Frank Chadwick

2000

TWILIGHT: 2000™

Roleplaying in the Devastation of World War III

Version 2.2



GDW GAMES

Conny Delshagen (order #3255201)

TWILIGHT: 2000

Roleplaying in the Devastation of WWIII



"WHAT FOOLS WE WERE to allow ourselves to be lulled into a warm sense of security by the events of the late '80s and early '90s. How childlike we were in our trumpeting of the new age of peace, prosperity, and good will. Democracy had come to Europe, and that meant that peace had come to Europe, for democracies never made war on other democracies.

"What utter rot!

"How could we have believed such naive rubbish with the lesson of history so plainly before us? Democracies have always made war on other democracies; it has been a fact of life since the earliest democracies flourished in Greece, and warred continuously upon each other.

"How could we have forgotten that in the War of 1812 the two great western democracies made enthusiastic, aggressive war on each other?

"How could we have forgotten that democracies represent the will of the people, and that the will of the people is often for war?

"How could we have forgotten that Hitler was elected?"

—Janosz Skrivkin, Chancellor of Croatia, 1999.



US Cadillac Gage Stingray; Poland, 2000.

The war has raged for years. The high-tech ammo is almost gone. High-tech equipment is failing, piece by piece, with no spares to fix it. The front lines are held by a few grim, desperate soldiers.

The US 5th Division holds the line in Poland. Now, a Soviet encirclement has cut it off in a province ruled by ambitious warlords, local militias, and bands of marauding deserters. HQ is 200 klicks to the rear and powerless.

Your last order sets you free...

"Good luck. You're on your own."

Version 2.2

Newly updated to be fully compatible with Traveller: The New Era

2000 25.00

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This Is a Roleplaying Game

Players work together to experience an exciting adventure. One player (the referee) supervises the action while you and the others verbally play the roles of the characters. You all face real situations and react to them just like characters in a story—but the results are ones you create!

Here's What You Do

Generate Your Character: You select your nationality, character type, and your military and nonmilitary backgrounds.

Equip Yourself: Use your money for weapons, ammunition, equipment, vehicles, and spares.

Start Moving: You're in hostile territory. Your next encounter may be a friendly farmer, a frightened refugee, or a dangerous deserter. You pick your course of action; you decide your own fate in the chaos of World War III.

Twilight: 2000's award-winning game rules provide the foundation for role-playing in the chaos of World War III.

Combat: Fast-playing, easy-to-resolve combat system gives the feel of modern battles.

Travel: Types of travel, time scales, vehicles, encounters, maintenance, fuel, repairs.

Encounters: Dangerous environments, radiation, disease, contaminants, reasons for encounters, typical adventures.

Equipment: Weapons, supplies, vehicles, munitions, costs, availability.

Danger: Places to go and reasons to go there. Plus reasons to wish you hadn't.

Background: Chronology and history of World War III.

Twilight: 2000. The adventures are fast and furious. The prize is survival, and maybe, just maybe, a safe place to spend the night.

SINCE 1973

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TWILIGHT: 2000™

Version 2.2

What is Version 2.2?

How is this book you are holding different from the previous printings of **Twilight: 2000 2nd Edition**? Do you have to buy it if you already have 2nd Edition **Twilight**?

No, you don't have to buy it. **Twilight: 2000 2nd Edition** works fine the way it is. However, Version 2.2 introduces a number of changes to make **Twilight: 2000** fully compatible with the new **Traveller: The New Era**, and you may want to know what these changes are.

•First, 2.2 takes **Twilight** from the D10-based combat and task resolution system to the new D20 system. The D20 system allows greater detail in task resolution because the larger number of die roll results allow the number of difficulty levels to be increased from three to five. This update is fully detailed in the **Twilight: 2000/Merc: 2000 Referee's Screen**. If you already have the screen, you know how to convert from the D10 system to the D20 system. In addition to incorporating these changes into the rules, the combat rules have been reorganized for greater clarity (see the Combat rules, pages 194 to 223).

•Second, the Initiative and turn sequence system has been modified for simplicity and speed of play. Rather than having six five-second phases within a 30-second turn, the five-second increments are now called turns, with no intermediate 30-second step (again, see the Combat rules).

•Character generation has been modified to provide more-skilled characters, and some of the skill names have been changed to make them correspond to **Traveller** (see Character Generation, pages 16 to 44).

•Numerous other evolutionary improvements have also been incorporated, including all errata. The vehicle data cards are updated and more detailed to show current information and new vehicle variants, and have additional data to make them more useful, including all-new amphibious ratings for all amphibious vehicles, reactive armor, etc. The revised recoil ratings for automatic and semiautomatic weapons from the Referee's Screen have also been incorporated into the weapons listings.

•**Traveller** players will find that the changes in this edition make all **Twilight: 2000** vehicles fully compatible with **Traveller**, providing a representative set of Tech Level 8 combat vehicles ready for use. These changes include the new D20-system ratings for fire control systems and target size classifications.

With all of these improvements fully incorporated into the basic rules, Version 2.2 is up-to-the-minute, state-of-the-art **Twilight: 2000**.

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Twilight: 2000, Version 2.2

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Twilight: 2000, Version 2.2

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Janosz Skrivkin
Chancellor of Croatia
1999

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COUNTDOWN TO ARMAGEDDON

What follows is an outline chronology of the events leading up to the current world situation. Obviously, we cannot deal with every event in every country in equal detail. Instead, we have presented a rough outline of major world events, and concentrated on the major campaigns of the war after 1995.

1989

The year the Cold War ended. All across Europe, communist governments topple in response to pro-democracy demonstrations or, in the case of Rumania, armed insurrection. Voting with their feet, East German citizens flood into the west. In Poland, a number of German ethnic organizations form in response to West Germany's policy of accepting as a German citizen anyone who can prove themselves of Germanic descent (it is rumored that membership in ethnic clubs will be good enough).

The Soviet Union's new policy of encouraging political pluralism in Europe makes the end of Bureaucratic Communism a certainty. Mao Tse Tung's forgotten maxim, "Let 10,000 flowers bloom," becomes reality as dozens of new parties spring into being. The only European communist governments which survive the Revolution of 1989 are those outside the Warsaw Pact: Yugoslavia and Albania. The Berlin wall is torn down in spots, and German reunification is now spoken of openly: The question is no longer "If," but rather "When?"

Riots in in the Soviet republic of Azerbaijan (over alleged repression of Armenians) require intervention by Soviet troops. As a result, the republic remains a powderkeg for months.

Elsewhere, the Chinese political reform movement is brutally crushed by government military forces. An attempted coup against President Aquino of the Philippines is foiled (with the help of American air cover), and the republic of Panama is invaded by the U.S. to remove the government of Manuel Noriega.

1990

In a major upset for political pundits in the United States, a coalition of opposition parties headed by Violetta Chamorro defeats Daniel Ortega's bid for re-election in Nicaragua.

Spring elections in the Soviet republics of Byelorussia, the Ukraine, and the RSFSSR sweep local reform candidates into office. Before, during, and after these elections, ethnic unrest continues to simmer in Azerbaijan, and spreads to the minority republics of Tajikstan, Georgia, Kazakhstan, mostly in the form of ethnic demonstrations and occasional riots. Low-level armed violence spreads throughout the Moslem parts of the Caucasus and Central Asia, although most of it fails to come to the attention of the rest of the world, who are distracted by events in Germany.

Iraq stuns the west by invading Kuwait in August. With the Soviet Union in disarray, the world rallies behind US leadership in resisting Iraqi aggression, and troops from a dozen countries, a few of them still formally members of the Warsaw Pact, pour into Saudi Arabia.

The long awaited (and long-feared, in some circles) reunification of Germany becomes reality in October. The four power conferences (representing the United States, the United Kingdom, the USSR, and France) that recognize the inevitable, also guarantee Poland's territorial integrity. As a part of the agreement, NATO troops will maintain a presence in the newly unified republic (the only way some European nations will agree to the deed). The newly united Germany renounces any territorial claims outside of its post-WWII boundaries, but asserts continued interest in the welfare of ethnic Germans living outside of Germany. Membership in German ethnic organizations in western Poland grows, particularly in Silesia, where the floundering efforts of the new (non-Communist) Polish government to convert from a controlled to a free economy result is only a partial success.

Poland attempts to negotiate a border treaty with Byelorussia, but is rebuffed and the official Byelorussian statement describes the city of Bialystok as "occupied" by Poland. Later in the year, Romania refuses a summit offer by Hungary to discuss the condition of ethnic Hungarians living in Romania.

By the end of the year, Soviet troop withdrawals are under way from Germany, Poland, Hungary, and Czechoslovakia.

1991

In January, the Gulf Coalition began a stunning aerial offensive against Iraq and followed it up with a blitzkrieg ground war in February which liberated Kuwait and crushed the flower of the Iraqi Army. Although Saddam remained in power, his authority was reduced to the central third of his nation and his military was no longer capable of aggression against neighboring states.

In March, both Croatia and Slovenia secede from Yugoslavia, and Bosnia-Hercegovenia follows in short order. Violence soon broke out between the Serbian-dominated federal government and militias of the breakaway states.

Ethnic and religious violence in the Central Asian republics of the Soviet Union escalates, and the Soviet Union increases its troop withdrawal schedule in order to use the forces inside its own borders. Fighting is particularly heavy between Armenians and Azeris in the enclave of Nagorno Karabak. As the republics seize greater autonomy, Gorbachev continued to vacillate between an all-out drive for reform and an all-out commitment to a strong central government in the old style. The result is an accelerating slide toward chaos. On July 1 the old Warsaw Pact is formally abolished, the last straw for many Moscow hardliners. In August the hardliners seize power in a bloody coup.

On August 19th, elements of the Taman Guards and Kantemir Motor Rifle Divisions move into the center of Moscow and seize the most important public buildings and radio stations. An eight-member Emergency Committee deposes Gorbachev (for "reasons of health") and bans strikes, protests, or public assemblies. Defiant protesters gather at the Soviet Parliament building, along with a few dissident military units and a cadre of armed Afghan War veterans, to defend Yeltsin and the Parliament. On August 20th, elements of the Kantemir Division, spearheaded by the elite KGB "Alpha Team," storm the Parliament building and scatter the protesters. Russian President Yeltsin, along with an estimated 800 others, die in the assault.

With Yeltsin dead and Gorbachev imprisoned in the Crimea, acting Soviet President Yanayev declares the establishment of a

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"renewal government." The governments of Byelorussia, Ukraine, and the Baltic States (Latvia, Lithuania, Estonia) denounce the new government as illegal and declare the Soviet Union to be dissolved.

1992

In February and March, democratic governments win elections in both Bulgaria and Albania. At the same time Bosnia demands that Yugoslavian federal troops withdraw from the province, a request which the Serbian-dominated central government refuses. Meanwhile, Greece and the new government of Albania sign a border treaty providing at least one point of stability in the region.

By mid-year, Slovakian separatists have gained enough seats in the Czech parliamentary elections to force the division of the country into two sovereign states: Slovakia and the Czech Republic.

Catalan and Basque separatists in Spain accelerate their demands for independence. Turkish and Iraqi Kurds become increasingly active and Turkish military sweeps of Turkish Kurdistan are hampered by the ability of guerrillas to seek sanctuary in the UN-protected northern third of Iraq.

The exposure of long-time links between the Mafia and key figures in the Italian government causes a scandal which shakes the very foundations of post-war Italian politics as well as crippling its economy. As the Lira loses value against every other western currency, there is open talk in industrialized and wealthy northern Italy of secession from Southern Italy.

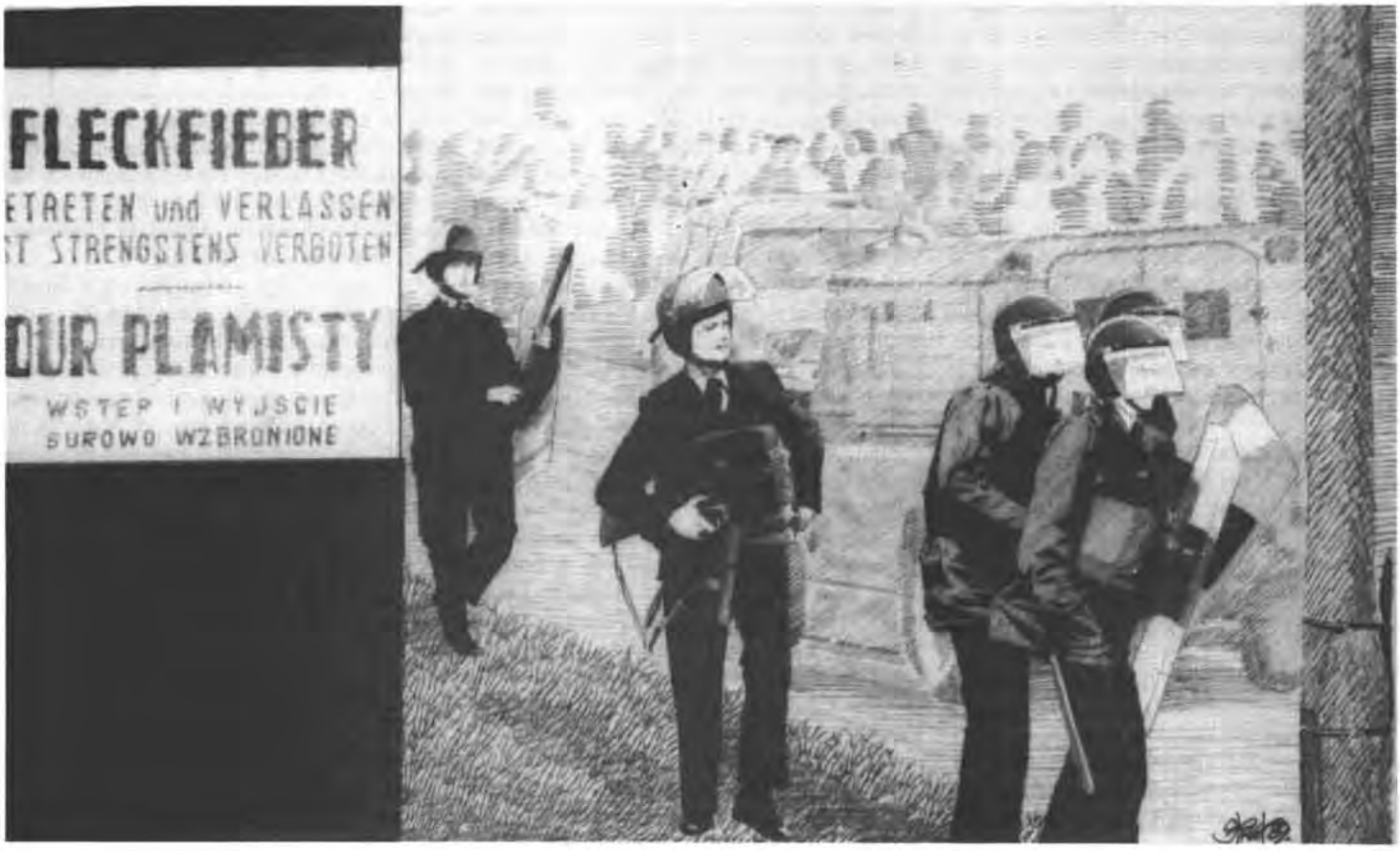
After early successes in holding down the Central Asian unrest, the Soviets suffer several major setbacks. TASS accuses Iran of supplying arms to rebels in Central Asia and Caucasus. Bloody fighting continues, with Islamic fundamentalist insurgents growing in strength. Late in the year, some Western observers begin to use the term "civil war" in referring to the Central Asian unrest. There are also continued riots in the Baltic States but beefed up contingents of MVD (Internal Security) troops maintain a semblance of order.

The Soviet Republic of Moldavia, made up largely of ethnic Romanians, is torn by riots and strikes demanding political autonomy and an eventual union with Romania. Riots are suppressed by Soviet MVD troops and Moscow accuses Romania of having secretly encouraged the unrest. In the fall, the Romanian government announces the arrest of five KGB operatives who, they claim, have been encouraging unrest among Romania's Hungarian minority.

In the United States, widespread perceptions of a lack of effective Republican leadership on the drug and trade front, and foot-dragging on military demobilization, lead to the election of John Tanner (a Democrat from California). Tanner's vice president, Deanna Pemberton (former representative from Ohio), is the first woman to hold such a high elective office.

1993

In his inaugural address, President Tanner sets the twin national priorities of rebuilding America's deteriorating infrastructure and "breaking the double grip of crank and crime that have made the nation's largest cities all but uninhabitable." Reductions in the defense budget made possible by the reduced American military presence in Europe are to fund a national reconstruction program and support large increases in law enforcement and anti-drug education. None of these measures have any real effect. (By year's end, the DEA will announce a 250% increase in drug seizures, both from smuggling and domestic



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crank factories. This will represent only 4% of the total estimated illegal drug consumption for the year.)

Tanner is not much more successful on the international scene, but by year's end he negotiates a withdrawal of Turkish troops from Cyprus and a reunification of the island republic.

After several years of intensive investment in the eastern third of the country, Germany shows little signs of economic progress. Radical right wing political organizations swell in membership while skinhead violence against foreign workers and handicapped Germans escalates. Germany's government responds to the threat weakly, seeming to compromise with the right, and passes a strict series of immigration laws which are widely compared to the Nazi "race laws" of the 1930s.

Fighting in Central Asia continues for most of the year, but the Soviet military gradually begins to gain the upper hand, and regains control of most of the cities of the region. A guerrilla war continues in the countryside, and many veterans of the fighting in Afghanistan a decade before find themselves fighting a very similar campaign.

Sporadic antigovernment rioting in Pyongyang and other large cities force the North Korean government to make further concessions toward a free market economy.

Fighting continues in the former republics of Yugoslavia and becomes increasingly bitter. There is now no talk of reunifying the country; instead ethnic groups fight for as large a slice of territory as possible, and deal ruthlessly with the people of other ethnic groups living in their regions. The lucky ones become refugees.

1994

As Europe shows signs of increasing instability, Germany begins quietly increasing its force structure. In January of 1994, the nine understrength divisions which had been maintained as a token army are brought up to full strength and each is given a territorial (reserve) brigade.

In China, underground pro-democracy organizations, with encouragement and financial aid from relatives in other countries, begin demonstrating in many of China's larger cities. While these remain relatively peaceful for a while, they soon erupt into violence, forcing military intervention. Better prepared than the students of 1989, the pro-democracy factions of the northeast hold out for months before the military manages to restore order. Elsewhere, things settle down more quickly. Some regional military commanders, increasingly mistrustful of the ability of the local government to maintain order, begin taking matters into their own hands, seizing direct control of local government and imprisoning government officials. Within a year, many regions are effectively ruled by military commanders, modern versions of China's traditional Warlords.

Researchers in France and the United States begin testing a vaccine which shows every sign of being effective against the Human Immunodeficiency Virus (the causative agent in AIDS). Researchers soon yield to demands for an accelerated testing program and US FDA waives animal tests in favor of immediate large scale human experimentation. Still, it will be several years before pharmaceutical firms can gear up to produce the vaccine in sufficient quantities to deal with the massive outbreaks of the disease in third world countries (those hardest hit). Central Africa in particular is facing complete collapse of its health care system under an avalanche of AIDS victims, and many health care professionals leave the region out of fear for their own lives.

1995

In China, the central government is increasingly dominated by hard-line nationalists, who are supported by north Chinese warlords. New demands for border adjustments are made against the Soviet Union, and it is felt that given the Soviet internal problems, this might be the time to press for them internationally. Talks produce no tangible results, however, and radical Chinese nationalist junior officers provoke increasingly violent border incidents. After a period of increasing tension and escalating border incidents, full-scale war erupts between the Soviet Union and the People's Republic of China. The Red Army enjoys rapid initial success, and tank columns roar deep into the northern Chinese industrial heartland.

However, the Chinese surpass the expectations of most military analysts in their ability to mobilize reserves from the interior and shift them to the fighting front. While the Soviets continue to make impressive gains, their losses mount and the tempo of advance slows. Soon, large bodies of citizens' militia are operating in the rear areas, attacking installations and destroying supply convoys. More and more front line troops have to be detailed to mopping up these patches of guerrilla resistance, and the advance grinds to a halt.

When the main Chinese conventional forces counterattack, to the amazement of the world's military experts, large pockets of Soviet troops are formed. Most of the Soviet units, due to their superior mobility and tremendous firepower, are able to fight their way out of the pockets, but Soviet losses are great and the front is shattered.

The Soviet Union had already been mobilizing additional troops from the western military districts, and this is now placed on an emergency priority basis. But the Far Eastern Front has become a meat grinder, which devours divisions as quickly as they can be committed. Motor vehicles and railroad rolling stock are increasingly drawn out of the civilian sector to support the war effort. As the first snows of winter fall, military units in Byelorussia and the Ukraine declare their support for the separatists governments which had been suppressed two years earlier.

In response to increasing regional instability, Germany declares its agreement on size and location of armed forces "obsolete in relation to the current European situation." The six eastern territorial brigades are immediately expanded to weak divisions while the original nine divisions are expanded to 12, the additional troops being provided by mobilization of reserve units from the western part of the country. Poland protests, begins bringing several divisions in western Poland to higher readiness states, and opens secret talks with Byelorussia (now renamed Belarus). These talks quickly break down over the status of the border city of Bialystok, however, and Belarus publicly announces that Poland had attempted to involve it in a "military adventure" against Germany.

In Romania, antigovernment demonstrations by Magyars (ethnic Hungarians) in several Transylvanian cities are suppressed by Romanian riot control police, with some loss of life. The Hungarian government again protests the mistreatment of these people at the hands of what they claimed is an increasingly genocidal government.

Several days of anti-Turkish rioting in Bulgaria are touched off when a Bulgarian national, arrested for attempting to assassinate the president of the Turkish republic, dies in custody. Despite Turkish protestations that his death was from natural causes, the incident soon assumes crisis proportions, and Turkish citizens are advised to leave Bulgaria.

Later in the year, United Nations peacekeeping forces are sent to Sri Lanka to intervene in the civil war there.

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1996

Faced with stalemate in the Far East and revolt in the West, the Soviets need more troops. Most Soviet category B readiness divisions are mobilized and sent to the Far East by mid-year, and almost a quarter of the remaining category A divisions from the Western European frontier garrisons are committed. Many of the low readiness category C divisions are upgraded to category B or mobilized, and for the first time in 50 years the mobilization-only divisions begin training. Many of the best remaining divisions, however, are committed against the Ukraine and Belarus.

With an uncertain Germany to the west and an increasingly aggressive Belarus to the east, Poland opens secret talks with Moscow. Within months these result in the public signing of a mutual defense agreement between the Soviet Union, Poland, Bulgaria, Hungary, and the Czech Republic. The treaty is signed in Warsaw and is officially called the Treaty on Collective Security. The world calls it the New Warsaw Pact.

Surrounded by enemies, Belarus resistance quickly collapses and, to the shock of the West, it is partitioned by Poland and the Soviets. As Poland prepares to move division into the former territory of Belarus for occupation duty, seven ethnic German soldiers in the division announce their intention to resist transfer out of the country. A wave of demonstrations in western Poland by ethnic Germans supporting the seven soldiers is violently suppressed by riot police, resulting in several deaths and numerous injuries. Germany protests and moves several divisions closer to the border.

In June, a small group of senior officers of the German Army, as well as at least one German cabinet minister, open secret talks with the leadership of several German ethnic organizations in eastern Poland. Shortly thereafter, another round of demonstrations break out and are again violently suppressed. This time, however, small groups of demonstrators fight back with military small arms. Polish army units move in and soon Pomerania and Silesia appear to be in the grips of a civil war. Poland charges that many of the rebels are German right-wing nationalists who have crossed the border with the collaboration of the German Army. Berlin denies any involvement with rioters but admits that it is possible that German nationals have crossed into Poland, and German military units move closer to the border to step up security.

In mid-July there are several border incidents between units of the Polish and German armies and frequent exchanges of artillery fire. On July 27th elements of the German III Corps cross the frontier in retaliation for what they described as a "full-scale attack" by the Polish 4th Mechanized Division. Within two days Poland and Germany are officially at war.

From the very beginning, this is a "come as you are" war; neither side is adequately prepared. The German Army has just finished a period of very rapid growth and rebuilding, many of its units being equipped with tanks and vehicles which have sat idle in warehouses for four or five years. The Poles and Soviets are at the end of several years of very limited military spending capped by a war in the east which has drawn off much of their best equipment already. The Poles are supported by the three Soviet divisions still stationed in Poland as part of the New Warsaw Pact joint command, but are still outnumbered by the Germans. What tips the balance against the Germans is the entry of the Czech Army in the war on the side of the New Warsaw Pact.

By the end of November, the Bundeswehr is in serious trouble. Soviet Frontal Aviation has left their most modern aircraft in the west; these are qualitatively and quantitatively a match for the Luftwaffe. The Czech Army finally cracks the line of German reservists holding the southern flank and cuts north into Germany itself, closing on Berlin. Heady with victory, the Warsaw Pact leadership announce their intention to occupy and repartition Germany as a guarantee against future aggression.

Claiming that their actions were justified by the military provocations of Poland and that they now face dismemberment as a state, Germany turns to its NATO partners for assistance. While the political leadership of the European members of NATO debate the prudence of intervention, the US Army crosses the frontier. Within a week, France, Belgium, Italy, and Greece first demand that U.S. troops withdraw to their start line and (when these demands have no effect) withdraw from NATO in protest. British and Canadian forces cross the border, however, while Danish and Dutch troops remain in place, still partners in NATO but not party to war.

In the far north, Soviet troops make a bid for quick victory in northern Norway. Most of the best Arctic-equipped divisions have already been sent east, however, and the third-line troops available are unable to break through to the paratroopers and marines landed in NATO's rear areas. As crack British commandoes and U.S. Marines join the battle, the front line moves east again toward the Soviet naval facilities on the Kola Peninsula, and the elite Soviet paratroopers and marines are isolated and destroyed.

At sea, the Soviet Red Banner Northern Fleet sorties and attempts to break through the Greenland-Iceland-United Kingdom Gap into the north Atlantic. For three weeks the opposing fleets hammer each other, but the western fleet comes out on top, badly bloodied but victorious. Eighty percent of the Soviet northern fleet surface tonnage rests on the bottom of the Norwegian and North seas. Scattered commerce raiders break out, however, and by year's end are wreaking havoc on the NATO convoys bringing reinforcements, ammunition, and equipment across the Atlantic.

When Romanian police shoot and kill a man crossing the border between Hungary and Romania, the Hungarian government suspends diplomatic relations. The Romanians claim he was a smuggler, bringing arms to antigovernment forces. Three days later, Hungarian army spies or Romanian government provocateurs (depending on which side you believe) blow up a Romanian railway station in Cluj. The Romanians conduct mass arrests of Magyars throughout Romania. Police sweeps are met with armed resistance and within a week a secessionist Magyar government declares its independence from Romania. As Romanian troops move north to crush the rebellion, the Hungarian government protests, is ignored, and then (with its allies) declares war.

As Hungarian, Bulgarian, and Soviet troops cross the border, Romania formally declares war on the three invading nations, and appeals to NATO for assistance.

The first nation to rally to Romania's aid is her neighbor, the Ukraine. Within 24 hours, three divisions and five brigades cross into Romania and two days later are at the front under Romanian command, where they are joined by a Serbian expeditionary force. The Ukraine also recognizes the incorporation of Moldavia into Romania. NATO responds shortly thereafter with the offer of full membership in the alliance to both nations, which they accept. More concrete assistance takes the form of the Turkish 1st Army, which launches its offensive against a thin Bulgarian covering force in Thrace on Christmas Eve.

In July, the *Sendaro Luminoso* (Shining Path) guerillas take advantage of international chaos to make a bid for control of Peru. They do not succeed in overthrowing the government, but they do succeed in wresting about half of the country from central control. Other South and Sentral American countries experience varying degrees of political instability.

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1997

On the first day of the new year, the NATO heads of state declare their support for a Polish government in exile, headed by a committee of Polish emigrés. While the news is greeted with scattered worker uprisings in Poland, the majority of the Polish Army remains loyal to the central government, and open resistance is soon crushed. An underground movement begins forming, however, and by spring small guerrilla bands, leavened by Polish Army deserters, begin to harass Warsaw Pact supply convoys and installations.

During January, continuing Turkish successes in Bulgaria spark a wave of patriotism in the Turks, particularly since Greece has remained neutral in the war. On Cyprus, unoccupied and supposedly reunited for three years, the Turkish Cypriots demonstrated in favor of Turkey. The demonstrations turn into anti-Greek riots, and the Cypriot Army moves to restore order. In response, the Turkish Army invades Cyprus and quickly occupies most of the island. Greece first sends military units to Cyprus to resist the Turks and then declares war on Turkey and attacks the Turkish forces in Thrace.

In late February, the socialist governments of Italy and Greece conclude a mutual defense pact. While Italy is not obligated by the pact to enter the Greco-Turkish war, the Italian government declares the war to be a regional conflict unrelated to the more general war raging elsewhere, promising to intervene on Greece's side if NATO tries to tip the balance in Turkey's favor. Within a week, Greece declares a naval blockade against Turkey and warns the world's shipping that the Aegean is now considered a war zone.

In an attempt to restore the situation in Germany, Soviet and Czech troops return to the offensive in southern Germany but do not have the strength to make any significant gains. With the coming of spring, the NATO offensive gains momentum and in April the first German troops cross the frontier into Poland. By June 17th, Warsaw is surrounded, and Polish army units and the citizens of the city prepare for a siege.

By late spring, NATO's Atlantic fleet has hunted down the last of the Soviet commerce raiders, and the surviving attack carriers and missile cruisers move to northern waters. The NATO drive in the north has bogged down on the banks of the Litsa River, but the Northern Front commander now contemplates a bold move to destroy the remnants of Soviet naval power there. While U.S. and British units attempt a rapid outflanking move through northern Finland, the NATO Atlantic Fleet will close in on Murmansk and Severomorsk, subjecting the Soviet fleet anchorages and air bases to a massive bombardment. On June 7th the ground offensive is launched and the fleet closes in on the Kola Peninsula shortly thereafter.

Finland had been expected to offer token resistance to the violation of its territory; instead the Finnish Army fights tenaciously, seriously delaying the flanking move. At sea the plan fares even worse, as coastal missile boats and the remnants of Northern Fleet's shore-based naval aviation inflict crippling losses on the NATO fleet. By mid-June the last major naval fleet-in-being in the world has been shattered.

In the south, the front in Romania stabilizes and enters a period of attritional warfare. Soviet mobilization-only divisions, largely legmobile and stiffened with a sprinkling of obsolete tanks and armored personnel carriers, enter the lines. Although the Romanians prove better soldiers than the over-aged and ill-trained Soviet recruits, the manpower difference begins to be felt.

The best Soviet troops are shipped further south to Bulgaria, and by May have managed to halt the Turkish drive. As Greek pressure on the Turkish left flank in Thrace builds, unit after Turkish unit is shifted to face the Greeks. It becomes clear that, without aid, the Turkish Army will have to fall back or be defeated.

On June 27th, a NATO convoy of fast transports and cargo ships, accompanied by a strong covering force, attempts the run to the Turkish port of Izmir with badly needed ammunition and equipment. Light fleet elements of the Greek Navy intercept the convoy and, in a confused night action off Izmir, inflict substantial losses and escape virtually unharmed. Two days later, NATO retaliates with air strikes against Greek naval bases. On July 1st, Greece declares war against the NATO nations, and Italy, in compliance with her treaty obligations, follows suit on the 2nd.

In early July, Italian airmobile and alpine units cross the passes into Tyrolia. Scattered elements of the Austrian Army resist briefly but are overwhelmed. By mid-month, Italian mechanized forces are debouching from the Alpine passes into southern Germany, and their advanced elements are in combat against German territorial troops in the suburbs of Munich.

The Italian Army enjoys tremendous success in the first month of its involvement in the war, primarily for logistical reasons. Most of



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its opponents have already been at war for six months or more. Their peacetime stocks of munitions and replacement vehicles had been depleted, and their industries had not yet geared up to wartime production. The Italians have intact peacetime stockpiles to draw on. As summer turns to fall, however, the Italians too began feeling the logistical pinch, aggravated by the increasing flow of munitions and equipment from the factories of their opponents.

In Asia, pro-Soviet, India and anti-Soviet Pakistan drift into war through an escalating spiral of border incidents, mobilization, and major armed clashes. Outright war begins in the spring, and by mid-year the Indian Army is slowly advancing across the length of the front, despite fierce resistance.

By early July, NATO advanced elements are closing up on the Polish-Soviet frontier in the central region, while continuing the siege of Pact-held Warsaw. The Polish government in exile establishes its temporary capital in the city of Poznan, and asserts its claim to the pre-1939 Polish borders in the east. In the Far East, Pact forces begin major withdrawals all along the front, and the mobile elements of the Chinese Army began a victorious pursuit.

On July 9th, with advanced elements of the 1st German Army on Soviet soil, the Soviets begin using tactical nuclear weapons. In the West, they are used sparingly at first, and for the first week are used only against troop concentrations no further than 50 kilometers from the Soviet border. In the Far East, however, they are used on a massive scale. Chinese mechanized columns are vaporized, caught in the open on the roads in imagined pursuit. Strike aircraft deliver warheads on the northern Chinese population and industrial centers still in Chinese hands. The Chinese response is immediate, but Soviet forward troop units are dispersed and well prepared. Ballistic missile attacks on Soviet population centers are frustrated by an active and efficient ABM system, and the Soviet Air Defense Command massacres the handful of Chinese bombers that attempted low-level penetration raids. Within a week, the Chinese riposte is spent, but Soviet attacks continue. The Chinese communication and transportation system, already stretched to the breaking point, disintegrates. The roads are choked with refugees fleeing from the remaining cities, all of them potential targets. China begins the rapid slide into anarchy and civil disorder.

On the western front, the forward elements of both armies on the Soviet-Polish frontier are hit hard by tactical nuclear strikes, as NATO matched the Warsaw Pact warhead for warhead. By late August, the first of the Soviet divisions released from the Far East enter the lines. Although the front lines are fluid everywhere, they begin moving gradually west.

On September 15th, the siege of Warsaw is lifted, and a week later Czech and Italian troops begin a renewed offensive in southern Germany. The southern offensive gains momentum, and NATO forces in Poland increase the rate of their withdrawal, practicing a scorched earth policy as they fell back. At the same time, advancing Warsaw Pact forces occupy Slovakia and force its reincorporation with the Czech republic.

The Soviet and Bulgarian forces in Thrace also begin a major offensive against the Turks in September. The one-sided use of tactical nuclear weapons breaks the stalemate, and by month's end, Bulgarian tank brigades are racing toward Istanbul. Simultaneously, Greek and Albanian troops launched a drive against southern Serbia, and the Serbian Army begins to break up. The Serbian expeditionary force in Romania is recalled for home defense, but before it can return, Beograd has fallen to Italian mechanized columns. At the same time, the limited use of tactical nuclear weapons, the increasing numbers of Soviet reserves, and the withdrawal of the Yugoslavians cause the Romanian front to collapse. As Warsaw Pact columns sweep through both countries, isolated military units withdraw into the mountains and begin to wage a guerrilla war.

In the west, NATO air units begin making deep nuclear strikes against communication hubs in Czechoslovakia and Poland in an attempt to slow the Warsaw Pact advance. The Pact responds with similar strikes against German industrial targets and major port cities. NATO's theater nuclear missiles are launched against an array of industrial targets and port cities in the western Soviet Union. Throughout October the exchanges continue, escalating gradually. Fearful of a general strategic exchange, neither side targets the land-based ICBMs of the other, or launches so many warheads at once as to risk convincing the other side that an all-out attack is in progress. Neither side wishes to cross the threshold to nuclear oblivion in one bold step, and so they inch across it, never quite knowing they have done so until after the fact.

First, military targets are hit (including the first decapitating strikes at US targets). Then industrial targets clearly vital to the war effort, followed by economic targets of military importance (transportation and communication, oil fields and refineries). Then major industrial and oil centers in neutral nations are targeted, to prevent their possible use by the other side. Numerous warheads are aimed at logistical stockpiles and command-control centers of the armies in the field. The civilian political command structure is first decimated, then eliminated (almost by accident in some cases). The exchanges continue, fitfully and irregularly, through November and then gradually peter out.

Pakistan and India wage their own nuclear war. Facing defeat, Pakistan launches a preemptive strike on India's economy and nuclear strike force. Although industrial centers are hit hard, enough of India's nuclear arsenal survive to launch a devastating retaliatory strike. The Indian-Pakistani war soon winds down, as each country's economy no longer can feed its civilians, let alone supply military units.



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1998

The winter of 1997-98 is particularly cold. Civilian war casualties in the industrialized nations have reached almost 15 percent by the turn of the year, but the worst is yet to come. Communication and transportation systems are nonexistent, and food distribution is impossible. In the wake of nuclear war comes famine on a scale previously undreamed of. Only the exceptionally cold winter delays simultaneous epidemics. In the nations of the Third World, destruction of their major industries together with cessation of western food aid causes severe dislocations, with famine and starvation in many areas.

With the spring thaw, the unburied dead finally bring on the epidemics the few remaining medical professionals had dreaded but were powerless to prevent. Plague, typhoid, cholera, typhus, and many other diseases sweep through the world's population. By the time they have run their courses, the global casualty rate will be 50%.

In Europe, France and Belgium had been hit the lightest and stand virtually alone in maintaining a semblance of internal order throughout the cataclysm. As refugees begin flooding across their borders, the French and Belgian governments close their frontiers, and military units begin turning back refugees with gunfire. The French government authorizes the army to move west to the Rhine to secure a solid geographical barrier. As the refugees pile up on the French and Belgian frontiers, a large lawless zone springs into existence. Open fighting for food is followed by mass starvation and disease, until the lawless zone becomes barren and empty.

The average strength of NATO combat divisions at the front has fallen to about 8,000, with U.S. divisions running at about half of that. Warsaw Pact divisions now varied widely in strength, running from 500 to 10,000 effectives, but mostly in the 2000-4000 range. Lack of fuel, spare parts, and ammunition temporarily paralyze the armies. Peace might have come, but there are no surviving governments to negotiate it. Only the military command structures remain intact, and they remain faithful to the final orders of their governments. In a time of almost universal famine, only the military has the means of securing and distributing rations. Military casualties have been much lower than casualties among civilians.

In the Balkans, the partisan bands in the mountains of Romania and former Yugoslavia have escaped almost untouched, while many Pact regular units had been destroyed in the exchange or have just melted away after it. The Romanians and Serbians begin forming regular combat units again, although still structured to live off the land and subsist from captured enemy equipment. At first, there is a great deal of enemy equipment just lying around waiting to be picked up.

There are border changes as well. The Italian Army delineates the borders of Croatia, Serbia, and Slovenia while the Greek Army directly annexes Macedonia. The Albanians claim Kosovo province, but both Greece and Italy support Serbia's claim to the area. Albania first protests, then withdraws from the temporary alliance, and finally begins sporadic attacks on Greek military units. They are joined by ethnic Albanian partisan units from Macedonia and Kosovo. At the same time, many Italian and Hungarian units are withdrawn from the Balkans and shifted to Czechoslovakia and southern Germany.

In North America, a flood of hungry refugees begins crossing the Rio Grande, and most of the remaining military forces of the United States are deployed to the southwest to deal with the mounting crisis. They move at the orders of the Joint Chiefs of Staff, now the *de facto* government of the United States. Widespread food riots and violence in refugee areas are met with military force. The Mexican government protests, and within months Mexican Army units cross the Rio Grande to protect Mexican lives. More U.S. units are shifted south. Scattered fighting grows into open warfare, and Mexican armored columns drive northeast toward Arkansas and northwest into southern California. The front quickly stabilizes in northeast Texas and central California. Elsewhere in the US civil disorder and anarchy increase with the withdrawal of army units.

In late June, the Pact forces in southern Germany renew their offensive in an attempt to seize the scattered surviving industrial sites in central Germany. Actually, the most intact parts of Germany were those areas in the south which had been under Warsaw Pact occupation, as neither side was willing to strike the area heavily. Galvanized into renewed action, NATO forces made a maximum effort to reform a coherent front, and the Pact offensive finally stalls along a line from Frankfurt to Fulda. In late August, NATO launches its own offensive from the area of Karl Marx Stadt, driving south to penetrate the Pact rear areas in Czechoslovakia. The thinly spread Czech border guard units are quickly overwhelmed and Pact forces in central Germany begin a precipitous withdrawal to Czechoslovakia, laying waste to southern Germany as they retreat.

A simultaneous offensive by the remnants of the Yugoslavian Army drives north in an attempt to link up with NATO. The Yugoslavians are halted near Lake Balaton, however, and then thrown back.

As more Pact units arrive in Czechoslovakia, the NATO drive runs out of steam and loses its sense of direction. Troops are shifted west to garrison the recaptured but devastated south of Germany, and many lives are wasted in a futile attempt to force the Alpine passes into Italy. As the autumnal rains begin, NATO and the Pact initiate a short and weak second nuclear exchange, directed primarily at surviving industrial centers in the United Kingdom and Italy.

Fighting gradually runs down to the level of local skirmishing as both sides prepare for another winter.



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1999

Once spring planting is finished, the United States Congress reconvenes for the first time since the exchange of nuclear missiles. Senator John Broward (D, Ark), the former governor of Arkansas who appointed himself to fill one of the two vacant senatorial seats, is elected President by the House of Representatives. General Jonathan Cummings, then-chairman of the Joint Chiefs of Staff, refuses to recognize the constitutional validity of the election, citing the lack of a proper quorum and numerous irregularities in the credentials of the attending congressmen.

(Although Cummings' decision will later be widely criticized, there is much validity to his position. Many congressional seats are disputed; several of the congressmen in attendance are merely self-appointed local strongmen who have gained control of large parts of the old congressional districts, and some have never seen the districts they purport to represent. There is at least one confirmed gunfight between rival claimants to a seat while Congress is in session.)

General Cummings declares a continuation of martial law until such time as a new census is practical, that being necessary for a meaningful reapportionment of congressional seats and presidential electoral votes. President Broward responds with a demand for Cummings' resignation, which Cummings declines to submit. While some military units side with the new civilian government, the majority continue to take orders from the Joint Chiefs, particularly those overseas, for two simple reasons. First, the habit of obedience is deeply ingrained, and, in many cases, is all that has allowed units to survive thus far. Second, the Joint Chiefs control virtually all surviving telecommunications networks.

In North America, the main effect of the split is a further erosion of central authority. Forced to choose between two rival governments, both with considerable flaws in their claims to legitimacy, many localities simply choose to ignore both.

The surviving foreign and national organizations dealing or concerned with the United States choose between the rival governments. The German military government and Polish government in exile continue relations with the Joint Chiefs, while the partisan commands of Yugoslavia and Romania recognize the civilian government. The remnants of the Central Intelligence Agency obey the orders of the civilian government, while the National Security Agency, loyal to the Joint Chiefs, organize a field operations branch to replace the CIA "defectors." Officially, forces of the two governments refrain from violent confrontation, but there are sporadic local clashes over key installations, occasional bloody coups within military units, and numerous assassinations and "dirty tricks" by rival intelligence agencies.

In the autumn, the dispatch of troops to Europe resumes, although only as a trickle. A few warships are available as escorts, and various old merchant vessels are pressed into service as transports. Initiated by the civilian government, both governments briefly compete in a struggle to outdo the other, viewing success as a litmus test of their ability to mobilize the nation. In fact, the call-ups affect only the Atlantic coast and lead to widespread resistance. The dispatch of troops, supplies, and equipment to Europe makes little sense to most, considering the appalling state of affairs in the United States.

The actual reinforcements sent include a small number of light vehicles and ammunition but consist mostly of light infantry. Mortars are becoming the most popular support weapon for troops, as they can be turned out in quantity from small machine shops and garages.

In Europe, the fronts are static for most of the year. Low troop densities mean that infiltration raids become the most common form of warfare. The "front" ceases to be a line and becomes a deep occupied zone, as troops settle into areas and begin farming and small-scale manufacturing to meet their supply requirements. Local civilians are hired to farm and carry out many administrative functions in return for security from the increasing numbers of marauders roaming the countryside. In other areas, the security the military unit provides to its civilians was from the unit itself, a post-nuclear version of the ancient "protection" racket. Many units stationed in barren areas drift apart or turn to marauding when supplies do not arrive. Although most attacks by large bodies of marauders are directed at areas held by "the enemy," they begin to be directed at "allied" units as well, although at first not against units of the same nationality.

The effects of the chaos ensuing from the destruction of world trade and the death of a sizable portion of the population are felt globally. Central Africa is hit particularly hard, as the war cuts off production and shipment of the HIV anti-virus just as the AIDS active infection rate tops 50%. No territory though, however remote, remains untouched by the war. Even scientific stations in the antarctic, and orbiting space laboratories, are abandoned as the war drags on.



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2000

By the spring of the year 2000, the armies of Europe have settled into their new "cantonment" system. Civil authority has virtually ceased to exist. Most military units are practicing extensive local recruiting in an attempt to keep up to strength, and stragglers are often incorporated into units regardless of nationality. Thus, U.S. units contain a wide variety of former NATO and Warsaw Pact soldiers in addition to Americans. Nominal titles of units (brigades, divisions, etc.) have little bearing on the actual size of the unit.

In early summer, the German Third Army, spearheaded by the U.S. Eleventh Corps, moves out of its cantonments on what is to become one of the last strategic offensives of the war.

One day Griffith looked over at me and said, "Monk, you know the worst thing about all this? No more television."

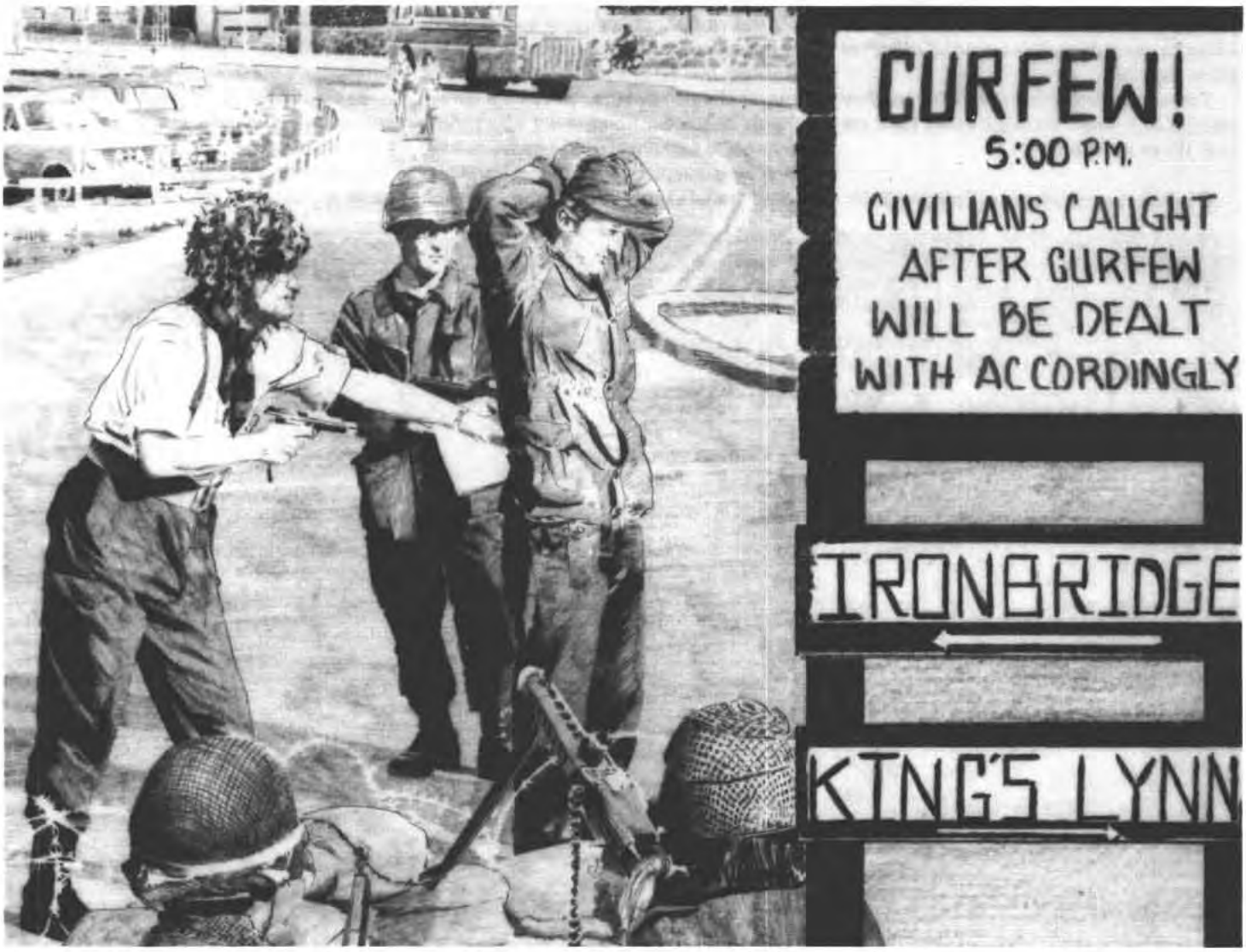
I just looked at him for a second.

"You miss Green Acres, do you?" I asked sarcastically.

"Hey, I'm not kidding. You know about Hitler and Mussolini and all those guys, right? Well, we never had anybody like that once we had television. And you know why? 'Cause all those guys look like clowns on TV. I mean, you're sittin' in your living room in front of the tube, watching some little guy scream and rant and foam at the mouth. Then they interrupt him for a commercial for a blender that makes salads or some damn thing, and then some cereal that's gonna make you regular, I mean who can take him seriously? What planet is this guy from? You wanna laugh, not get in line behind him.

"So now we've been—what?—three years without TV? And those people out there just keep getting loonier and loonier. I tell you, unless someone gets a network up and running pretty soon, we're gonna be in a world of hurt."

"Griffith," I said, "I think that we are already in a world of hurt."



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CHARACTER GENERATION

There really weren't many of us left after Kalisz. I remember that Carson, the major's driver, found some paint and stenciled a sign he stuck in the ground next to where we had the Hum-Vee parked.

Headquarters
3rd Battalion, 143rd Infantry
2nd Brigade
5th Infantry Division (Mechanized)
United States Army

When Gordon saw it, she borrowed the paint and stencils and painted the same thing on a sign we put next to our other vehicle, the old LAV-25, except instead of headquarters she painted "Main Body." The major laughed when he saw it, but made us get rid of both of them. Security.

There was a time when none of us laughed much at all, but now we laugh again. What the hell. We're still alive.

Characters are the focus of **Twilight: 2000**; they are the alter-egos of the players, and all activity centers on them. Each character is a person within the game, interacting with other player characters (those controlled by other players) and nonplayer characters (controlled by the referee).

Characters are described in the game using their physical and mental attributes, their skills, and a number of other characteristics. All these characteristics are derived by a combination of die rolls and player choices. The following rules explain this process of character generation.

To make the long process of character generation easier, a character generation worksheet is included with this game on page 267. The worksheet is largely self-explanatory, but occasional references to the rules are necessary, at least for the first few characters. A player should read the rules as he generates his character, filling in the appropriate blanks of the worksheet as he goes. Once the character is completely generated, the player should transfer the information from the worksheet to a character record sheet. The record sheet is a permanent record; the worksheet may be discarded. (*Important:* Remember to save at least one blank copy of each sheet to photocopy.)

DIE-ROLLING CONVENTIONS

This game uses a 20-sided die (D20), a 10-sided die (D10) and one or more six-sided dice (D6). For a complete discussion of how dice are used in the game, see "Mechanics," on page 132.

OVERVIEW

The abilities and limitations of a character are determined by three general areas of information—background, attributes, and experience—so the character generation procedure follows these three general steps.

Background: Each player decides on the nationality and gender of his character, then names him or her.

Attributes: Each player determines the six basic attributes of his character, either by



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rolling dice or by use of a point system described later. These six basic attributes are Strength, Agility, Constitution, Intelligence, Education, and Charisma.

Experience: Each character begins accumulating experience at the age of 17, upon completing secondary education. The player then makes career choices for the character. Each career choice covers four years of training and/or experience. Each time a player makes a four-year career choice, he may also select a secondary activity (hobby) for the character. Careers and secondary activities provide all-important skills for the character.

At the end of each four-year career period (henceforth called a term), the player rolls to see if war breaks out. If so, the character conducts one wartime career and is then complete; if not the player makes another regular four-year career choice. Note that while players have considerable control over most aspects of character generation, they have no control over when war breaks out.

War: This is the final shaping influence over all characters in **Twilight: 2000**. During the war they will gain further military experience, be exposed to radiation, and perhaps to the effects of aging.

Derived Values: Now that all changes to skills and attributes are finalized, certain values are calculated based on them. These are things like the amount of damage a character can take, how strong a punch he throws, and so forth.

Equipment: Finally, a player finds out how much equipment his character has managed to hold onto through his adventures so far.

We picked up Jones right before we jumped off on the Baltic push. There wasn't time to get him back to a British unit then, and I wouldn't know where to look for one now. I call him British, but he says he's Welsh, and calls himself "Jones the Sniper." I guess half the people in Wales are named Jones, to hear him tell it, so everyone is Jones the Butcher, Jones the Baker, and so on. He told me a joke once about a KGB agent who was supposed to contact and activate a mole, an agent who had spent years getting accepted by the locals. So the KGB agent walks into the Welsh village where the mole lives and asks at the local pub where he can find him. He doesn't know what name he's going by so he describes him to the bartender, who says, "Ah! It's Jones the Spy you're after!"

I think it was probably funnier if you were Welsh. Fortunately, he knows German and a smattering of Polish, which has saved our butts more than once.

BACKGROUND

Each player should name his character and decide on the character's sex and nationality. Any nationality which the referee is willing to allow in the game is permissible, although as a practical matter characters should be drawn from the list of belligerent nations with combatants in the area where the campaign is set. If the referee chooses to set his campaign in Poland, then characters should mostly be American or European.

Players may choose to be Americans or other nationalities, at their option. Since all armies practice considerable local recruiting and have picked up deserters from the other side, a U.S. unit could contain virtually any nationality. However, it is recommended that at least half of the unit be American.

Europeans, although they are with the group, are not technically in the U.S. Army; the unit is technically under the command of the highest ranking American, despite the ranks of any European characters. As a matter of courtesy, American officers often place themselves under the command of the senior NATO officer present. An Eastern bloc officer present with the unit (for whatever reason) should not expect this same courtesy.

The character's army affects the nature of the equipment he starts with. A player must join an army appropriate to his nationality (but this need not dictate the nationality of the unit he plays **Twilight: 2000** with, since technically nobody is in the military anymore—"you're on your own").

Native Language: A character's nationality determines his native language. All characters receive a 10 skill level in their native language automatically, without penalties or costs. Characters of certain nationalities also have a chance of having a second native language. The second column of the Army/Nationality/Native Language Chart (on pages 47 and 261) lists possible second languages and the D10 chance that the character speaks them. For example, a Hungarian character has a chance of speaking German or Romany in addition to Hungarian. Players make D10 rolls for each language, in order, stopping at the first success or after failing to receive all of them. The character receives a Language: 10 skill level in his second native language too.

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Soviet Languages: Former members of the Soviet Army are treated differently. The player chooses his nationality and receives a 10 skill level in that language. (Each of the listed nationalities is also a language except for Ukrainian and Byelorussian, and in many cases the nationality also corresponds to one of the major political divisions of the Soviet Union.) If any nationality other than Russian, Ukrainian, or Byelorussian was chosen, the player also rolls 1D10 (if an officer) or 1D10+2 (if enlisted), rounding fractions up. The result is his skill in Russian.

In addition to native languages, players may acquire additional language skills as explained later in the rules.

ATTRIBUTES

Each character is described, in the simplest of terms, by six basic attributes: Strength, Agility, Constitution, Charisma, Intelligence, and Education. These attributes are divided between two broad groups: physical attributes (Strength, Agility, and Constitution) and mental attributes (Charisma, Intelligence, and Education).

Attributes may be determined in one of two ways—random generation or allocation. Random generation gives the player only minimal control over that character's attributes, but many players enjoy the challenge of playing a randomly generated character. Allocation allows the player greater input in shaping a character, but evens out the extremes of random fluctuation.

A player who rolls attributes totaling less than 30 points may add attribute points (allocated as he sees fit) to bring the total up to 30. This way the character is always at least average.

Random Generation: In this method, each attribute is determined by rolling 2D6–2 (reroll any roll that would result in a 0 attribute score). This gives a range of from 1 to 10 for each attribute.

Allocation: Players who choose the allocation method have a total of 32 points to be distributed among their attributes in any combination they wish. No attribute may have a value of 0 or more than 10.

Increasing Attributes: Attributes may be permanently changed as part of the character generation process, but do not change (except temporarily) as a result of game play. No attribute may be increased by more than 2 points during character generation. Thus the maximum attribute level is 12.

Meaning of Attributes: Attributes have the following definitions:

Strength: The numerical quantification of a character's muscular power.

Agility: A measure of the character's coordination and nimbleness.

Constitution: Health and physical stamina. This affects the character's resistance to disease and also influences his hit capacity.

Intelligence: A measure of the ability of the character to perform abstract reasoning. Intelligence primarily affects the ability of the character to learn; it is not the same thing as common sense. (How much common sense the character has is determined by the actions of the player himself.)

Education: A measure of the character's performance in a formal academic setting. This attribute determines how far a character can get in a university and serves as a prerequisite for certain forms of higher education.

Charisma: The extent to which the character is attractive to and trusted by strangers. This is a measure not only of physical appearance, but also of sensitivity and natural charm.

Abbreviations: The six attributes of Strength, Agility, Constitution, Intelligence, Education, and Charisma are used throughout these rules. For brevity, they will sometimes be abbreviated as STR, AGL, CON, INT, EDU, and CHR, respectively.

Me, I'm a grease monkey. That's why they call me "Monk." I keep the Hum-Vee purring and the LAV-25 limping along (so far). I guess I've always loved engines, which is why I'm so good with them.

Admittedly, with the LAV-25 it's definitely a love-hate relationship. Gordon's an engineer, and even though there's not much to work with in the way of construction material, she's kept us from driving over a couple bad bridges I figured would've supported us. And I'll never forget the time a year ago in Germany when she got us out of that FASCAM minefield those yo-yos in the First Cav dumped right on top of us.

I figure Wood has saved everybody's life at least once; last winter when I took one in the left wing and it got infected, I'd have been gone except for him. Carson, the major's driver, is a maniac behind the wheel and a deadly rifle



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shot, and Griffith, our master scrounger, could find roast chicken and mashed potatoes in the Sahara. We're a team. We complement each other. I guess that's why we're still alive.

EXPERIENCE

Player characters will have to carry out many difficult and dangerous tasks over the course of the game. Skills in various fields of knowledge will determine their success or failure. To begin with, a character will have accumulated a few skills before the age of 17 due to hobbies and education.

Each player chooses four skills from the following list and receives a level 2 skill in each.

Players have a reasonably free hand in choosing a detailed career background for their character. This background consists of formal education and/or one or more careers.

A character starts out at age 17 with certain minimum skills (these are picked up in the process of growing up, as noted above). The character may then choose to further his education or enter an occupation (including the military). For ease of calculation, backgrounds are lived through in four-year terms. A character may do anything he or she pleases, but must do it in four-year increments for ease of record keeping. Each career entry described on the Career List (pages 30-44) details the nature of the career and describes what skills are received for the first term (and skills which can be received in any subsequent terms). A character may enter any career for which he meets the prerequisites, but must spend at least one four-year term in that career before moving on. Nothing in these rules prevents a character from entering the game at age 17, although we cannot imagine why any player would want to do so.

Background Skill List

- Language*
- Swimming
- Ground Vehicle (Wheeled)
- Computer
- Unarmed Martial Arts
- Riding
- Survival
- Small Watercraft
- Ground Vehicle (Motorcycle)
- Tracking
- Farming

*Language is in addition to any native language(s) the character has as a result of nationality choice.

Bobbi Lee joined up with us back around Frankfurt-on-the-Oder and she's walked point ever since. The major says he's never seen anyone with an eye for an ambush like she has. Well, he's seen more than I have. All I know is that we've never gotten cracked with Bobbi Lee on point. She says it's because her brothers used to take her coon hunting. Maybe. But I've got a feeling that Ranger scroll on her shoulder has something to do with it.

MILITARY CAREERS

Military occupations are somewhat more detailed than civilian occupations due to the military emphasis of the game. Players chose a service for their character (army, marines, navy, air force) and, assuming they meet the entry requirements, they are enrolled.

If they come from a service academy or ROTC, they are commissioned as officers; otherwise, they are enlisted as privates. In either case, they immediately receive the basic training skills for that service.

After basic training, they pick an occupation (in the case of the army and marines, they should also note the arm of the occupation they chose—armor, infantry, artillery, etc.). In the case of the army, they should also note the arm of the occupation they chose. They then

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receive the first term skills for that occupation.

Note that basic training and the first career skills are both received in the first term spent in the service.

At the end of each career term, the character rolls for promotion and for the outbreak of war.

Back at Kalisz, when everything was falling apart and there were Soviet tanks all over the place, this crazy artillery captain comes running up to the LAV-25 and tells us he's taking us under command and we're going to ride shotgun for his ammo carriers.

In a pig's eye we were!

Just when things looked like they might get ugly the major got back from the QM depot with our rations, and that was the end of that deal. That captain wanted our LAV big time, but the major had the rank—and that's all she wrote.

Rank

Characters in military careers receive rank as part of the character generation process, recording their advancement by promotion during their careers. Rank is recorded either as enlisted rank (specialist, private, corporal, NCOs, etc.) or officer rank. Civilian careers do not have ranks.

A character's rank is a good measure of his or her success and level of responsibility in the prewar world. However, in the situation in the year 2000, people are no longer quite sowilling to automatically defer to someone who simply wears an insignia of high rank. Characters will find that real leadership is the result of a person's internal qualities, and the insignia of rank is only a reflection of those strengths.

NCO Skills
Leadership
Instruction
Persuasion

Secondary Activities

Acrobatics (dance or gymnastics)
Archery
Climbing (rock climbing)
CON +1 (jogging)
Disguise (neighborhood theater)
Early Firearms (historical re-Enactment)
EDU +1 (Adult education/night school)
Ground Vehicle (Motorcycle)
Ground Vehicle (Wheeled)
Language
Medical (Trauma Aid) (CPR and first aid lessons)
Observation (bird watching)
Parachute (skydiving)
Pilot (flying lessons)
Riding
Scuba (skindiving)
Small Arms (target shooting)
Small Watercraft (boating)
Snow Skiing
STR +1 (weight lifting)
Survival (camping)
Swimming
Tracking (hunting)
Unarmed Martial Arts

Arm of Service

A character may normally chose a career only from the arm of service in which he is currently enrolled. A character may switch arms of service (e.g., from infantry to armor) at the end of any or every term. When he does so, he adds two to his promotion die roll for the current term.

RESERVES

A character who completes one or more full terms of active duty with the armed forces may leave the armed forces and enter the reserve component. While in the reserves, the character may be active or inactive, at the player's option. This decision is made separately each career term.

An inactive reservist retains his previous rank but does not roll for promotion and does not receive any additional skills.

A character who is an active reservist counts this as his second activity for his main career for the term. He rolls for promotion normally and receives one skill level from the list of subsequent term skills for his military career. Active reservists may only choose careers from branches in which they served during active duty.

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OBTAINING SKILLS

Players obtain skills initially in two ways: automatic skills and acquired skills. Automatic skills include knowledge of the character's native language (or languages), certain combat skills all recruits are taught in basic training, and skills supplied by a character's education or career.

Acquired skills are learned from instructors as a part of the game (see the definition of Instruction skill). All skills are listed on the skill list, together with standard abbreviations and descriptions.

Skills are received in levels (sometimes skills are awarded as level 0—see "Unskilled Tasks," page 134). For example, a level of 4 in Aircraft Mechanic skill would be written on the character record sheet as Aircraft Mechanic: 4. The Language skill is a special case—each language is a separate skill. A level of 6 in Gaelic would be written as Language: 6 (Gaelic).

SECONDARY ACTIVITIES

The career chosen by a player does not occupy 100% of the character's time. Often a person's hobbies and pastimes can provide valuable additional skills. As a general rule, each character is allowed one "secondary activity" each term. This allows the player to take one level in any one skill from the Secondary Activities skills list at the left.

Some careers allow two secondary activities a term, while others allow none. The number of allowed secondary activities per term is the number of skill levels received.

LANGUAGES

Each skill level received counts double for any language in the same group as the character's native language.

All European players receive double levels in all Germanic, Romance, and Balto-Slavic languages.

For example, suppose that a European player receives a language skill level. If he takes it as Dutch (a Germanic language) he receives two skill levels in Dutch, while if he takes it as Korean he receives only one.

ADDITIONAL NOTES ON SKILLS

Cascade Skills: A few skills are cascade skills. A cascade skill is one which includes several lesser skills under one broad heading.

Examples of cascade skills are Pilot, which includes both Fixed-Wing and Rotary-Wing (helicopter) Pilot skill, and Small Arms, which includes both Pistol and Rifle skill.

A character who receives a cascade skill must decide on an area of special interest from among the subskills covered. From then on his skill level in the chosen specialty skill is the same as his level in the overall skill. His level in all of the other subskills is half his level in the overall skill, with fractions rounded down.

For example, a character receives a Small Arms skill level of 3 and decides he will specialize in pistols. His skill level with pistols is 3, while his skill level with rifles is 1½, rounded down to 1.

Sometimes it is possible to receive a skill in a cascade other than the one the character has already chosen as his specialty. For example, consider the character above with Small Arms: 3, specializing in Pistols. If he then goes through army basic training he will receive Rifle skill. The Rifle skill received adds to his Rifle skill only, not his overall Small Arms skill, thus giving him Small Arms (Pistol): 3 and Small Arms (Rifle): 2 (1½+1 = 2½, rounded down).

However, if this extra skill would cause his Rifle skill to exceed his overall Small Arms skill, then his overall skill will go up, and Rifle will become his new specialty.

In either case he will have to keep separate track of his Rifle and Pistol skills from then on.

A while back, Sgt. Anderson, Alvarez and I were in some little town I can't pronounce (let alone spell), dickering with some yokels for fresh vegetables, when eight Ivan cavalry breezed into town. Things got a little tense when we saw each other. Evidently they weren't expecting to see us either, because none of them had their guns out.

Well, we stood there looking at each other for a second or two, when suddenly one of the Ivans lets out this laugh and says, "Ander-soon?"

Sarge looked at him, and recognition gleamed in his eyes.

"Femerov!" he cried, "I thought they hung



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your commie rear last year, you old reprobate." Then they both began chattering in Russian—which I do not speak.

Turns out he and the sarge were both assigned to the capital of Iceland (I can't spell that either) back in the stone age, and it's a pretty boring duty, so they took to hoisting a couple once in a while—hadn't seen each other in a coon's age.

Small world, I guess. Good thing too. We might've hurt those guys!

CONTACTS

As part of his educational or occupational background, a character can acquire contacts. These are friends, acquaintances, associates, colleagues, and confederates (even rivals) that a character has some previous association or connection with. Basically a contact is someone from the character's past, encountered at an opportune moment in an adventure session ("You just happen to run into an old pal from your college days."). The rules given below are a means of regularizing these seemingly chance encounters. It is intended that contacts be used (at the referee's discretion) to add interest and variety to an adventure by providing an additional resource for characters to make use of in a crisis or to spur the plot along. In the hostile environment of the year 2000, contacts can be vital.

Contacts exist in one of two forms: generic and solid. A contact must be one or the other—it cannot be both.

Generic Contacts: Generic contacts are assigned during character generation. The player may work up attributes and skills for them at any time, if desired, or this can be left to the referee. In some cases, it may not be necessary to develop a contact in great detail, unless the situation is such that the contact could turn into a recurring character.

Foreign contacts are contacts of another nationality than the character's. All contacts are in terms of what the contact did before the war. Each entry below contains suggestions on what that contact might be doing in 2000 (although the referee should supply the details for individual situations).

Academic: The contact is a member of the intellectual community, meaning he could be a professor, writer, or member of a social sciences think tank. In 2000, an academic contact could be part of a community's governing body, or could be an official in a small town. On the other hand, nothing prevents a professor of social science from becoming a soldier, marauder, and so on.

Business: The contact is a member of the business community, meaning he could be an executive in a corporation, or a mover and shaker in the banking or investment field. In 2000, business contacts could be merchants, military officers, or officials in a community government.

Criminal: Before the war, the contact was engaged in a form of criminal activity, and in 2000 he has probably reverted to old habits. The contact could be a soldier, smuggler, marauder, or some kind of criminal leader inside a larger community organization.

Entertainment: The contact was once part of the entertainment industry, either as an actor, director, or technician. In 2000, entertainment contacts can be almost anything, but will tend to cluster around their areas of expertise. Directors and technicians will have served in signal corps units during the war; actors may have been with USO tours and become stranded.

Of course, any of them could have enlisted or been drafted when the war started.

Government: The contact was some form of government official before the war. He may now be making use of those talents in running (or helping to run) a small community, a unit of soldiers, or a mob of marauders.

Intelligence Community: The contact worked in espionage, either as a field operative, controller, or intelligence analyst. The contact might be a soldier, part of a community government, or (rarely) still doing business at the old stand.

Journalist: The contact may have worked with the character on a newspaper, magazine, or television newsgathering staff. Perhaps the journalist was sent to cover the war and is now stranded. The contact could turn up just about anywhere.

Law Enforcement: The contact was a policeman or investigator of some sort, and is probably doing the same sort of thing for a small community government.

Medical: The contact was a medical doctor or administrator, and more than likely is still in that business.

Military: The contact was a soldier before the war, and could be just about anything in 2000, although soldier, mercenary, or marauder are the most likely occupations.

Specialist: Before the war, the contact was a construction engineer, medical technician, or one of the other specialities mentioned in the Career List. In 2000, the contact will probably be making the best possible use of his speciality to survive. Specialists have skill level 8 in their specialty.

Wealthy: The contact is (or rather was) wealthy, and may have converted some of that prewar wealth into postwar power or influence. The contact may be involved in some form of local government, in a mercantile operation, etc. On the other hand, the contact may be encountered as a penniless wanderer who happens to have some bit of vital information for the adventuring group.

Solid Contacts: Solid contacts are those which have been assigned a name, skills, attributes, suitable background history, and so on, and have been used in an adventure.

Players may not convert a solid contact back into a generic one, but they can run into the same fellow again in a different place if the referee is agreeable. Once a generic contact is turned into a solid one, the referee must pay a little closer attention to how he might go about showing up in future adventures. A contact in a marauder band or a merchant convoy can be expected to wander, but a contact in a community government or a local militia will tend to stay in the same geographic area. Also, contacts can (and should) change over time. Next time you run into Femerov, maybe he'll be running a village—or scrounging in the ruins.

Example: Let's take the situation from the narrative at the beginning of this section. During generation, the character of Anderson acquired a number of contacts, including one foreign military type. When a small party of the characters are in a tight spot (surprised and outnumbered by a party of Soviet cavalry), the player controlling Anderson asks the referee if he can use up one of his contacts. The referee decides for himself how likely this might be, rolls a die, and then agrees. The player controlling Anderson had previously worked out that the foreign military type was a Soviet soldier, and had roughed in the name, how and where they met, and other general details.

The referee determined how to work this contact into the adventure session (by deciding that Femerov would be in command of the party of Soviet cavalry, and that he would be friendly towards Anderson's companions as well). In most cases the referee will decide to add contacts to the adventure without prompting by the players. If the players specifically ask, there should be a slim chance (say on a roll of 1 on the D10) that a contact will be present.

There are so many possibilities for contacts that it is not possible to do more than suggest a few here:

- An entertainer character was in a soap opera that was shown on European television. The character might encounter a fan of that show ("Omigosh—you're Lance Carter! I can't believe it—Lance Carter from *The Stomach Turns*! I watched every episode!"

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• A government agent character recognizes a nemesis from the old days. Since the present situation makes old animosities a little silly, perhaps the contact is in a mood to be charitable. ("I never thought I'd see you again, Carstairs. Before last year, I'd have shot you on sight for what you did to me in Prague in the spring of '92.")

• "Well, they hauled me into KGB Headquarters, and who should be sitting behind the desk but my old pal, Captain Penkovski. 'Penkovski!' I said, 'Get me out of this, can't you?' He just looked me over and said, 'Douglas, my old friend, I am not exactly in charge of things here.'"

As a kid I saw John Wayne in The Sands of Iwo Jima *and Dan Daley in* What Price Glory *on the late show. I guess that's how I always pictured first sergeants—great big guys. But our "top," Anderson, is a quite little guy. It seems like he's been in forever—if we had dress uniforms, he'd have hash marks up his sleeve and across his shoulder blades.*

One night he got talking about a place in Vietnam he called "Happy Valley," and it sounded even worse than all this. I said so, and he just shook his head. "Monk," he said, "The A Shau was just one valley. This is everywhere."

WELCOME TO HELL

This section describes the final polishing to be done to your character, and covers the skills the character may pick up as a result of having been in combat for a year or more.

The War: At the end of each term, roll 1D10. If the roll is equal to or less than your current term number, war breaks out (i.e., war breaks out at the end of the first term on a roll of 1, at end of second term on roll of 1 or 2, etc.).

Once war breaks out, the character has one term under fire. All regulars get one automatic promotion and roll again for another at the end of the term. Reservists and draftees just roll. All characters get their normal skills for a subsequent term.

Regulars and recalled reservists get twice the normal number of skills allowed by their military career—these are chosen from the subsequent term skill list. They are not allowed a second activity during this final term.

American civilian characters are drafted unless their career notes specify otherwise. They receive basic training, then pick a military career and receive its skill points. Draftees are allowed a second activity during this term.

Civilian characters who receive direct commissions as medical officers or engineers are treated as draftees.

European civilian characters are drafted into the militia. This has the same result as being drafted into the army except these characters do not receive basic training. Militia characters are allowed a second activity during this term.

Government agents (who are exempt from the draft) may volunteer for service, in which case they are treated as draftees, or they may remain as government agents. If so, they conduct a normal career term and then find themselves with the other players. Government agents are allowed a second activity during this term.

We've been in some tight spots now and then, but for some reason I've never lost my head. I don't know why. Wood, who used to be a pre-med student and is the closest thing we have to a medic, says my glands produce too much noradrenaline. He says that's why I don't panic during the fireworks, but shake like a leaf when it's all over. Well, I've seen people panic under fire. They don't shake afterwards; mostly they lie very, very still. I think I'll keep my glands the way they are.

INITIATIVE

Initiative is a characteristic of great importance in the Twilight: 2000 combat rules, and its effects are explained starting on page 194.

To determine Initiative, regulars roll 1D6, reservists roll 1D6+2 (round up), and draftees roll 1D6+2 (round down, but reroll results of 0). Add one to this roll for rangers, airborne, special forces, force recon, snipers, and equivalents. Subtract one from this roll for support, air force enlisted, aviation enlisted, and military intelligence (but never reduce Initiative below 1).

We accidentally moved through an old impact crater once. Didn't bother most of us, but Anderson and the major both got sick for about a day. Not super sick, but nausea and weakness. Wood says there's nothing to worry about because none of us have anywhere near a bad dose, but we've got to be careful, because exposure is cumulative. The major and Anderson have been here from the start and have just picked up more than the rest of us.



RADS

Since nuclear weapons were used earlier in the war, some exposure to radiation is unavoidable. Rads are a measure of the extent of exposure a character has suffered. (No character will begin the game with serious or lethal exposure levels, for obvious reasons.)

The number of rads a character has been exposed to should influence his willingness to take risks in potentially contaminated areas.

To determine the exposure level of a military character in rads, roll a number of D6 equal to twice his Initiative. To determine the exposure

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level of a civilian character in rads, roll 1D6 and 1D10 and multiply the two die rolls by each other.

Most of us are pretty young—all but the major and Anderson. The major once said this was a young man's war, and Anderson said, "So name one that wasn't." We call him "Sergeant Anderson, United States Army, Retired." He must be pushing 50. I found out he really was retired, but got back in when all this started. He says he got reactivated, but I don't think they do that. I think he actually pulled some strings to get back in. Other than that, though, he seems reasonably sane.

AGE

A character's age at the time an adventure campaign begins is determined by multiplying by 4 the number of terms served and adding 17 to the result. In other words, (4×Terms)+17=Age. Age adds a further dimension of reality to play, helping players visualize their characters as actual people, rather than merely numbers on paper. It is possible for beginning characters to have range anywhere from age 17 on up, although few characters will be older than 37 or so.

Effects of Age: At age 33, the effects of age may start to take their toll on a character physically. Beginning at age 33, i.e., the end of the fourth term, a character must check for the effects of age at the end of each term. At the end of the fourth and fifth terms, the character rolls 1D10 to check for losses in Agility. At the end of the sixth and seventh terms, both Agility and Strength must be checked. At the end of the eighth and every term thereafter, Agility, Strength, and Constitution must be checked.

In addition, once characters reach age 65, at the end of the 12th term, they must start rolling for a decrease in Intelligence. (The Consolidated Effects of Age Table illustrates these progressions, as well as the reduction in the amount of skills gained during careers due to aging.)

The character loses 1 point from the relevant attribute if the 1D10 roll is less than the current level of that attribute. If the roll equals or exceeds the attribute, there is no loss. This check, also called an age saving throw, is made at the end of each term.

Example: Alvarez ends her fourth term and must roll for a reduction in her Agility, which is presently 9. She rolls a 3 and since that is less than her current attribute level of 9, she loses 1 point of Agility. In another example, upon leaving his eighth term to enter active play, Roosevelt Jefferson must roll three times, once for Strength (presently 6), once for Agility (presently 9), and once for Constitution (presently 5). The rolls are 7, 6 and 5 respectively, so Jefferson does not lose any Strength or Constitution points, but has his Agility reduced to 8.

Aging In Play: Aging in play works the

CONSOLIDATED EFFECTS OF AGE TABLE

Term	Start Age	End Age	ST*	Losses STR	AGL	CON	INT
1	17	21	†	—	—	—	—
2	21	25	5	—	—	—	—
3	25	29	4	—	—	—	—
4	29	33	3	—	Y	—	—
5	33	37	2	—	Y	—	—
6	37	41	1	Y	Y	—	—
7	41	45	1	Y	Y	—	—
8	45	49	1	Y	Y	Y	—
9	49	53	1	Y	Y	Y	—
10	53	57	1	Y	Y	Y	—
11	57	61	1	Y	Y	Y	—
12	61	65	1	Y	Y	Y	Y

* ST = Number of Subsequent Term skills.

† This number will vary depending upon the first term skills of the first career the character enters.

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same way. Upon reaching the crucial age as indicated in the "End Age" column above, the player must roll for whatever attributes are marked Y in the "Losses" columns. For example, on Captain Toye's 45th birthday (determined by the player), his player must roll to save his STR 5 and AGL 8. The player rolls 10 and 5, saving the STR, but losing a point of AGL (not too bad). Soon, however, it is poor old Sgt. Anderson's 65th birthday. He rolls for STR, AGL, CON, and INT with a 3, 9, 2, and 3. Anderson loses 1 point from each his STR and INT. Happy birthday, Top.

Although rolling for character aging on their birthdays is convenient, referees may wish to invoke the attribute changes gradually over the course of the year.

SKILL- AND ATTRIBUTE-DERIVED VALUES

Once the character has finished all steps of character generation which affect skills and attributes, the following values, which are derived from skills and attributes, can be calculated.

Hit Capacity: Hit capacity is a measure of the amount of damage (hits or hit points) a character can take before suffering serious injury. Hit points can be suffered in any of seven different parts of the body: left leg, right leg, left arm, right arm, head, abdomen, and chest.

The hit capacity of a character's head is equal to twice his Constitution (CON×2). The hit capacity of his chest is equal to three times the sum of his Strength and Constitution [(STR+CON)×3].

Each of his other body parts has a hit capacity equal to two times the sum of his Strength and Constitution [(STR+CON)×2].

Boxes are provided on the character record sheet for players to write their characters wound level threshholds. Consult the "Wounds and Healing" section of the Combat chapter for the details of determining wound thresholds and the effects of being wounded.

Weight: A character's weight in kilograms is equal to 80 plus four times Strength minus Agility [4×(STR–AGL)]+80. Thus, a character with a Strength of 6 and Agility of 1 would weigh 100 kilograms (roughly 220 pounds), while a character with a Strength of 4 and an Agility of 8 would weigh 64 kilograms (roughly 141 pounds).

Physiological differences, particularly in bone structure, produce smaller body masses in women. For a female character, weight in kilograms is equal to 65 plus four times Strength minus Agility [4×(STR–AGL)]+65. Thus, a female character with a Strength of 6 and an Agility of 1 would weigh 85 kilos (roughly 187 pounds), while a female character with a Strength of 4 and an Agility of 8 would weigh 49 kilos (roughly 108 pounds).

Load: A character can carry a considerable amount of equipment cross-country, but there is a limit. A character may carry, without being heavily burdened, weight in kilograms equal to three times the sum of his Strength and Constitution (STR+CON)×3. This is called his normal load. A character may carry up to twice this amount, but is burdened and has his movement reduced, as explained in later rules. A character may lift loads up to four times this amount and carry them short distances (50 to 100 meters), but this counts as hard work under the fatigue rules, as explained later in this book. Characters may combine their load capacities to lift heavy objects.

Throw Range: The distance (in meters) a character can throw a one-kilogram weight accurately is called his throw range. Throw range is four times the character's Strength (STR×4).

One day everyone was out foraging, except for me. I was working on the LAV-25's transmission. The story of my life. First thing I know there's this Hungarian sergeant leaning under the LAV-25 and sticking a Makarov in my face. Beats me what he was doing this far north, but he was pretty skinny and raggedy looking, so I figure he was probably a deserter. Well, I was tired of working on the LAV-25 anyway, so I crawled out and stood up.

About then Bobbi Lee got back to camp, and I guess she wasn't expecting trouble, because it's the only time I've ever seen her surprised. She dropped her M16, but then the Hungarian looked back at me. Wrong move. Bobbi Lee kicked him. She kicked him in the HEAD. She kicked him so hard she broke his neck. This I do not believe she learned coon hunting with her brothers.

Unarmed Combat Damage: Unarmed combat damage determines the amount of damage a character will inflict on an opponent if he hits him during melee combat. Unarmed



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combat damage is determined by multiplying a character's Unarmed Martial Arts skill by his Strength and dividing by 10, rounding fractions down (unless this would result in 0, in which case it is 1).

The result is the number of hit points the character will inflict per attack.

Example: Bobbi Lee has a Strength of 8 and a Unarmed Martial Arts skill level of 8. From this, calculate the unarmed combat damage [(8×8)+10=6]. Bobbi Lee will inflict 6 hit points per unarmed combat attack.

Right there at the end things got pretty hot at Kalisz, and we ended up having to make a run for it across about 200 meters of fire-swept open ground. Well, we made it, somehow, and even the Hum-Vee didn't take much damage. But the alcohol still on the trailer behind the LAV-25 got all shot up. That's bad news, because we can't run these vehicles on bat droppings, and gasoline's scarcer than politicians these days.

I got it mostly patched up, but the tubing had been shot away and fell off the trailer. I told the major we needed tubing for the still or we'd have to start walking. He called Griffith over and told him we needed some tubing for the still. "What kind?" he said. "Copper would be nice," I said. "Right." And he was gone. Eight hours later he's back with 15 feet of copper tubing and an almost-new truck battery with a full charge on it as a bonus. I don't know how he does it.

EQUIPMENT

Soldiers accumulate gear, particularly in as fluid and changing a situation as this one. Each character begins the game with a basic load of equipment and personal possessions (as detailed later on) and a personal weapon. The personal weapon depends on the character's army, and should be selected from the Personal Weapons List on pages 50 and 266. Thus, a Czech character could choose any of the personal weapons listed under Czech personal weapons. Each officer also receives a pistol in addition to his personal weapon. Note that an American officer may choose either an M9 or M1911A1 pistol.

Transportation: Next, characters should roll for vehicles, using the Vehicles Table. Only a party of three or more characters will have vehicles. Each group of characters receives one D6 die roll for vehicles for every three characters in the group (rounding fractions up). Players may combine their dice into 2D6 or 3D6 rolls if desired (but not 4D6 or more); many of the more desirable vehicles are only obtainable with rolls greater than 6.

If players wish, they may use one or more vehicle dice as animal dice instead. The number rolled on animal dice is the number of animals the party owns. These may be divided among the various draft animals listed on page 88 as the players see fit, provided that the animal is appropriate to the climate and terrain of the campaign.

For example, a party of seven characters would have three D6 rolls for vehicles. They could use them as three rolls of 1D6 or one roll of 1D6 and one roll of 2D6. They could also use one or all of the dice to roll for animals instead.

Each vehicle begins the game with a full tank of alcohol fuel and a full load of ammunition as given in the vehicle's entry on the Equipment List. (Type is up to the players, but the referee should restrict the quantities of rare ammunition chosen.) Vehicles and their characteristics are given on the Equipment List. Players should photocopy a vehicle card for each vehicle their characters own. Weapons cards should also be copied for weapons mounted on these vehicles.

Characters in services making special use of vehicles (armor, airmobile, air force, etc.) do not automatically receive a vehicle.

Buying Equipment: Finally, each character can "buy" equipment at the beginning of the game. This is not meant to represent the actual purchase of equipment; instead, the money for buying equipment allocated to each player is a representation of the value of the equipment he has accumulated over time.

Players may buy equipment separately or may pool their resources to buy equipment. Note that motorcycles do not appear on the Vehicles Table and thus cannot be obtained with a vehicle die roll. They may, however, be purchased.

To determine a character's equipment purchase allowance in dollars, multiply the number of terms served in the military by 5000, if enlisted, or 10,000, if an officer. Terms spent in the reserve component are only counted if the character was active in the reserves that

Vehicles

Die	*Vehicle*
1	¾-ton truck
2	¾-ton truck
3	HMMWV
4	HMMWV
5	HMMWV
6	2½-ton truck
7	2½-ton truck
8	5-ton truck
9	5-ton tank truck
10	LAV-25
11	M113A3
12	M977 HEMTT
13	M2A2 Bradley
14	M2A2 Bradley
15	M1
16	M8 AGS
17	M1A1
18	M1A2

This table is for US personnel. The referee may substitute equivalent vehicles for other nationalities as necessary.



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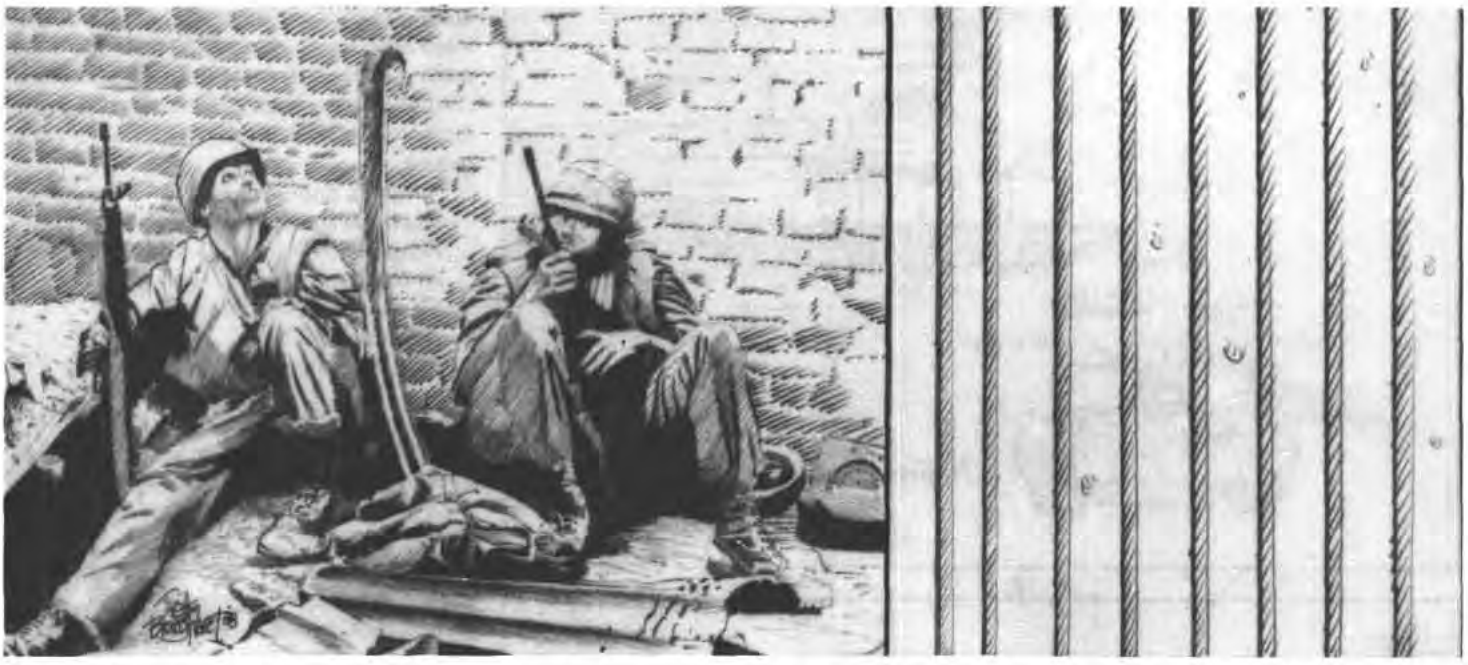

term. Note that even civilian characters are considered to have spent one term (the one after war broke out) in the military.

All items of equipment are listed in the Price List on pages 248-251, along with their rarities and prices. They are described in greater detail in the Equipment List. An Eastern Bloc character may not buy equipment listed as rare in the East; other characters may not buy equipment listed as rare in the West. A character may, if he desires, take up to 10% of his total equipment allowance in gold coins, in the hope of using them later to purchase additional supplies.

Since the PCs start the game on the run, no equipment may be bought which cannot be carried in their vehicles. Vehicle cargo capacities are given on the vehicle cards; armored vehicles may carry an extra 10% of vehicle weight fastened to the outside of the vehicle. All equipment and all passengers (but not crew) must fit within those limits.

Additional Characters: During the course of the game, it may be necessary to incorporate additional player characters. This may be due to other players wishing to join the group, or as a result of one of the players having his character killed and generating a new character to rejoin the group. In this case, it is possible to meet a new group or just a single character. A single character could not have a vehicle (except for a motorcycle) and thus probably will not be able to carry all of the equipment he could purchase. The referee should allow the character to purchase his full allotment of equipment, but join the group only with the equipment he can carry on his back. The rest may be in a hidden cache some distance away, and the trip by the group to the cache can constitute a small adventure itself. Naturally, the cache should not be too close to where the new character joins the group, and placing the cache in a dangerous area will add interest to the mission.

To appreciate fully the truth that "men are but children of large growth" one must have commanded soldiers. [T]hey will at once eat or throw away the rations furnished for several days, never considering the morrow. They will cast aside or give away their clothing because today it is warm, never calculating that the next day they may be suffering for the want of it. An officer, to be truly efficient, must add to the qualities of courage and firmness, those of nurse, monitor, and purveyor for grown-up children.

Col. F. R. Keefer, CSA

LIFE IN THE SERVICE

This material is presented for the benefit of players and referees who may be unfamiliar with some of the terms and practices of service in the military.

Basic Training: This is the minimum training given to all soldiers, and includes training in military courtesies, basic weapons and equipment familiarization, and a general introduction to the way things are done in the military. It also serves to bring recruits to a minimum standard of physical condition, acquaint them with the tasks they will have to perform in the future, and instill a sense of camaraderie. The most important thing done in basic is to instill a sense of the military as peer group (not to train everyone to shoot, although that's one side effect). Basic training lasts 18 weeks in the American Army; other armies have different systems.

Recruits undergo basic training at one of several training centers: Ft. Wood, MO; Ft. McClelland, AL; Ft. Gordon, GA; Ft. Jackson, SC; and Ft. Dix, NJ.

Players who are intensely interested in precisely what is involved might want to go to a military surplus store and buy a copy of the various volumes of the *Soldier's Manual of Common Tasks*. These are fairly inexpensive and go into much more detail than we possibly can here.

Advanced Training: After basic training, the soldier goes on to a course in whatever specialization he has chosen, including training with any special equipment or weapons required. Scouts learn to scout, artillerymen learn to shoot big guns, infantry learn to be infantry, and so on. Each specialty (called an MOS, or military occupational specialty) is assigned a code for easy classification (the MOS for M1 tank crewmembers is 19K, or "Nineteen-Kilo," for instance), but these are not important to the game. An MOS simply represents what your job is in the military: armor crewmember, heavy weapons specialist, scout, clerk, mechanic, etc.

Officer Training: Soldiers who show the right talents may go into an officer candidate program (or may have been in ROTC or a military academy before enlisting). Here they received training in various skills necessary to be an officer (leadership, tactics, command, administration, etc.). As officers are promoted, they may complete other courses of training.

Schools: The training centers for the various

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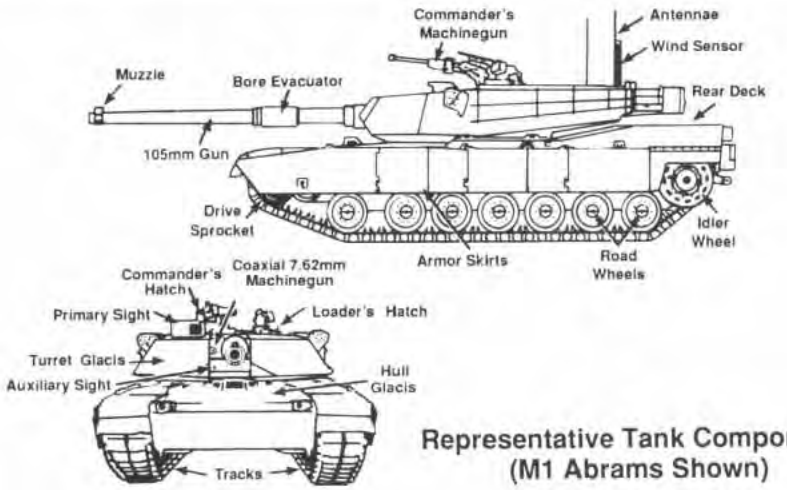
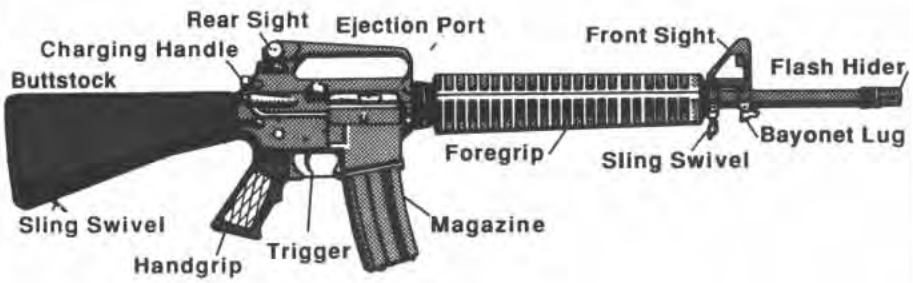
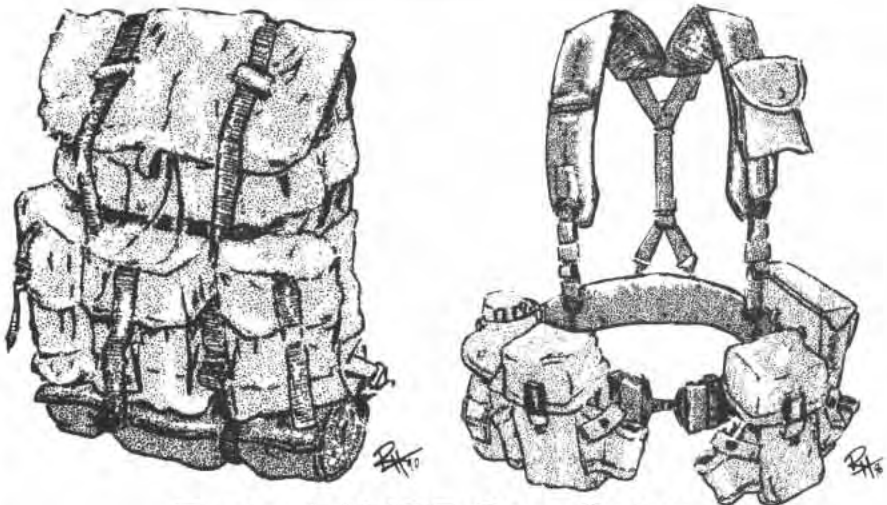


Representative Tank Components
(M1 Abrams Shown)



M16



Typical ALICE Gear Setup

specialties are called schools. One exists for each major specialty and branch. A list of some of the major schools (at least the more common player choices) and their locations are provided below, for characters to use in adding detail to their background.

Armor: Ft. Knox, KY.
Infantry, Airborne, Engineers: Ft. Benning, GA.
Ranger: Ft. Stewart, GA.
Air Defense Artillery: Ft. Bliss, TX.
Medical: Ft. Sam Houston, TX.
Artillery: Ft. Sill, OK.
Aviation: Ft. Rucker, AL.

MILITARY TERMS & EXPRESSIONS

AAMG: A ring-mounted weapon, usually fired by a vehicle commander, intended to be fired at low-flying aircraft, but usually employed against ground targets.

ALICE: Acronym for all-purpose, lightweight, individual carrying equipment. This is web gear, pack, and pouches designed to help carry equipment.

Blooper: 40mm grenade launcher and (less often) the soldier detailed to fire it.

Coaxial: A secondary weapon set up to fire parallel to the main weapon. It is usually of smaller caliber and is most often a machinegun matched with a large-caliber gun.

Cupola: A raised housing for a hatch, usually incorporating view slits and a ring mount for an AA weapon.

Glacis: The sloped forward armor of a vehicle hull.

Klick: Kilometer.

Ma Deuce, Mother Deuce: Slang expression for the M2HB .50-caliber machinegun.

Military Time: Time in the military is always given according to a 24-hour clock to avoid confusion. 9:00 a.m. is 0900; noon is 1200; 1:42 p.m. is 1342; and 12:23 a.m. is 0023. Dates are written in day/month/year format: 23 JUN 01.

MOPP Suit: The acronym for mission operative protective posture, the U.S. military's chemical/bacteriological/radiological protective suit.

MOS: Military occupational specialty. Explained on page 27.

MRE: Meal, ready-to-eat, individual, a prepackaged field ration intended for consumption by one person when normal food service is not available. It requires only minimal water (unlike the earlier freeze-dried rations) and weighs less than the earlier canned rations. Like all military food, it is universally despised (it is widely rumored that MRE really stands for "meals rejected by Ethiopians").

Phonetic Alphabet: It is often necessary

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to send information (map coordinates, authentication codes, etc.) over equipment with poor voice transmission qualities. To make sure that people do not confuse letters that sound alike (such as A/K/J, M/N, etc.) soldiers are trained to use a phonetic alphabet. In the U.S. military, this is: **Alfa, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliet, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, Xray, Yankee,** and **Zulu.** Players and referees may make of this what they will.

"Rock and Roll": Full automatic fire, as opposed to semiautomatic fire.

Zulu: Referring to a time, the word zulu means Greenwich Mean Time, as opposed to local time. It is indicated by appending a "Z" to the end of the standard military time expression (1421Z, pronounced "fourteen-twenty-one-zulu").

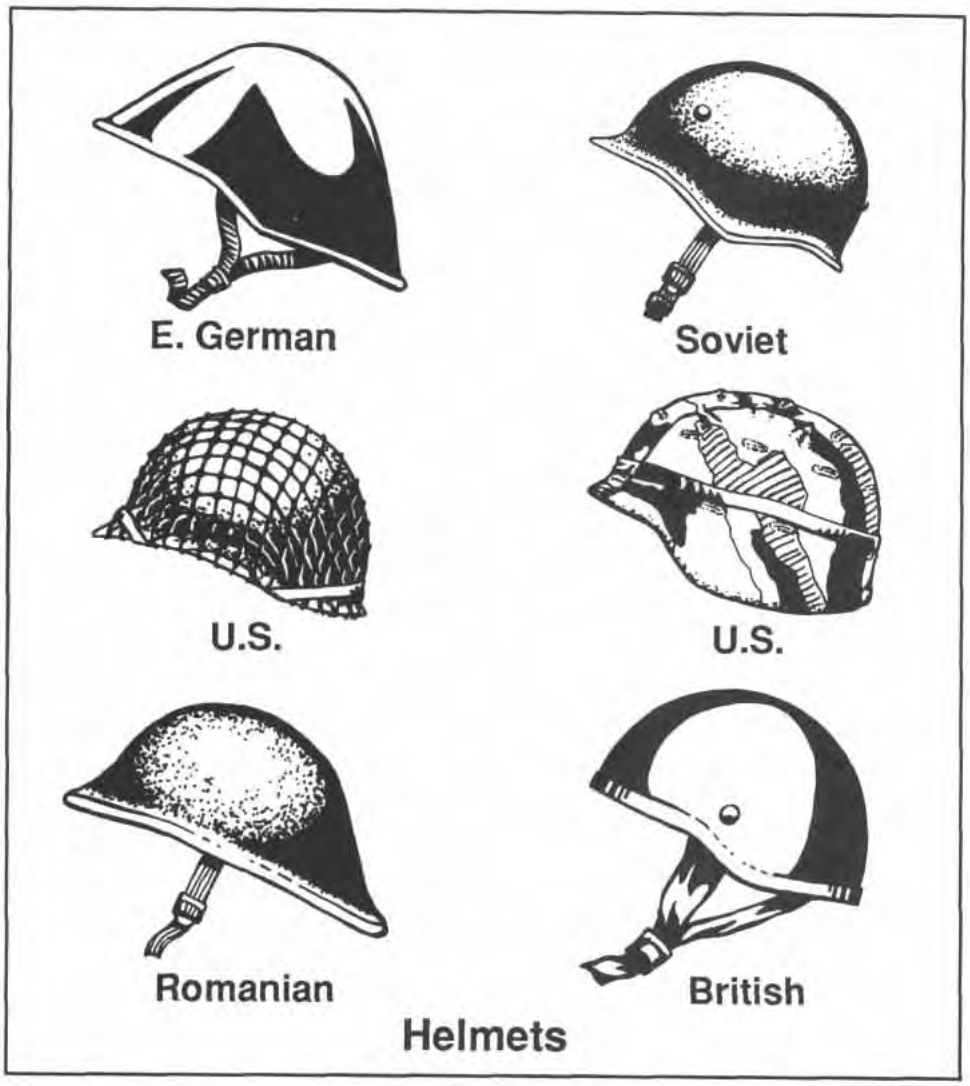
TYPICAL EXPERIENCES

This section is intended to help players flesh out their character backgrounds. Devising what past experiences a character has had is an excellent way to make a character seem more three-dimensional and well rounded, and will increase player enjoyment. It will also prove helpful to the referee in deciding what kinds of contacts are possible for a particular character. This kind of chrome can have a very real effect on the course of the game.

A player has a free hand in devising his character's background, provided he sticks to the career path as laid out when the character is generated. Birthplace and nationality are largely up to the individual player, but this will not have a great effect on the final statistics (details like this can be filled in at a player's discretion). The character's age determines some of the background details: Military characters of the proper age may have seen action in Vietnam (1964-1975), Grenada (1983), Panama (1989), Iraq/Kuwait (1991), and Somalia (1991-1993). A character born in 1952 could have enlisted in 1970, served one term, and returned to enter college in 1974. Graduating in 1978, the character could have pursued a civilian career until 1996.

A character born in 1970 could enter college in 1988, graduating and becoming a police officer in 1992, and serving one term before the war. He could have enlisted in the army as an MP when the war breaks out.

The sequence of education dictates some aspects of a character's background. A doctor born in 1962 would have been in school/interning until 1988, for example, and would be 34 in 1996, at which time he was drafted into an army medical unit (they need doctors of any age).



Helmets


MRE

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Careers

In the first term of a career, a character receives a fixed package of skills from a group of skill areas which represent training in the core knowledge necessary to function in the career.

In every subsequent term of service in that career, the character receives additional levels of skills from a group of skill areas. After the first term in a given career, the player selects skills from the Subsequent Terms heading, not the First Term heading.

Players receive five skill levels in their second term of service, four in their third term, three in their fourth, two in their fifth, and one in their sixth and every subsequent term.

Term Skill Levels

Term	*Age Start-End*	*Term Skills*
1	17-21	*
2	21-25	5
3	25-29	4
4	29-33	3
5	33-37	2
6+	37+	1

*Depends upon first-term package

Note that this reduction in number of skills received is based on the total number of terms served by the character, not just the terms served in a particular career. For example, a character begins a career on term 1 and continues it on term 2, but changes careers on term 3. On term 3, the player receives the full first term skill package for the new career, but then on term 4, the character would receive three subsequent term skills from the Subsequent Terms skill package, not five. The information on number of skills per term is also recorded on the Consolidated Effects of Aging table on page 24, and on the character Generation Worksheet, page 267.

Players may divide the levels among the skills listed in the allowed skill group in any manner desired. If five skills are listed and a character is entitled to four skill levels, the player may take a level 4 skill in one of them, two level 2 skills in different areas, four level 1 skills, etc. If the character already has skill in the area chosen, the additional levels are added to the levels already there. Thus, a character who already has Navigation 1 who then selects two levels in Navigation now has Navigation 3.

Basic Training: Characters entering the military receive a basic training skill package during their first term. This package is *in addition* to the first-term skills package received. Characters may only receive basic training *once:* during their first term in any branch of the military. Later transfers to other branches do not confer additional basic training packages.

Education Skills: Skills received in education terms do not follow the 5-4-3-2-1 pattern described above, but are based on the character's EDU, as stipulated under the career listing. Most education types cannot be taken for more than one term; the one exception is graduate university, which can be taken as many times as desired.

Promotions: In each term of service, characters roll to see if they are promoted. Although the promotion heading is included under the Subsequent Terms heading of the career listings, the roll is made on the first term as well. Each career has a promotion number and DMs affecting that promotion roll. Generally, if a promotion is achieved, the character advances to the next higher rank in the service. A character is eligible for one promotion per term of service.

A character who receives a promotion also receives one additional skill drawn from the Subsequent Terms list (even if the promotion is received during the first term), and advances one rank.

The chart on pages 46 and 263 lists the two classes of rank in the US military (enlisted/NCO and Officer) in ascending order from the top (the lowest ranks are at the top and the higher ones at the bottom). Equivalent rank names are given on pages 45 and 262 for the military forces of other nationalities.

If an officer makes a promotion roll, he or she is promoted to the next highest grade.

If an enlisted man makes promotion, he is made an NCO or, if he is already an NCO, is promoted to the next highest NCO grade.

Enlisted privates who fail their promotion roll are made specialists instead. Enlisted specialists who fail their promotion roll remain specialists.

When an enlisted man is made an NCO, he receives one skill level in each of the three NCO skill areas listed on the NCO Skills List below. In each subsequent term he may take one of his skill points as an NCO skill instead of the normal term skills for that career. This three-skill package is a one-time benefit, and is taken in lieu of the normal single skill earned with a promotion.

All of these conditions apply to the equivalent ranks in other services (a marine enlisted private who fails promotion is made [or remains] a lance corporal, and so on).

NCO SKILLS
Leadership
Instruction
Persuasion

Changing Branches: Characters who are planning to change military branches on the following term must subtract 2 from their promotion die rolls.

Civilian Promotions: Civilian careers have no ranks. Characters in these careers roll normally for promotions, and receive the additional skill when they roll a success, but no rank or change in rank is recorded. Players should assume that some form of professional advancement or recognition was achieved with the roll, but nothing so easily recorded as a military rank.

CAREER LIST

Careers are divided into three broad categories: education, civilian, and military.

Education

Higher education is a prerequisite for many careers. Certain forms of higher education have Education requirements for admission, and others do not. All schools are limited to one term unless otherwise indicated.

Undergraduate University

Entry: Education: 5+.

Skills: Total skill levels equal to character's Education attribute from any combination of the following, but no more than level 3 in any one skill:

- Biology
- Chemistry
- Construction
- Computer
- Geology
- Instruction
- Language
- Metallurgy
- Meteorology
- Excavation
- Persuasion

Contacts: One, either academic or journalist.

Special: May elect to join ROTC (Reserve Officer Training Corps), NROTC or AFROTR (the naval and air force equivalents). If so, add Leadership: 1 in place of any two skill levels above. The next career choice must include either entry into the appropriate branch of the regular armed forces or enrollment in the reserves in lieu of a second activity.

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National Military Academy

Entry: Education: 6+.

Skills: All basic training skills for the appropriate armed services branch (army, navy, or air force) plus skill levels equal to character's Education attribute from any combination of the following, but no more than level 3 in any one skill:

- Construction
- Combat Engineer
- Horsemanship
- Leadership
- Small Arms
- Persuasion
- Computer

Contacts: Two military. On a 1D10 roll of 10, this contact is foreign military.

Special: Enter the army at the rank of 2nd Lieutenant (or appropriate branch at equivalent rank) and must serve at least one term. Graduates of the US Naval Academy may become naval officers or marine officers (player's choice).

Graduate University

Entry: Undergraduate degree, Education: 7+, Intelligence: 7+.

Skills: Four levels per term in any one specialty, plus a total of two levels in any electives.

Specialties:

- Biology
- Chemistry
- Construction
- Geology
- Metallurgy
- Meteorology
- Excavation

Electives:

- Computer
- Instruction
- Leadership
- Persuasion

Contacts: One per term, academic or government.

Special: One term provides a master's degree; the second and each subsequent term provide a Ph.D. Degrees must be taken in one of the specialties noted above.

Law School

Entry: Undergraduate degree, Education: 5+, Intelligence: 5+.

Skills: The character automatically receives the following:

- Interrogation: 2
- Observation: 2
- Persuasion: 2

Contacts: One academic or government. On a 1D10 roll of 9+, the contact is foreign.

Special: None.

Medical School

Entry: Undergraduate degree, Biology: 3+, Chemistry: 2+.

Skills: As follows.

- Computer: 1
- Medical: 6
- Observation: 1

Contacts: One medical. On a 1D10 roll of 8+, the contact is foreign medical.

Special: When war breaks out, the character will receive a direct commission as a captain in the medical corps.

Technical School

Entry: No prerequisites.

Skills: A total of six levels from any one or a combination of the following:

- Aircraft Mechanic
- Computer
- Electronics
- Gunsmith
- Machinist
- Mechanic
- Medical
- Metallurgy
- Pilot

Contacts: One specialist (skill level 8) in one area listed above.

Special: None.

Civilian Occupations

The following occupations will serve for characters from North American and European backgrounds. Note that European also includes many of the Pacific Rim nations.

Attorney

Entry: Law school.

First Term Skills:

- Persuasion 3
- Interrogation 3

Subsequent Term Skills:

- Computer
- Intrusion
- Leadership
- Observation
- Persuasion

Promotion: 7+, DM +1 if EDU 7+.

Contacts: One per term, government or criminal. On a roll of 1D10 for 8+ the contact is foreign.

Special: Two secondary activities are allowed per career period.

Civil Engineer

Entry: Master's degree, Construction: 3+.

First Term Skills:

- Computer: 1
- Construction: 2
- Geology: 2
- Metallurgy: 1

Subsequent Term Skills:

- Climbing
- Combat Engineer
- Computer
- Construction
- Excavation
- Geology
- Ground Vehicle (Tracked)
- Instruction
- Metallurgy
- Navigation
- Scuba

Promotion: 7+, DM +1 if EDU 6+.

Contacts: One per term, government. On a D10 roll of 10, the contact is foreign.

Special: In the event of war, the character will be directly commissioned as a 1st lieutenant in the engineers.

Commercial Pilot

Entry: Technical school, Pilot skill of 3+ (either fixed wing or rotary wing).

First Term Skills:

- Computer: 2
- Navigation: 2
- Observation: 1
- Pilot: 1

Subsequent Term Skills:

- Aircraft Mechanic
- Computer
- Electronics
- Navigation
- Observation
- Parachute
- Pilot

Promotion: 6+, DM +1 if AGL 6+

Contacts: One per term, specialist (Pilot). On a D10 roll of 10, the contact is foreign.

Special: Upon the outbreak of war, the character will receive a direct commission as a 2nd lieutenant in the aviation arm of the army and will be assigned to fly helicopters or transport aircraft.

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Computer Operator/Programmer

Entry: Technical school or undergraduate degree, Computer: 2+.

First Term Skills:
- Computer: 4
- Electronics: 2

Subsequent Term Skills:
- Computer: 1
- Electronics: 1
- Instruction: 1

Promotion: 7+, DM +1 if INT 7+.

Contacts: This represents a person met through an electronic BBS or network). The character may know this person only through electronic communication, and it is highly likely they have never laid eyes on each other. One per term, specialist (Computer) or specialist (Electronics). On a D10 roll of 9+, the contact is foreign.

Special: None.

Construction Worker

Entry: Strength: 4+.

First Term Skills:
- Climbing: 2
- Construction: 1
- Excavation: 1
- Ground Vehicle (Tracked): 2

Subsequent Term Skills:
- Climbing
- Combat Engineer
- Construction
- Excavation
- Ground Vehicle (Tracked)
- Mechanic

Promotion: 7+, DM +1 if CON 7+.

Contacts: One per term, specialist (Construction/Civil Engineer). On a D10 roll of 10, the contact is foreign.

Special: None.

Criminal

Entry: Agility: 5+.

First Term Skills:
- Ground Vehicle (Wheeled): 1
- Intrusion: 2
- Small Arms (Pistol): 1
- Unarmed Martial Arts: 2

Subsequent Term Skills:
- Combat Engineer
- Disguise
- Forgery
- Ground Vehicle (Wheeled)
- Intrusion
- Language
- Scrounging
- Small Arms (Pistol)
- Small Arms (Rifle)
- Stealth
- Thrown Weapon
- Unarmed Martial Arts

Promotion: 7+, DM +1 if INT 7+.

Contacts: One per term, criminal or law enforcement. Contact is foreign on a D10 roll of 10.

Special: If more than one term is served, add +1 to Initiative.

Also, roll once per term versus Intelligence to avoid capture.

If unsuccessful, the next career choice must be prison.

If war breaks out in the same term the character is caught, he is drafted instead of going to prison.

Entertainer

Entry: Charisma: 8+.

First Term Skills:
- Disguise: 3
- Observation: 1
- Persuasion: 1
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Disguise
- Ground Vehicle (Motorcycle)
- Horsemanship
- Language
- Parachute
- Persuasion
- Small Watercraft
- Swimming
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term. Roll 1D10 for 8+ for the contact to be in government; otherwise it is in entertainment.

If it is entertainment, roll 1D10 for 8+ for it to be foreign.

Special: At the referee's option, random NPCs may recognize the character as a favorite TV or movie star.

Factory Worker

Entry: No prerequisite.

First Term Skills:
- Electronics: 1
- Machinist: 2
- Mechanic: 1

Subsequent Term Skills:
- Electronics
- Gunsmith
- Machinist
- Mechanic

Promotion: 7+, DM +1 if CON 6+.

Contacts: One per term, business. On a D10 roll of 10, the contact is foreign.

Special: Factory workers are allowed two secondary activities per career period.

Farmer

Entry: No prerequisite.

First Term Skills:
- Computer: 1
- Farming: 3
- Mechanic: 1
- Observation: 1

Subsequent Term Skills:
- Computer
- Farming
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Horsemanship
- Mechanic
- Meteorology
- Observation
- Survival
- Tracking

Promotion: 7+, DM +1 if CON 6+.

Contacts: One per term, specialist in one of the above skills.

Roll 1D10 for 10 for the contact to be foreign.

Special: None.

Federal Law Enforcement

Entry: Law school or graduate university, no prison record.

First Term Skills:
- Interrogation: 2
- Observation: 1
- Small Arms (Pistol): 2
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Armed Martial Arts
- Autogun
- Computer
- Instruction
- Interrogation
- Language
- Observation
- Small Arms
- Stealth
- Unarmed Martial Arts

Promotion: 7+, DM +1 if INT 7+

Contacts: One per term, government or criminal.

On a 1D10 roll of 8+ this contact is foreign government or criminal.

Special: If more than one term is served, add +1 to Initiative.

Conny Delshagen (order #3265201)

Government Agent

Entry: Undergraduate degree, Intelligence: 6+, Charisma: 6+.

First Term Skills:

- Interrogation: 1
- Language: 2
- Observation: 2
- Small Arms: 1

Subsequent Term Skills:

- Autogun
- Computer
- Disguise
- Forgery
- Interrogation
- Intrusion
- Language
- Small Arms
- Unarmed Martial Arts

Promotion: 7+, DM +1 if INT 7+

Contacts: One per term, government or intelligence community.

On a roll of 1D10 for 8+ the contact is foreign.

Special: The character will not be drafted in the event of war; but continues as an intelligence agent.

Idle Rich

Entry: Charisma: 8+.

First Term Skills:

- Computer: 1
- Horsemanship: 1
- Language: 1
- Small Watercraft: 1
- Snow Skiing: 1
- Swimming: 1

Subsequent Term Skills:

- Computer
- Ground Vehicle (Motorcycle)
- Ground Vehicle (Wheeled)
- Horsemanship
- Instruction
- Language
- Persuasion
- Small Arms (Rifle)
- Small Watercraft
- Snow Skiing
- Swimming

Promotion: 7+, DM +1 if INT 7+

Contacts: One per term, wealthy or government. Roll 1D10 for 6+ for the contact to be a foreign contact.

Special: Double the money available to the character unless he or she enters the military in their final term (the only way to avoid this is by certain careers).

Journalist

Entry: Undergraduate degree or Charisma: 7+.

First Term Skills:

- Computer: 1
- Interrogation: 2
- Observation: 2
- Persuasion: 1

Subsequent Term Skills:

- Disguise
- Ground Vehicle (Wheeled)
- Interrogation
- Language
- Observation
- Persuasion
- Stealth

Promotion: 6+, DM +1 if EDU 7+

Contacts: Two per term, government or law enforcement.

Roll 1D10 for 7+ for the contact to be foreign.

Special: None.



Conny Delshagen (order #3265201)

Manager

Entry: Undergraduate degree.
First Term Skills:
- Computer: 2
- Leadership: 2
- Persuasion: 2

Subsequent Term Skills:
- Computer
- Instruction
- Leadership
- Observation
- Persuasion
- Scrounging

Promotion: 7+, DM +1 if EDU 6+
Contacts: One per term, business or government.
Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Mechanic

Entry: No prerequisite.
First Term Skills:
- Electronics: 1
- Mechanic: 3
- Metallurgy: 1

Subsequent Term Skills:
- Aircraft Mechanic
- Electronics
- Ground Vehicle (Motorcycle)
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Intrusion
- Mechanic
- Metallurgy

Promotion: 7+, DM +1 if CHR 6+
Contacts: One per term, specialist in one of the above term skills. Roll 1D10 for 10 for the contact to be foreign.
Special: None.

Medical Doctor

Entry: Medical school.
First Term Skills:
- Computer: 1
- Medical: 1
- Observation: 1
- Persuasion: 1

Subsequent Term Skills:
- Computer
- Leadership
- Medical
- Persuasion

Promotion: 6+, DM +1 if EDU 7+
Contacts: One per term, medical.
On a D10 roll of 10, the contact is foreign.
Special: The first term is internship and residency.
No secondary activity is allowed during this time.
For each additional career period, however, doctors are allowed two secondary activities.
At the time when war finally breaks out, any characters who are or previously have been medical doctors will receive a direct commission as a captain in the medical corps.

Registered Nurse

Entry: Education 5+
First Term Skills:
- Biology: 1
- Chemistry: 1
- Medical (Diagnosis): 3

Subsequent Term Skills:
- Biology
- Chemistry
- Instruction
- Medical
- Persuasion
- Scrounging

Promotion: 6+, DM +1 if EDU 7+
Contacts: Two per term, Business or Medical. Roll 1D10 for 9+ for the contact to be foreign.
Special: The first term is a combination of medical training and university classes. No secondary activity is allowed during this time. For each additional career period, however, nurses are allowed two secondary activities. When war breaks out, character will receive a direct commission as a lieutenant in the medical corps.

Paramedic

Entry: Technical school, Medical: 2+.
First Term Skills:
- Biology: 1
- Computer: 1
- Ground Vehicle (Wheeled): 1
- Medical (Trauma Aid): 1

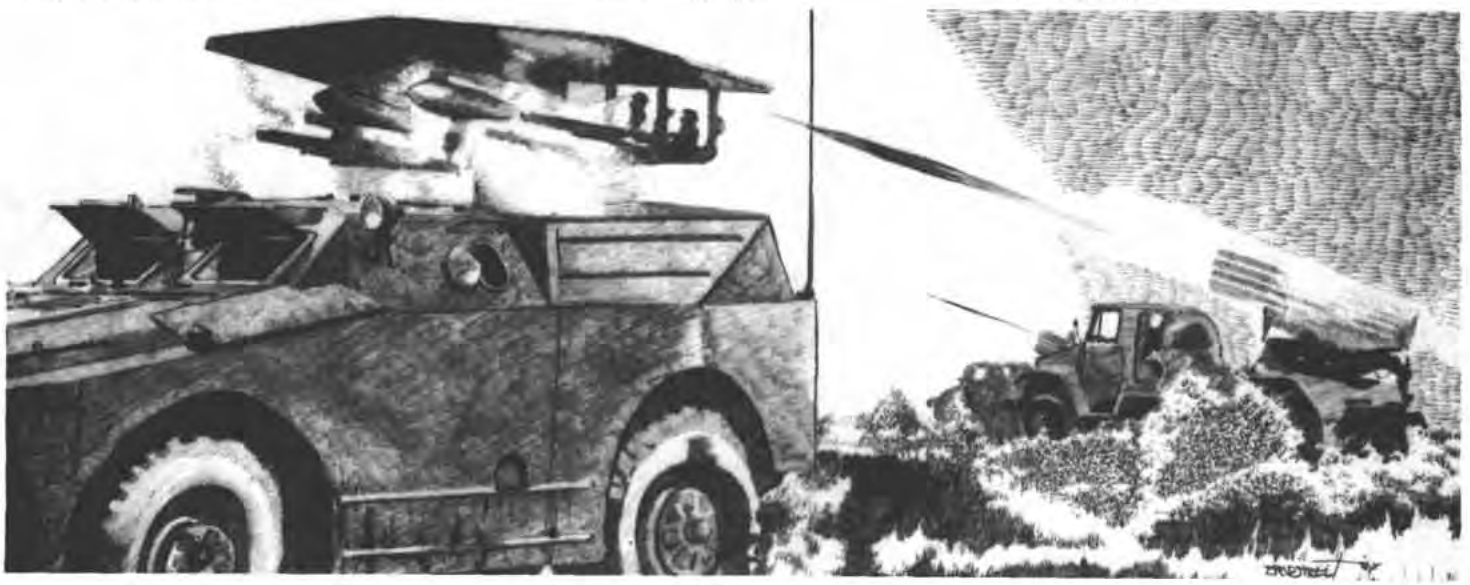
Subsequent Term Skills:
- Biology
- Computer
- Ground Vehicle (Wheeled)
- Language
- Medical (Trauma Aid)
- Unarmed Martial Arts

Promotion: 6+, DM +1 if EDU 7+
Contacts: One per term, medical.
On a 1D10 roll of 10, the contact is foreign.
Special: None.

Politician

Entry: Charisma: 8+.
First Term Skills:
- Leadership: 2
- Persuasion: 2

Subsequent Term Skills:
- Instruction
- Interrogation
- Language



Conny Delshagen (order #3265201)

- Leadership
- Observation
- Persuasion

Promotion: 6+, DM +1 if CHR 7+

Contacts: Three per term — journalism, government or military.

Roll 1D10 for 7+ for contacts to be foreign.

Special: When war breaks out, the character will not be drafted while he is in this career.

Former politicians may be drafted.

Prison

Entry: Forced due to capture while engaged in criminal activity.

Skills:
- Armed Martial Arts
- Disguise
- Forgery
- Intrusion
- Scrounging
- Unarmed Martial Arts

Promotion: None.

Contacts: Two per term, criminal.

Special: Released after one term.

Private Investigator

Entry: Intelligence: 5+, Charisma: 5+.

First Term Skills:
- Disguise: 1
- Interrogation: 1
- Observation: 2
- Persuasion: 1
- Small Arms (Pistol): 1

Subsequent Term Skills:
- Armed Martial Arts
- Disguise
- Forgery
- Interrogation
- Intrusion
- Observation
- Persuasion
- Small Arms (Pistol)
- Stealth
- Unarmed Martial Arts

Promotion: 6+, DM +1 if CON 7+

Contacts: Two per term—criminal, law enforcement, or government.

Roll 1D10 for 9+ for the contact to be foreign.

Special: None.

Professor

Entry: Ph.D. (see Graduate University)

First Term Skills:
- Instruction: 2
- Language: 1
- Persuasion: 1
- Specialty: 1 (a level in the character's specialty skill, see Graduate University)

Subsequent Term Skills:
- Instruction
- Language
- Leadership
- Observation
- Persuasion
- Specialty Skill (a level in the character's specialty skill)

Promotion: 7+, DM +1 if EDU 7+

Contacts: Two per term, academic or government.

Roll 1D10 for 7+ for the contact to be foreign.

Special: Professors may have two secondary activities per term.

State/Local Law Enforcement

Entry: No prison record.

First Term Skills:
- Armed Martial Arts: 1
- Interrogation: 1
- Observation: 1
- Small Arms (Pistol): 2

Subsequent Term Skills:
- Armed Martial Arts
- Computer
- Instruction
- Interrogation
- Language
- Observation
- Small Arms (Pistol or Rifle)
- Stealth
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if CON 7+

Contacts: One criminal contact per term.

On a 1D10 roll of 10, this contact is foreign criminal.

Special: If more than one term is served, add +1 to Initiative.

Truck Driver

Entry: Agility: 4+.

First Term Skills:
- Ground Vehicle (Wheeled): 2
- Mechanic: 2
- Navigation: 1

Subsequent Term Skills:
- Armed Martial Arts
- Ground Vehicle (Wheeled)
- Mechanic
- Navigation
- Unarmed Martial Arts

Promotion: 6+, DM +1 if CON 7+

Contacts: One per term, specialist (Mechanic) or law enforcement.

Special: Truck drivers are allowed two secondary activities per career period.

Military Occupations

Military careers are as follows.

UNITED STATES ARMY

Entry: No prerequisites.

Basic Training: The character receives the following skills as a part of his basic training (these are in addition to the first term skills listed with an individual arm of service):
- Armed Martial Arts: 0
- Autogun: 0
- Grenade Launcher: 0
- Ground Vehicle (Wheeled): 1
- Small Arms (Rifle): 2
- Swimming: 1
- Tac Missile: 0
- Thrown Weapon: 1
- Unarmed Martial Arts: 1

Special: Characters with Intelligence and Education of 7+ may enter OCS. If so, they receive a level 1 Leadership skill, are commissioned as 2nd lieutenants, and then conduct their first term normally.

Armor Arm

The armor combat arm includes both tank units and armored cavalry units used for recon and screening missions.

Enlisted

Entry: No prerequisites.

First Term Skills:
- Autogun: 1
- Ground Vehicle (Tracked): 2
- Heavy Gun: 2

Subsequent Term Skills:
- Autogun
- Ground Vehicle (Tracked)
- Heavy Gun
- Hovercraft
- Mechanic
- Navigation
- Observation
- Small Arms
- Stealth
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

Conny Delshagen (order #3265201)

Officer

Entry: OCS, military academy, or commission.

First Term Skills:
- Autogun: 1
- Ground Vehicle (Tracked): 1
- Heavy Gun: 1
- Leadership: 1
- Navigation: 1
- Persuasion: 1

Subsequent Term Skills:
- Autogun
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Heavy Gun
- Hovercraft
- Leadership
- Mechanic
- Navigation
- Observation
- Persuasion
- Small Arms (Pistol)
- Small Arms (Rifle)
- Stealth
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

Artillery Arm

Artillery provides indirect howitzer and rocket fire in support of ground forces, and mans air defense and long-range missile units.

Enlisted

Entry: Strength: 5+.

First Term Skills:
- Autogun: 1
- Ground Vehicle (Tracked): 1
- Heavy Artillery: 2

Subsequent Term Skills:
- Autogun
- Computer
- Electronics
- Forward Observer
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Heavy Artillery
- Warhead

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

Officer

Entry: Intelligence: 5+, and OCS, military academy, or commission.

First Term Skills:
- Autogun: 1
- Forward Observer: 1
- Heavy Artillery: 2
- Navigation: 2

Subsequent Term Skills:
- Autogun
- Computer
- Electronics
- Forward Observer
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Heavy Artillery
- Leadership
- Persuasion
- Warhead

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

Aviation Arm

Aviation is responsible for flying and maintaining the helicopters and light, fixed-wing liaison aircraft operated in support of ground troops.

Enlisted (Aircraft Mechanic)

Entry: No prerequisites.

First Term Skills:
- Aircraft Mechanic: 2
- Electronics: 2
- Mechanic: 1

Subsequent Term Skills:
- Aircraft Mechanic
- Electronics
- Ground Vehicle (Wheeled)
- Machinist
- Mechanic
- Pilot
- Scrounging
- Small Arms
- Warhead

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 9+ for the contact to be foreign.

Special: None.

Officer (Aircraft Pilot)

Entry: Agility: 6+ and OCS, military academy, or commission.

First Term Skills:
- Navigation: 2
- Parachute: 1
- Pilot (Rotary Wing): 3
- Survival: 1

Subsequent Term Skills:
- Aircraft Mechanic
- Ground Vehicle (Wheeled)
- Leadership
- Meteorology
- Navigation
- Observation
- Parachute
- Persuasion
- Pilot
- Small Arms (Pistol)
- Survival

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

Engineer Arm

Engineers are responsible for a variety of construction tasks in support of combat units, as well as river crossings, obstacle creation, obstacle clearance, and front-line combat missions.

Enlisted

Entry: No prerequisites.

First Term Skills:
- Combat Engineer: 2
- Construction: 1
- Excavation: 1

Subsequent Term Skills:
- Autogun
- Combat Engineer
- Construction
- Excavation
- Grenade Launcher
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Observation
- Scuba
- Small Arms
- Small Watercraft
- Swimming

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military or specialist (Combat Engineer). Roll 1D10 for 8+ for the contact to be foreign.

Special: The character receives a demolitions kit as part of basic equipment.

Conny Delshagen (order #3265201)

Officer

Entry: Construction: 2+, and OCS, military academy, or commission.

First Term Skills:
- Combat Engineer: 2
- Leadership: 1
- Persuasion: 1
- Navigation: 1

Subsequent Term Skills:
- Autogun
- Combat Engineer
- Construction
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Metallurgy
- Navigation
- Observation
- Scuba
- Small Arms
- Small Watercraft
- Swimming

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term—government, military, specialist (Combat Engineer or Construction). Roll 1D10 for 7+ for the contact to be foreign.

Special: The character receives a demolitions kit as part of basic equipment.

Infantry Arm

Infantry is the largest of the combat arms. In addition to both light and mechanized infantry, it also includes such specialized troops as airborne, rangers, and mountain troops.

Enlisted Airborne

Entry: Constitution+Strength+Agility: 15+.

First Term Skills:
- Navigation: 1
- Parachute: 2
- Small Arms: 2
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Autogun
- Forward Observer
- Grenade Launcher
- Ground Vehicle (Wheeled)
- Navigation
- Parachute
- Small Arms
- Stealth
- Survival
- Tac Missile
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

Airborne Officer

Entry: Constitution+Strength+Agility: 14+, and OCS, military academy, or commission.

First Term Skills:
- Leadership: 1
- Navigation: 1
- Parachute: 2
- Small Arms: 2

Subsequent Term Skills:
- Autogun
- Forward Observer
- Grenade Launcher
- Leadership
- Navigation
- Parachute
- Persuasion
- Small Arms
- Stealth
- Survival
- Tac Missile
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

Enlisted Infantry

Entry: No prerequisites.

First Term Skills:
- Small Arms: 2
- Grenade Launcher: 1
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Autogun
- Forward Observer
- Grenade Launcher
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Small Arms
- Survival
- Tac Missile
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

Infantry Officer

Entry: OCS, military academy, or commission.

First Term Skills:
- Leadership: 1
- Navigation: 1
- Persuasion: 1
- Small Arms: 1

Subsequent Term Skills:
- Autogun
- Forward Observer
- Grenade Launcher
- Ground Vehicle (Tracked)
- Ground Vehicle (Wheeled)
- Leadership
- Navigation
- Persuasion
- Small Arms
- Tac Missile
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.

Special: None.



Conny Delshagen (order #3265201)

Enlisted Mountain Infantry

Entry: Strength+Agility: 10+.
First Term Skills:
- Climbing: 2
- Small Arms: 2
- Snow Skiing: 1

Subsequent Term Skills:
- Autogun
- Climbing
- Forward Observer
- Grenade Launcher
- Small Arms
- Snow Skiing
- Survival
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military or specialist (Climbing). Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Mountain Infantry Officer

Entry: OCS, military academy, or commission.
First Term Skills:
- Climbing: 2
- Leadership: 1
- Navigation: 1
- Snow Skiing: 1

Subsequent Term Skills:
- Autogun
- Climbing
- Forward Observer
- Grenade Launcher
- Leadership
- Navigation
- Persuasion
- Small Arms
- Snow Skiing
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.
Contacts: Two per term, military or specialist (Climbing). Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Enlisted Ranger

Entry: Constitution+Strength+Agility: 17+.
First Term Skills:
- Parachute: 2
- Small Arms: 2
- Stealth: 2
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Armed Martial Arts
- Autogun
- Climbing
- Grenade Launcher
- Navigation
- Observation
- Parachute
- Small Arms
- Snow Skiing
- Stealth
- Survival
- Swimming
- Thrown Weapon
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Ranger Officer

Entry: Constitution+Strength+Agility: 16+, and OCS, military academy, or commission.
First Term Skills:
- Leadership: 2
- Navigation: 2
- Parachute: 1
- Small Arms: 2
- Stealth: 1

Subsequent Term Skills:
- Armed Martial Arts
- Autogun
- Climbing
- Forward Observer
- Grenade Launcher
- Leadership
- Navigation
- Observation
- Parachute
- Persuasion
- Small Arms
- Snow Skiing
- Stealth
- Survival
- Swimming
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.
Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Medical Corps

The medical corps is responsible for the maintenance of troop health at all times, as well as treating combat wounds when a unit is actively engaged with the enemy.

Enlisted (Medic)

Entry: Education: 6+.
First Term Skills:
- Medical (Trauma Aid): 3
- Ground Vehicle (Wheeled): 2

Subsequent Term Skills:
- Biology
- Chemistry
- Ground Vehicle (Wheeled)
- Medical
- Scrounging
- Small Arms
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military.
Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Officer (Nurse)

Entry: Undergraduate degree, Medical: 3+, and OCS, military academy, or commission (often direct commission).
First Term Skills:
- Medical (Trauma Aid): 2
- Biology: 1
- Chemistry: 1

Subsequent Term Skills:
- Ground Vehicle (Wheeled)
- Medical
- Biology
- Chemistry
- Scrounging
- Instruction
- Persuasion

Promotion: 6+, DM +1 if INT 7+.
Contacts: Two per term, military or medical. Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Officer (Doctor)

Entry: Medical school, and OCS, military academy, or commission (often direct commission).
First Term Skills:
- Medical (Surgery): 3
- Leadership: 1

Subsequent Term Skills:
- Medical
- Biology
- Chemistry
- Persuasion
- Leadership

Promotion: 6+, DM +1 if INT 7+.
Contacts: Two per term, military or medical. Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Conny Delshagen (order #3265201)

Military Intelligence Arm

Officers in military intelligence are usually trained as interrogators and/or intelligence analysts.

Enlisted

(See Enlisted, support arm.)

Officer

Entry: Intelligence: 7+, and OCS, military academy, or commission.

First Term Skills:
- Language: 2
- Interrogation: 2
- Persuasion: 1

Subsequent Term Skills:
- Disguise
- Forgery
- Interrogation
- Language
- Intrusion
- Unarmed Martial Arts
- Observation
- Persuasion
- Small Arms
- Stealth
- Thrown Weapon

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military or intelligence community.

Roll 1D10 for 6+ for the contact to be foreign.

Special: None.

Special Forces Arm

Special forces members, best known for their distinctive green berets, are trained to operate deep in the enemy rear in support of local resistance groups.

Special Forces, Enlisted and Officer

Entry: Strength+Constitution+Agility: 18+, Language: 2+, and (for officer only) OCS, military academy, or commission.

First Term Skills:
- Autogun: 1
- Parachute: 2
- Small Arms: 2
- Survival: 1
- Unarmed Martial Arts: 2

Subsequent Term Skills:
- Acrobatics
- Armed Martial Arts
- Autogun
- Forward Observer
- Grenade Launcher
- Instruction
- Interrogation
- Language
- Leadership
- Medical
- Navigation
- Observation
- Parachute
- Persuasion
- Small Arms
- Stealth
- Survival
- Swimming
- Tac Missile
- Thrown Weapon
- Tracking
- Unarmed Martial Arts

Promotion: 6+ (7+ for Officers), DM +1 if INT 7+

Contacts: Two per term, military or intelligence community. Roll 1D10 for 6+ for the contact to be foreign.

Special: The character has a green beret as part of his basic equipment.

Support Arm

This category is a combination of a number of noncombat arms (ordnance, quartermaster, etc.)

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Enlisted

Entry: No prerequisites.

First Term Skills:
- Ground Vehicle (Wheeled): 2
- Mechanic: 2

Subsequent Term Skills:
- Computer
- Electronics
- Ground Vehicle (Wheeled)
- Gunsmith
- Hovercraft
- Instruction
- Language
- Machinist
- Mechanic
- Metallurgy
- Scrounging
- Small Watercraft
- Warhead

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

Officer

Entry: OCS, military academy, or commission.

First Term Skills:
- Computer: 1
- Persuasion: 2

Subsequent Term Skills:
- Computer
- Electronics
- Ground Vehicle (Wheeled)
- Instruction
- Hovercraft
- Language
- Leadership
- Persuasion
- Scrounging
- Warhead

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, military.

Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

UNITED STATES MARINE CORPS

The United States Marine Corps (USMC) is a separate branch of service from the US Army. It has traditionally been expected to perform amphibious missions, but in recent decades it has become a high-readiness force capable of carrying out most conventional combat missions.

Entry: Strength+Agility+Constitution: 15+, no prison record.

Basic Training: The character receives the following skills as a part of his basic training:
- Armed Martial Arts: 0
- Autogun: 0
- Grenade Launcher: 0
- Ground Vehicle (Wheeled): 1
- Small Arms: 3
- Swimming: 1
- Tac Missile: 0
- Thrown Weapon: 1
- Unarmed Martial Arts: 1

Careers: Available careers and arms are the same as the army, except no ranger, airborne, or special forces careers exist.

Special: Characters with Intelligence and Education of 7+ may enter OCS. If they do so, they receive a level 1 Leadership skill, are commissioned as 2nd lieutenants, and then conduct their first term normally.

Add the following careers to the infantry arm:

Conny Delshagen (order #3265201)

Force Recon, Enlisted

Entry: Strength+Agility+Constitution: 17+.
First Term Skills:
- Observation: 1
- Parachute: 1
- Small Watercraft: 1
- Stealth: 2
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Autogun
- Climbing
- Grenade Launcher
- Navigation
- Observation
- Parachute
- Scuba
- Small Arms
- Small Watercraft
- Stealth
- Survival
- Swimming
- Thrown Weapon
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Force Recon Officer

Entry: Strength+Agility+Constitution: 17+, and OCS, military academy, or commission.
First Term Skills:
- Leadership: 1
- Navigation: 1
- Observation: 1
- Parachute: 1
- Stealth: 2
- Unarmed Martial Arts: 1

Subsequent Term Skills:
- Autogun
- Climbing
- Forward Observer
- Grenade Launcher
- Leadership
- Navigation
- Observation
- Parachute
- Persuasion
- Scuba
- Small Arms
- Small Watercraft
- Stealth
- Survival
- Swimming
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.
Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Sniper, Enlisted

Entry: Strength+Agility+Constitution: 19+.
First Term Skills:
- Observation: 1
- Small Arms: 3
- Stealth: 2
- Survival: 1

Subsequent Term Skills:
- Autogun
- Climbing
- Navigation
- Observation
- Small Arms
- Stealth
- Thrown Weapon
- Tracking
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

UNITED STATES NAVY

Naval personnel man both combat and support vessels as well as a substantial air arm.

Entry: No prerequisites.
Basic Training: The character receives the following skills as a part of his basic training:
- Autogun: 0
- Small Arms: 1
- Small Watercraft: 1
- Swimming: 1
- Unarmed Martial Arts: 1

Special: Characters with Intelligence and Education of 7+ may enter OCS. If they do so, they receive a level 1 Leadership skill, are commissioned as ensigns, and then conduct their first term normally.

Enlisted Seaman

Entry: No prerequisites.
First Term Skills:
- Autogun: 2
- Electronics: 1
- Mechanic: 2

Subsequent Term Skills:
- Autogun
- Computer
- Electronics
- Grenade Launcher
- Heavy Artillery
- Hovercraft
- Language
- Machinist
- Mechanic
- Medical
- Scrounging
- Small Arms
- Small Watercraft
- Swimming
- Warhead

Promotion: 6+, DM +1 if INT 7+.
Contacts: One per term, military. Roll 1D10 for 8+ for the contact to be foreign.
Special: None.

Naval Officer

Entry: OCS, military academy, or commission.
First Term Skills:
- Autogun: 1
- Leadership: 1
- Navigation: 2

Subsequent Term Skills:
- Autogun
- Hovercraft
- Instruction
- Leadership
- Mechanic
- Metallurgy
- Navigation
- Persuasion
- Scuba
- Small Arms
- Small Watercraft
- Swimming

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.
Contacts: Two per term, military. Roll 1D10 for 7+ for the contact to be foreign.
Special: None.

Naval Aviator (Officer)

Entry: Agility: 8+, and OCS, military academy, or commission.
First Term Skills:
- Navigation: 1
- Parachute: 1
- Pilot: 6
- Survival: 1

Subsequent Term Skills:
- Aircraft Mechanic
- Instruction
- Leadership
- Meteorology
- Navigation
- Observation
- Parachute
- Persuasion
- Pilot
- Small Arms

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Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Three per term, military or specialist (Pilot). Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

SEAL (Sea Air Land), Enlisted

Entry: Strength+Agility+Constitution: 15+.

First Term Skills:

- Combat Engineer: 1
- Parachute: 1
- Scuba: 1
- Small Arms: 1
- Small Watercraft: 1
- Swimming: 1
- Unarmed Martial Arts: 2

Subsequent Term Skills:

- Acrobatics
- Autogun
- Combat Engineer
- Grenade Launcher
- Navigation
- Observation
- Parachute
- Scuba
- Small Arms
- Small Watercraft
- Stealth
- Survival
- Swimming
- Unarmed Martial Arts

Promotion: 6+, DM +1 if INT 7+.

Contacts: One per term, military or intelligence community. Roll 1D10 for 8+ for the contact to be foreign.

Special: None.

SEAL Officer

Entry: Strength+Agility+Constitution: 15+, and OCS, military academy, or commission.

First Term Skills:

- Combat Engineer: 1
- Leadership: 1
- Navigation: 1
- Scuba: 1
- Small Arms: 1
- Small Watercraft: 1
- Swimming: 1
- Unarmed Martial Arts: 1

Subsequent Term Skills:

- Acrobatics
- Autogun
- Combat Engineer
- Grenade Launcher
- Leadership
- Navigation
- Observation
- Parachute
- Persuasion
- Scuba
- Small Arms
- Small Watercraft
- Stealth
- Survival
- Swimming

Promotion: 7+, DM +1 if INT 7+

Contacts: Two per term, military or intelligence community.

Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

UNITED STATES AIR FORCE

Originally part of the United States Army, the United States Air Force became a separate branch of the service following World War II. Its principal responsibility is for fixed-wing combat and transport aircraft.

Entry: No prerequisites.

Basic Training: The character receives the following skills as a part of his basic training:

- Autogun: 0
- Ground Vehicle (Wheeled): 1
- Small Arms: 1
- Swimming: 1
- Unarmed Martial Arts: 1

Special: Characters with Intelligence and Education of 7+ may enter OCS. If they do so, they receive a level 1 Leadership skill, are commissioned as 2nd lieutenants, and then conduct their first term normally.



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Airman, Enlisted (Aircraft Mechanic)

Same as enlisted (aircraft mechanic) in the army aviation arm.

Pilot (Officer)

Entry: Agility: 6+, and OCS, military academy, or commission.

First Term Skills:

- Navigation: 2
- Parachute: 1
- Pilot: 4

Subsequent Term Skills:

- Aircraft Mechanic
- Instruction
- Leadership
- Meteorology
- Navigation
- Observation
- Parachute
- Persuasion
- Pilot
- Small Arms
- Survival

Promotion: 6+, DM +1 if INT 7+, and/or if graduate of Military Academy.

Contacts: Two per term, specialist (Pilot). Roll 1D10 for 7+ for the contact to be foreign.

Special: None.

Other Armed Forces

The basic listing above covers the United States. Other armed forces use the same charts but with the modifications listed below.

ALBANIA

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

- There are no equivalents to mountain infantry, but Climbing should be added to the subsequent term skill list for infantry.
- There are no equivalents to airborne, ranger, special forces, naval aviator, navy SEAL, or any marine career.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

BELGIUM

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

- Navy pilots use the same career description as air force pilots.
- Commandoes are equivalent to rangers.
- Special recce teams (*Equipes Speciales de Reconnaissance*, or ESRs) are equivalent to special forces.
- There are no equivalents to mountain Infantry, navy SEALs, or any marine career types.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

BULGARIA

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exception:

- There are no equivalents to rangers, special forces, marines, or naval aviators.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

CANADA

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

- Navy and air force pilots each receive Pilot: 5 (instead of Pilot: 4 or Pilot: 6) for a first term skill.
- Airborne Commandos are the equivalent of rangers.
- There are no equivalents to mountain infantry, special forces, navy SEALs, or any marine career.

CZECHOSLOVAKIA

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

- Infantrymen are called motor rifles.
- All airborne troops are from the 22nd Airborne Regiment.
- One special operations battalion of the 22nd Airborne Regiment is the equivalent of special forces.
- There are no equivalents to mountain infantry, rangers, or any marine career.



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• The navy is a small riverine patrol force on the Danube River. There are no naval aviators or SEAL equivalents.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

DENMARK

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

• The *Jaegerkorpset* (jaeger corps) are the equivalent of special forces.

• The *Froemandskorpset* (frogman corps) are the equivalent of navy SEALS.

• There are no equivalents to mountain infantry, airborne, ranger, or any marine careers.

FINLAND

Basic Training: Same as Soviet, but add Snow Skiing: 1 to the army basic skill list.

Careers: All careers are the same with the following exceptions:

• The equivalent of rangers are the *Sissi*, but add Snow Skiing: 2 to their first term skills.

• The equivalent of marine force recon are the marine commandos.

• There are no equivalents to mountain infantry, airborne, special forces, naval aviators, navy SEALs, marine infantry, or marine sniper careers.

FRANCE

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

• Navy and air force pilots each receive Pilot: 5 (instead of Pilot: 4 or Pilot: 6) for a first term skill.

• Mountain infantry are called *Chasseurs Alpins*.

• Airborne troops are called *Parachutists*.

• The naval rifle commandos (*Fusiliers-Marins Commandos*) are the equivalent of marine force recon.

• The French Foreign Legion paratroopers (*étranger Parachutists*) are the equivalent of rangers. Note that characters of any nationality may be in the foreign legion, which has infantry, light armor, artillery, and airborne units.

• There are no equivalents to special forces, navy SEALs, or marine snipers.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

GERMANY

Basic Training: Same as US except for army basic training, which provides:

• Small Arms: 2
• Unarmed Martial Arts: 1
• Swimming: 1
• Ground Vehicle (Wheeled): 1
• Thrown Weapon: 1
• Autogun: 0
• Grenade Launcher: 0

Careers: All careers are the same with the following exceptions:

• Air force pilots and naval aviators each receive Pilot: 5 (instead of Pilot: 4 or Pilot: 6) for a first term skill.

• Infantry are called *Panzergrenadier* (if in a mechanized unit) or *Jäger* (if in a light infantry unit).

• Mountain troops are called *Gebirgsjäger*.

• Airborne solders are called *Falschirmjäger*.

• Rangers are called *Fernspähtruppen*.

• There is no equivalent to special forces, navy Seals, or any marine career.

GREECE

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

• Naval aviators use the same career description as air force pilots.

• Airborne troops are called paratroopers.

• Rangers are called commandos.

• Special forces are called special raider forces.

• There are no equivalents to mountain infantry, but Climbing should be added to the subsequent term skill list for infantry.

• There are no equivalents to navy SEALs, marine force recon, or marine sniper careers.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

HUNGARY

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

• The navy is a small riverine patrol force on the Danube River.

• There are no naval aviators or SEAL equivalents.

• There are no equivalents to mountain infantry, rangers, special forces, or any marine career.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

ITALY

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

• Naval aviators use the same career description as air force pilots.

• Mountain infantry are called *Alpini*.

• Airborne troops are called *Paracadutisti*.

• Rangers are called *Paracadutisti Incursore* (parachute raiders).

• Marine infantry are called *Lagunari*.

• The equivalent of the SEALs are the *San Marcos Subacque Incursori* (underwater raiders).

• There are no equivalents to special forces, marine force recon, or marine sniper careers.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

EX-YUGOSLAVIAN

This entry includes the Italian satellite armies of Serbia, Croatia, and Slovenia, as well as nationalist armies in Dalmatia, Montenegro, and Macedonia.

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

• Airborne troops are called paratroopers.

• Marine infantry are called naval infantry.

• There are no equivalents to rangers, special forces, naval aviators, navy SEALs, marine force recon or marine sniper careers.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

LITHUANIA

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

• Marine infantry are called naval infantry.

• There are no equivalents to rangers, airborne, mountain infantry, special forces, naval aviators, navy SEALs, marine force recon or marine sniper careers.

• Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

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THE NETHERLANDS

Basic Training: Same as US

Careers: All careers are the same with the following exceptions:

- The equivalent of special forces are commandos.
- The equivalent of navy SEALs are special boat sections (SBS).
- There are no equivalents to mountain infantry, airborne, rangers, marine force recon, or marine snipers.

NORWAY

Basic Training: Same as US, but add Snow Skiing: 1 to the army basic training skill list.

Careers: All careers are the same with the following exceptions:

- Air force pilots each receive Pilot: 5 (instead of Pilot: 4) for a first term skill.
- The Jaegers are the equivalent of rangers.
- The Jaegers are the equivalent of navy SEALs.
- There are no equivalents to airborne, special forces, naval aviators, or any marine careers.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

POLAND

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

- All airborne troops are from the 6th Pomeranian Air Assault Division.
- Marine infantry is a combat arm of the army, and all marines are from the 7th *Luzycka* Naval Assault Division.
- There is no equivalent to marine force recon or snipers, or navy SEALs.
- Navy pilots use the same career description as air force pilots.
- There is one brigade of mountain troops, called the *Brigada Podhalanska* (Highland Brigade).
- One special operations battalion of the 6th Air Assault Division is the equivalent of special forces. They can be distinguished by their black berets instead of the red beret worn by regular Polish paratroopers.
- There are no equivalents to rangers or Seals in the Polish Army.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

ROMANIA

Basic Training: Same as Soviet.

Careers: All careers are the same with the following exceptions:

- All airborne troops are from the 161st Parachute Regiment.
- Marines are called naval infantry, of which there is a single battalion.
- There are no equivalents to rangers, special forces, marines snipers or force recon, or naval aviators.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

SOVIET UNION

Basic Training: Same as US except that army basic training covers only the following:

- Small Arms: 2
- Unarmed Martial Arts: 1
- Swimming: 1
- Thrown Weapon: 1
- Autogun: 0
- Grenade Launcher: 0

Careers: All careers are the same with the following exceptions:

- Infantrymen are called motor rifles.
- Rangers are called *Reydoviki.*
- Special forces are called *Spetsnaz.*
- Airborne are called *Vozdushno-Desantnaya Voyska* (VDV) or *desantniki* for short.
- Army aviation is called *Frontovaya Aviatsiya* (frontal aviation).
- Marines are called *Morskaya Pyekhota* (naval infantry).
- Navy SEALs are called naval *Spetsnaz.*
- Naval aviators use the same career description as air force pilots.
- There is no equivalent to marine snipers or force recon.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.
- Add Hovercraft to Naval Infantry subsequent terms skill listings.

TURKEY

Basic Training: Same as US except that army basic training covers the following:

- Small Arms: 2
- Unarmed Martial Arts: 2
- Survival: 1
- Autogun: 0
- Thrown Weapon: 1

Careers: All careers are the same with the following exceptions:

- Naval aviators use the same career description as air force pilots.
- Airborne troops are called *Paracütcü.*
- Rangers are called *Paracütcü Komando.*
- Marine infantry are called *Amfibi Deniz* (amphibious rifles).
- There are no equivalents to mountain infantry, special forces, navy SEALs, marine force recon, or marine sniper careers.
- Add Heavy Gun skill to the subsequent terms skill listings of the Infantry and Artillery Arms.

THE UNITED KINGDOM (GREAT BRITAIN)

Basic Training: Same as US except for army basic training, which provides:

- Small Arms: 2
- Unarmed Martial Arts: 2
- Swimming: 1
- Ground Vehicle (Wheeled): 1
- Thrown Weapon: 1
- Autogun: 0
- Grenade Launcher: 0

Careers: All careers are the same with the following exceptions:

- Naval aviators and air force pilots each receive Pilot: 5 (instead of Pilot: 4 or Pilot: 6) for a first term skill.
- The equivalent of navy SEALs is the special boat service (SBS).
- The equivalent of special forces is the special air service (SAS).
- The equivalent to marine infantry is the Royal Marine Commandoes.
- There is no equivalent to the mountain infantry career, but Climbing and Snow Skiing should be included in the subsequent term skill list for marine infantry.
- There are no equivalents to rangers, marine force recon, or marine snipers.

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Equivalent Ground Forces Ranks in Selected Armies

U.S. Army	*British Army*	*German Army*	*Czech Army*
Private	Private	Soldat	Vojin
Spec 4	Lance corporal	Gefreiter	Svobodnik
Sergeant	Corporal	Unteroffizier	Desatnik
Staff sergeant	Sergeant	Feldwebel	Cetar
Platoon sergeant	Staff sergeant	Oberfeldwebel	Rotny
Master sergeant	Sergeant major	Stabsfeldwebel	Rotmistr
Sergeant major	Regt. sergeant major	Hauptfeldwebel	Nadrotmistr
2nd lieutenant	2nd lieutenant	Leutnant	Porucik
1st lieutenant	1st lieutenant	Oberleutnant	Nadporucik
Captain	Captain	Hauptmann	Kapitan
Major	Major	Major	Major
Lieutenant colonel	Lieutenant colonel	Oberstleutnant	Podplukovnik
Colonel	Brigadier	Oberst	Plukovnik

U.S. Army	*Bulgarian Army*	*Hungarian Army*	*Polish Army*
Private	Rednik	Honved	Szeregowiec
Spec 4	Efreytor	Örvezetö	Starszy szeregowiec
Sergeant	Mladshi serzhant	Tizedes	Plutunowy
Staff sergeant	Serzhant	Szakaszvezetö	Sierzant
Platoon sergeant	Starshi serzhant	Örmester	Starszy sierzant
Master sergeant	Starshina	Törzsörmester	Sierzant sztabowy
Sergeant major	—	Fötörzsörmester	Starszy sierzant sztabowy
2nd lieutenant	Leytenant	Hadnagy	Podporucznik
1st lieutenant	Starshi leytenant	Föhadnagy	Porucznik
Captain	Kapitan	Szazados	Kapitan
Major	Mayor	Örnagy	Major
Lieutenant colonel	Podpolkovnik	Alezredes	Podpulkownik
Colonel	Polkovnik	Ezredes	Pulkownik

U.S. Army	*Romanian Army*	*French Army*	*Soviet Army*
Private	Soldat	Soldat	Armeyets
Spec 4	Soldat-fruntas	Caporal	Yefreytor
Sergeant	Sergeant	Sergent	Serzhant
Staff sergeant	Sergeant major	Sergent	Serzhant
Platoon sergeant	Plutonier	Sergent	Starshiy serzhant
Master sergeant	Plutonier major	Sergent	Starshina
Sergeant major	Plutonier adjutant	Sergent-chef	Starshina
2nd lieutenant	Locotenent	Sous-lieutenant	Mladshiy leytenant
1st lieutenant	Locotenent major	Lieutenant	Starshiy leytenant
Captain	Captain	Captaine	Kapitan
Major	Major	Major	Major
Lieutenant colonel	Locotenent colonel	Lieutenant colonel	Podpolkovnik
Colonel	Colonel	Colonel	Polkovnik

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U.S. Enlisted and NCO Ranks

Army	*Marines*	*Navy*	*Air Force*
Private	Private	Seaman	Airman
Spec 4	Lance corporal	Petty officer 3rd class	Senior airman
Sergeant	Sergeant	Petty officer 2nd class	Sergeant
Staff sergeant	Staff sergeant	Petty officer 1st class	Staff sergeant
Platoon sergeant	Gunnery sergeant	Chief petty officer	Technical sergeant
Master sergeant	Master sergeant	Senior CPO	Master sergeant
Sergeant major	Sergeant major	Master CPO	First sergeant

Army/Nationality/Native Language

U.S.	*Language*
American	English
	(2 Spanish)
	(1 German)
	(1 Italian)
	(1 Polish)
	(1 Yiddish)
British	
English	English
Welsh	English
	(2 Welsh)
Scottish	English
	(3 Scots Gaelic)
Irish	English
	(2 Gaelic)
Canadian	
Anglo-Canadian	English
	(3 French)
French-Canadian	French
	(3 English)

German	*Language*
German	German
Danish	
Danish	Danish
Polish (Eastbloc army)	
Polish	Polish
Hungarian (Eastbloc army)	
Hungarian	Hungarian
	(1 German)
	(1 Romany)
Czech (Eastbloc army)	
Czech	Czech
	(2 Slovak)
	(1 Hungarian)
	(1 Romany)
Slovak	Czech
	(8 Slovak)
	(1 Hungarian)
	(1 Romany)
Soviet (Eastbloc army)	
See Soviet Nationalities List.	

Vehicles

Die	Vehicle
1	3/4-ton truck
2	3/4-ton truck
3	HMMWV
4	HMMWV
5	HMMWV
6	2 1/2-ton truck
7	2 1/2-ton truck
8	5-ton truck
9	5-ton tank truck
10	LAV-25
11	M113A3
12	M977 HEMTT
13	M2A2 Bradley
14	M2A2 Bradley
15	M1
16	M8 AGS
17	M1A1
18	M1A2

This table is for US personnel. The referee may substitute equivalent vehicles for other nationalities as necessary.

Soviet Nationalities

Russian	Kazakh
Azerbaijani	Chuvash
Ukrainian*	Armenian
Byelorussian*	Estonian
Georgian	Kirgiz
Uzbek	Tartar
Lithuanian	Mordvinian
Romanian	Taijik
Latvian	Turkoman

*Ukrainians and Byelorussians also speak Russian.

U.S. Commissioned Officer Ranks

Navy	*Others*
Ensign	2nd lieutenant
Lt. junior grade	1st lieutenant
Lieutenant	Captain
Lt. commander	Major
Commander	Lt. colonel
Captain	Colonel

NCO Skills

Leadership
Instruction
Persuasion

Secondary Activities

Acrobatics (dance or gymnastics)
Archery
Climbing (rock climbing)
CON +1 (jogging)
Disguise (neighborhood theater)
Early Firearms (historical re-enactment)
EDU +1 (adult education/night school)
Ground Vehicle (Motorcycle)
Ground Vehicle (Wheeled)
Language
Medical (Trauma Aid) (CPR and first aid lessons)
Observation (bird watching)
Parachute (skydiving)
Pilot (flying lessons)
Riding
Scuba (skindiving)
Small Arms (target shooting)
Small Watercraft (boating)
Snow Skiing
STR +1 (weight lifting)
Survival (camping)
Swimming
Tracking (hunting)
Unarmed Martial Arts

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Language List

Family	Group	Language
Germanic	Anglic	English
	West Germanic	German
		Dutch
		Yiddish
		Flemish
	North Germanic	Danish
		Swedish
		Norwegian
Romance	East Romance	Italian
		Romanian*
	West Romance	Spanish
		French
		Portuguese
	E & W Romance	Latin
Celtic	Goidelic	Scots Gaelic
	Brythonic	Welsh
		Gaelic
Greek	Greek	Greek
Balto-Slavic	Baltic	Lithuanian*
		Latvian*
	East Slavic	Russian*
	West Slavic	Polish*
		Czech*
		Slovak*
	South Slavic	Serbo-Croat
		Bulgarian*
		Slovenian
		Macedonian
Albanian	Albanian	Albanian
Armenian	Armenian	Armenian*
Indo-Iranian	Indic	Hindi-Urdu
		Bengali
		Romany (Gypsy)
	Iranian	Taijik*
		Parsi (Persian)

Family	Group	Language
Caucasian	South Caucasian	Georgian*
Sino-Tibetan	Sinitic	Mandarin†
		Cantonese†
	Tibeto-Burman	Thai
		Burmese
Semito-Hamitic	Semitic	Arabic
		Hebrew
	Hamitic	Berber
		Hausa
Dravidian	Dravidian	Tamil
Japanese	Japanese	Japanese
Altaic	Turkic	Turkish
		Azerbaijani*
		Uzbek*
		Kazakh*
		Tartar*
		Chuvash*
		Kirzig*
		Turkoman*
	Ugric	Hungarian*
	Finnic	Finnish
		Estonian*
		Mordvinian*
Vietnamese	Vietnamese	Vietnamese
Mon-Khmer	Mon-Khmer	Cambodian
Korean	Korean	Korean
Bantu	Bantu	Swahili
Mayalo-Polynesian	W. Mayalo-Polynesian	Malay-Indonesian
Amerindian	South Amerindian	Maya
	Athabascan	Navaho
	Uto-Aztecan	Nahuati

*Eastern Bloc language.

†These two languages (Mandarin and Cantonese) are mutually unintelligible in their spoken form, but they are 100% intelligible in their written form.

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Skill List

Skill	*Controlling Attribute*	*Definition*
Acrobatics	AGL	Ability to precisely control body motions and actions.
Aircraft Mechanic	STR	Ability to repair and maintain aircraft.
Archery	STR	Ability to use a bow.
Armed Martial Arts	STR	Ability to use various melee weapons in combat.
Autogun	STR	Ability to fire autocannons (automatic cannons), automatic grenade launchers, and machineguns.
Biology	EDU	Knowledge of plant and animal biology.
Chemistry	EDU	Knowledge of chemical interactions and compounds.
Climbing	CON	Ability to climb building walls, steep slopes, and sheer cliffs.
Combat Engineer	CON	Ability to perform tasks such as emplacing demolitions, building fortifications, and camouflaging emplacements.
Computer	EDU	Ability to operate and program a computer.
Construction	EDU	Ability to plan/supervise construction of buildings, roads, and bridges.
Disguise	CHR	Ability to alter appearance to avoid recognition.
Electronics	EDU	Ability to repair electronic devices.
Excavation	EDU	Ability to supervise the excavation of safe and stable large holes in the ground, such as mines.
Farming	INT	General knowledge of growing food crops and raising livestock.
Forgery	AGL	Ability to forge a signature or document and have it accepted as genuine.
Forward Observer	INT	Ability to communicate fire data for indirect fire weapons.
Geology	EDU	Knowledge of rock formations and minerals.
Grenade Launcher	STR	Ability to fire non-automatic grenade launchers, mortars, and unguided antitank rockets.
Ground Vehicle	AGL	Ability to operate a vehicle that moves by means of wheels or tracks. Cascade skill: (*Wheeled*, *Tracked*, *Motorcycle*).
Gunsmith	AGL	Ability to construct and repair weapons.
Heavy Artillery	STR	Ability to fire large-caliber indirect-fire guns, including mortars, howitzers, and multiple-rocket launchers.
Heavy Gun	STR	Ability to fire large-caliber direct-fire guns, including AFV guns.
Hovercraft	AGL	Ability to operate a hovercraft.
Instruction	CHR	Ability to teach skills.
Interrogation	CHR	Ability to persuade or force a prisoner to reveal information.
Intrusion	AGL	Ability to open a lock, including key locks, combination locks, and electronic locks.
Language	CHR	Ability to speak and understand a given language. A specific language must be chosen.

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Skill List

Skill	*Controlling Attribute*	*Definition*
Leadership	CHR	Ability to inspire followers.
Machinist	AGL	Ability to use machine tools (such as lathes, punch presses, etc.) to fabricate other machinery.
Mechanic	STR	Ability to maintain and repair vehicles and machinery.
Medical	EDU	Ability to render first aid/medical care to injured or sick characters. Cascade skill: (*Diagnosis*, *Trauma Aid*, *Surgery*).
Metallurgy	EDU	Knowledge of smelting ore into metal, forming alloys, and fundamental metal-working.
Meteorology	EDU	Understanding of weather and the forces governing it.
Navigation	INT	Ability to determine correct position and direction of travel using maps, compass, landmarks, the stars, etc.
Observation	INT	Ability to spot concealed enemies and avoid ambushes.
Parachute	CON	Ability to use a parachute.
Persuasion	CHR	Ability to phrase arguments in ways best calculated to gain acceptance.
Pilot	AGL	Ability to fly aircraft. Cascade skill: (*Fixed-Wing*, *Rotary-Wing*).
Riding	CON	Ability to ride a horse.
Scrounging	INT	Ability to find man-made items such as spare parts, domestic food, ammunition, etc.
Scuba	CON	Ability to use an aqua-lung or rebreather. Skill level may not exceed character's Swimming skill.
Small Arms	STR	Ability to use small arms (pistols, rifles, shotguns, etc.). Cascade skill: (*Pistol*, *Rifle*).
Small Watercraft	CON	Ability to operate small boats, including oar-driven, wind-driven, and small (under 20 meters) motor boats.
Snow Skiing	AGL	Ability to travel using snow skis.
Stealth	AGL	Ability to move silently and without being spotted.
Survival	INT	Ability to find food in the wild, including knowledge of what plants are edible and where to find them, and the ability to set snares and traps, and the ability to catch or trap fish.
Swimming	CON	Ability to swim.
Tac Missile	AGL	Ability to fire a guided tactical missile launcher.
Thrown Weapon	STR	Ability to hit a target with a thrown weapon, such as a knife, rock, or grenade.
Tracking	INT	Ability to follow vehicles, humans, or animals by the traces they leave behind them.
Unarmed Martial Arts	STR	Ability to conduct hand-to-hand combat.
Warhead	AGL	Ability to arm, disarm, and repair both conventional and nuclear warheads.

Conny Delshagen (order #3265201)

Personal Weapons

Albania
PPSh submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
Tokarev pistol

Belgium
FN-FNC assault rifle
MAG machinegun
HP-35 pistol

Bulgaria
PPSh-41 submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
PM Makarov pistol

Canada
Sterling submachinegun
M16 assault rifle
C3 Parker-Hale sniper rifle
M249 automatic rifle
M60 machinegun
M9 or M1911A1 pistol

Czechoslovakia
Vz-24 submachinegun
AK-74 assault rifle
Vz-54 sniper rifle
RPK-74 automatic rifle
Vz-59 machinegun
Vz-52 pistol

Denmark
Uzi submachinegun
G3 battle rifle
MG3 machinegun
HP-35 pistol

Finland
M71 assault rifle
PK machinegun
PM Makarov pistol

France
MAT-49 submachinegun
FA-MAS assault rifle
FR-F1 sniper rifle
AAT-52 machinegun
PA-15 pistol

Germany
G11 submachinegun
PSG1 sniper rifle
HK-CAW shotgun
MG3 machinegun
P7 M13 pistol

Greece
FN-FAL battle rifle
MAG machinegun
M1911A1 pistol

Hungary
AKR or AMD-65 submachinegun
AKMR assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
M1933 Tokarev pistol

Italy
M12 submachinegun
AR-70 assault rifle
MAG machinegun
M92S (M9) pistol

Yugoslavia
PPSh-41submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
M1933 Tokarev pistol

Netherlands
Uzi submachinegun
FN-FAL battle rifle
MAG machinegun
HP-35 pistol

Norway
G3 battle rifle
M249 automatic rifle
MAG machinegun
HP-35 pistol

Poland
AKR submachinegun
AK-74 assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
P-64 pistol

Romania
AMD-65 submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
PM Makarov pistol

Turkey
M3A1 submachinegun
G3 battle rifle
M21 sniper rifle
M60 machinegun
M1911A1 pistol

UK
L2A3 Sterling submachinegun
L85 (IWS) assault rifle
L42 sniper rifle
L86A1 (LSW) automatic rifle
L7A2 (MAG) machinegun
HP-35 pistol

USA
M231 submachinegun
M177 carbine
M16 assault rifle
M21 sniper rifle
HK-CAW shotgun
M249 automatic rifle
M60 machinegun
M9 or M1911A1 pistol

USSR
AKR submachinegun
AK-74 assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
PM Makarov pistol

Conny Delshagen (order #3265201)

Character Record Sheet

Player _____ Age _____ Initiative _____

Character _____ Service Branch _____ Rank _____

Nationality _____ Weight _____ Rads _____

Gender _____ Throw Range _____ Load _____

Attributes and Skills

Strength _____
Aircraft Mechanic _____
Archery _____
Armed Martial Arts _____
Autogun _____
Grenade Launcher _____
Heavy Artillery _____
Heavy Gun _____
Mechanic _____
Small Arms (Pistol) _____
Small Arms (Rifle) _____
Thrown Weapon _____
Unarmed Martial Arts _____

Education _____
Biology _____
Chemistry _____
Civil Engineer _____
Computer _____
Electronics _____
Excavation _____
Geology _____
Medical (Diagnosis) _____
Medical (Trauma Aid) _____
Medical (Surgery) _____
Metallurgy _____
Meteorology _____

Constitution _____
Climbing _____
Combat Engineer _____
Parachute _____
Riding _____
Scuba _____
Small Watercraft _____
Swimming _____

Charisma _____
Disguise _____
Instruction _____
Interrogation _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Leadership _____
Persuasion _____

Agility _____
Acrobatics _____
Forgery _____
Ground Vehicle (Motorcycle) _____
Ground Vehicle (Tracked) _____
Ground Vehicle (Wheeled) _____
Gunsmith _____
Hovercraft _____
Intrusion _____
Machinist _____
Pilot (Fixed-Wing) _____
Pilot (Rotary-Wing) _____
Snow Skiing _____
Stealth _____
Tac Missile _____
Warhead _____

Intelligence _____
Farming _____
Forward Observer _____
Navigation _____
Observation _____
Scrounging _____
Survival _____
Tracking _____

Contacts

Derived Values

Throw [ ] Unarmed Combat Damage [ ]

Range [ ]

Weight Load [ ]

Hit Capacity

	Current	Scratch	(Base) Slight	Serious	Critical
Head					+
Chest					+
Abdomen					+
Right Arm					+
Left Arm					+
Right Leg					+
Left Leg					+

Equipment

TWILIGHT: 2000

Conny Delshagen (order #3265201)

EQUIPMENT LIST

Every entry lists weight in kilograms, price in dollars, and availability. The last is given in the form of availability in the West/availability in the East. East and West refer to respective parts of Europe. North America and Japan are considered West. The interior of the Soviet Union and all of Northern China are East. Everything else is the third world: Use the least common of the two availabilities.

V: Very common *C:* Common *S:* Scarce *R:* Rare *—:* Unavailable except at referee's discretion.

Some entries contain additional information. Some items are covered in data cards. These are intended to be photocopied and rearranged, enabling each player and referee to assemble weapon arrays to suit individual situations. Players and referees have permission to photocopy these data cards for personal use.

MELEE WEAPONS

Garotte: A length of rope or wire used for strangulation.

Wt: 0.2 kg

Price: Usually improvised (V/V).

FIREARMS

Most of these entries represent weapons not covered by data cards.

Autocannon

Most autocannon are an integral part of a vehicle. Prices and availability are given only for those which are available separately.

20mm Autocannon: An automatic cannon mounted on the AMX-10P and on old versions of the Marder.

23mm Autocannon: A belt-fed automatic cannon mounted on the OT-65. It accepts 100-round belts. It may be fired only from the vehicle mount.

25mm Autocannon: A belt-fed automatic cannon mounted on the M2-2 and LAV-25. The weapon may have two belts, with two different types of ammunition loaded simultaneously, and may fire from either belt. Neither the 25mm autocannon nor the gunner's machinegun may fire while either belt is being reloaded. The weapon accepts 100-round belts.

30mm Autocannon: A belt-fed automatic cannon mounted on the BMP-2, BMP-3, and BRDM-4. The weapon accepts 100-round belts. A two-barrel Gatling gun version of the 30mm is used on the ZSU-30-2. Its rate of fire (5) is the number of times each gun can fire per combat round. Thus, if the vehicle fires five times, a total of 10 rounds could be fired.

30mm Rarden: A 30mm automatic cannon used on the British Warrior MCV-80 and other British vehicles.

Howitzers

122mm: The howitzer mounted on the SAU-122 self-propelled howitzer and D-30 towed howitzer.

It is manually loaded. The D-30 howitzer has an armor value 2 gun shield which provides cover for the gunner (but not the loader) if fired at from the front.

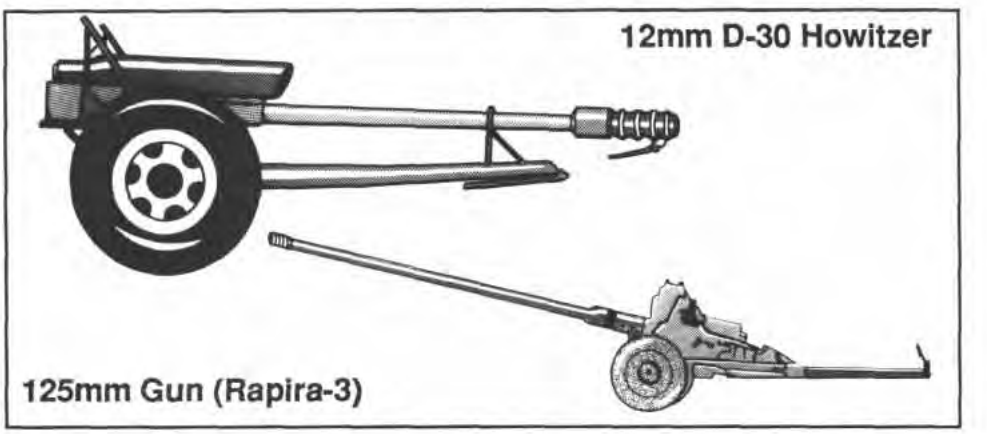
The D-30 howitzer takes six minutes to set up.

Wt (D-30): 3 tons.

Price (D-30): $50,000 (S/C).

152mm: The howitzer mounted on the SAU-152 self-propelled howitzer. It is manually loaded.

155mm: The howitzer mounted on the M109A2 self-propelled howitzer. It is manually loaded.



12mm D-30 Howitzer

125mm Gun (Rapira-3)

Large-Caliber Guns

100mm Gun: A manually loaded direct fire gun mounted on the T-55 and BMP-3 AFVs.

105mm Gun: A manually loaded large caliber gun mounted on the M1 tank and M8 self-propelled gun.

120mm Gun: A large-caliber gun mounted on the M1A1 and M1A2 tanks. On the M1A1 it is manually loaded; on the M1A2 it is equipped with an autoloader.

120mm Rifled Gun: The L11A5 rifled gun mounted on the Challenger and other British tanks.

125mm Gun (Rapira-3): A large-caliber gun mounted on the T-72, T-80, and T-90 tanks and the Rapira-3 towed antitank gun. All three tanks are equipped with autoloaders.

On the Rapira-3, the gun is manually loaded. On the T-72 and T-80, the gun automatically goes to maximum elevation while the autoloader is working, so the gunner may not aim during loading.

On the T-90 and the Rapira-3, the gunner may aim during loading.

The Rapira-3 has an armor value 2 gun shield which provides cover for the gunner and loader if fired at from the front. The Rapira-3 takes four minutes to set up.

Wt (Rapira-3): 3.5 tons.

Price (Rapira-3): $50,000 (R/S).

Tripods

With the exception of the AT-4, a tripod for a weapon must be purchased separately.

NLT (NATO Light Tripod): Accepts M60 and MG3.

Wt: 7 kg.

Price: $200 (C/S).

NMT (NATO Medium Tripod): Accepts MAG.

Wt: 10 kg.

Price: $200 (S/R).

NHT (NATO Heavy Tripod): Accepts M214, M2HB, Mk-19.

Wt: 22 kg.

Price: $350 (C/S).

PLT (Pact Light Tripod): Accepts PK, Vz-59.

Wt: 10 kg.

Price: $250 (S/C).

PMT (Pact Medium Tripod): Accepts AGS-17.

Wt: 12 kg.

Price: $300 (S/C).

PHC (Pact Heavy Carriage): Accepts DShK.

Wt: 100 kg.

Price: $1000 (R/S).

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SMALL ARMS AMMUNITION

Weights per magazine include weight of magazine (which is negligible in most cases) and ammunition.

Magazines are purchased separately and cost $1 per three rounds of capacity, except the 1000-round drum for 5.56mm N ammunition, which costs $200.

Small Arms & Machineguns

Longbow Arrow:
Wt: 3 kg per 24.
Price: $50 per 24 (C/C).

Crossbow Bolt:
Wt: 3 kg per 24.
Price: $30 per 24 (C/C).

Loose Black Powder and Ball: These are most commonly premeasured and wrapped in paper in ready-to-use units.
Wt: 1 kg per 40.
Price: $25 per 40 (C/C).

4.7mm Cls (4.7×21mm Caseless):
Wt: 10 kg per case of 1800, 1 kg per 50-round magazine.
Price: $1300 per case (S/R).

5.45mm B (5.45×39mm Bloc):
Wt: 10 kg per case of 840, 0.5 kg per 30-round magazine, 0.6 kg per 40-round magazine.
Price: $100 per case (C/V).

5.56mm N (5.56×45mm NATO):
Wt: 10 kg per case of 840 or 4 belts, 0.5 kg per 30-round magazine, 2 kg per 200-round belt, 15 kg per 1000-round drum.
Price: $100 per case, $200 per empty drum (V/C).

.22 LR (5.7×17mmR Long Rifle):
Wt: 20 kg per case of 5000, 0.1 kg per 7-round magazine.
Price: $225 per case (C/S).

7.5mm MAS (7.5×54mm MAS):
Wt: 15 kg per case of four belts, 2 kg per 50-round belt.
Price: $30 per case (R/R).

7.62mm T (7.62×25mm Tokarev):
Wt: 35 kg per case of 2500, 0.2 kg per 8-round magazine, 0.6 kg per 32-round magazine.
Price: $250 per case (R/S).

7.62mm S (7.62×39mm Short):
Wt: 10 kg per case of 600, 1 kg per 30-round magazine.
Price: $80 per case (S/C).

.30-30 (7.62×51mmR):
Wt: 20 kg per case of 1000, 5 loose rounds per kilogram.
Price: $170 per case (C/S).

7.62mm N (7.62×51mm NATO):
Wt: 15 kg per case of 600, 0.75 kg per 20-round magazine, 1.5 kg per 50-round belt, 3 kg per 100-round belt.
Price: $65 per case (C/S).

7.62mm L (7.62×54mmR Long):
Wt: 15 kg per case of 600, 0.3 kg per 10-round magazine, 3 kg per 100-round belt.
Price: $70 per case (S/C).

.30-06 (7.62×63mm):
Wt: 15 kg per case of 500, 35 loose rounds per kilogram.
Price: $80 per case (S/R).

.32 ACP (7.65×17mmSR):
Wt: 20 kg per case of 2000, 0.1 kg per 10-round magazine, 0.2 kg per 20-round magazine.
Price: $150 per case (S/S).

8mm M (7.92×57mm Mauser):
Wt: 10 kg per case of 300, 30 rounds per kilogram.
Price: $30 per case (S/S).

.380 ACP (9×17mm):
Wt: 15 kg per case of 1500, 0.1 kg per 7-round magazine.
Price: $125 per case (C/S).

9mm M (9×18mm Makarov):
Wt: 15 kg per case of 1500, 0.1 kg per 8-round magazine.
Price: $200 per case (S/C).

9mm P (9×19mm Parabellum):
Wt: 15 kg per case of 1500, 0.1 kg per 8-round magazine, 0.2 kg per 13- and 15-round magazine, 0.3 kg per 25- and 30-round magazine, 0.4 kg per 32- and 34-round magazine.
Price: $225 per case (V/C).

.38 Special (9×29mmR):
Wt: 15 kg per case of 1000.
Price: $175 per case (S/R).

.357 Magnum (9×33mmR):
Wt: 18 kg per case of 1000.
Price: $500 per case (R/—).

10mm (10x24mm):
Wt: 10 kg per case of 1000 rounds.
Price: $85 (R/—).

.44 Magnum (11.2×32.8mmR):
Wt: 20 kg per case of 1000.
Price: $550 per case (R/—).

.45 ACP (11.43×23mm):
Wt: 20 kg per case of 1000, .03 kg per 7-round magazine.
Price: $63 per case (S/R).

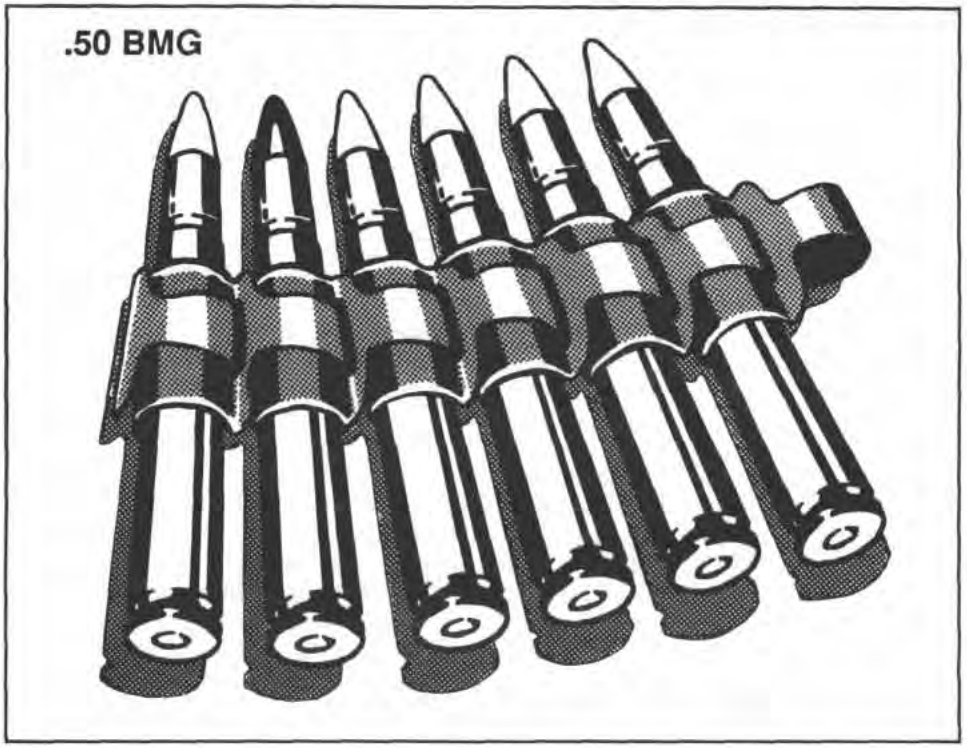
12.7mm B (12.7×83mmR Bloc):
Wt: 25 kg per case of 2 belts, 11 kg per 50-round belt.
Price: $35 per case (S/C).

.50 BMG (12.7×99mm Browning Machinegun):
Wt: 15 kg per case of 1 belt, 13 kg per 105-round belt.
Price: $35 per case (C/S).

.50 SLAP (12.7×99mm Saboted Light Armor Piercing):
Wt: 15 kg per case of 1 belt, 13 kg per 105-round belt.
Price: $60 per case (S/R).

14.5mm B (14.5×114mm Bloc):
Wt: 30 kg per case of 1 belt, 25 kg per 100-round belt.
Price: $30 per case (S/C).

12 Gauge (12 Gauge All-Brass):
Wt: 15 kg per case of 240, 1 kg per 10-round magazine, (15 loose rounds per kilogram).
Price: $100 per case (C/C).



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Types of Rounds

Large-caliber gun, autocannon, and grenade rounds come in several types, explained below. Each weapon can fire one or more of these types. Certain rounds are here defined as *Penetrators* or *Exploding* according to the rules on page 216.

APDU (Armor Piercing Depleted Uranium): Essentially the same as an APFSDS round, but with a penetrator made of depleted uranium. The density and hardness of the DU penetrator increases the ability of the round to penetrate armor considerably. Depleted uranium is spent reactor fuel and is not dangerously radioactive. *Penetrator.*

APFSDS (Armor Piercing Fin Stabilized Discarding Sabot): The round consists of a subcaliber finned penetrator (usually made of tungsten) surrounded by a full-bore aluminum sabot (pronounced *SAY-bow*) in several pieces. Once the round leaves the barrel, the sabot falls away. The combination of a large propelling charge and a small diameter penetrator results in very high muzzle velocity and armor penetration. *Penetrator.*

APHE (Armor Piercing High Explosive): A kinetic armor piercing round with a substantial explosive charge. This is, in effect, a dual purpose round which can function as a *penetrator* vs. armored vehicles, or like an exploding artillery shell vs. personnel or area targets. *Penetrator.*

API (Armor Piercing Incendiary): A nearly solid round containing a small amount of incendiary material in the base. Primarily used against armored vehicles. *Penetrator.*

CHEM (Chemical): A hollow shell which, upon landing, burns and releases a gas or smoke. The most common chemical is hexachloroethane (HC) smoke, and all prices given later are based on that round. Rounds may also be filled with irritant gas (double price), blood agent poisonous gas (triple price) or nerve gas (quadruple price). In all cases, the chemical cloud will cover an area the width of the given burst area and four times as long as the burst area. The cloud will originate at the impact point of the round and stretch downwind.

FASCAM (Field Artillery Scatterable Mines): Also called remote-delivered mines (RDM), this is a hollow round containing antitank and antipersonnel mines. The round bursts in the air and scatters mines over an area 100 meters in radius from the burst point.

HE (High Explosive): A high explosive round is a hollow casing containing an explosive compound. Set to detonate on impact or at a selected altitude, it is useful against infantry and some larger targets. It is the least expensive (and thus most common) indirect fire round used. *Exploding.*

HEAT (High Explosive Antitank): A hollow shell filled with explosive compound. An inverted cone in the nose of the shell directs the explosive force forward into a high-energy jet of super-heated gas and molten metal, reducing the effectiveness of the round against soft targets, but vastly increasing it against armor. *Exploding.*

HEDP (High Explosive Dual Purpose): A hollow round containing an explosive compound filler with a shaped charge director in the nose to provide the round with an enhanced armor-penetrating capability. *Exploding.*

HVAP (High Velocity Armor Piercing): The simplest, earliest, and most basic kinetic energy armor piercing round, fired at high velocity to penetrate armored targets. *Penetrator.*

HVHE and HVHEDP (High Velocity High Explosive and High Velocity High Explosive Dual Purpose): These high-explosive rounds are similar to HE and HEDP rounds, but they have a greater muzzle velocity and, consequently, an increased range. *Exploding.*

ICM (Improved Conventional Munitions): Also called improved conventional mines (ICM), this is a hollow round filled with grenades. The round bursts in the air and scatters grenades over a large area. It is very effective against infantry.

ICM-DP (Improved Conventional Munitions, Dual Purpose): Similar to ICM, the ICM-DP round contains shaped-charge grenades which have an improved effectiveness against armored targets—provided they achieve a direct hit. *Exploding.*

ILLUM (Illumination): A hollow round containing a parachute flare which will illuminate the area defined by the round's burst radius for two combat turns (one minute).

Powder Charges: Most guns use a round which consists of both the projectile and a brass casing with propellant. The 125mm gun and all howitzers fire a round consisting of a projectile and a separate powder charge. One powder charge is consumed for each projectile fired.

WP (White Phosphorus): A hollow round filled with white phosphorus. Upon detonation, it scatters burning white phosphorus throughout its burst radius. WP rounds also generate thick white smoke.

Hand Grenades

Fragmentation: The grenade, upon exploding, scatters metal fragments throughout its burst radius.

Wt: 0.5 kg, 30 kg per case of 30.

Price: $4 each, $100 per case (C/C).

Chemical: Same as a chemical round for large-caliber guns. Two types are available: HC smoke and irritant gas.

Wt: 0.5 kg, 16 kg per case of 16.

Price: $3 each, $40 per case for smoke, double prices for irritant (smoke, C/S; irritant, S/R).

Antitank: The grenade is designed to explode on impact. It contains a shaped charge and is stabilized by fins so that the grenade flies with the shaped charge pointing forward.

Wt: 1 kg, 25 kg per case of 15.

Price: $10 each, $120 per case (R/S).

Concussion: The grenade consists of explosive filler in a cardboard or plastic container. Upon explosion it will knock people down, but causes no lethal fragmentation.

Wt: 0.5 kg, 20 kg per case of 20.

Price: $4 each, $70 per case (C/S).

Thermite: The grenade has little blast or fragmentation, but it burns with intense heat.

Wt: 1 kg, 20 kg per case of 16.

Price: $10 each, $140 per case (S/R).

WP (White Phosphorus): The grenade scatters incendiary fragments throughout its burst radius and burns with intense heat.

Wt: 1 kg, 20 kg per case of 16.

Price: $20 each, $280 per case (S/S).



Fragmentation Grenade

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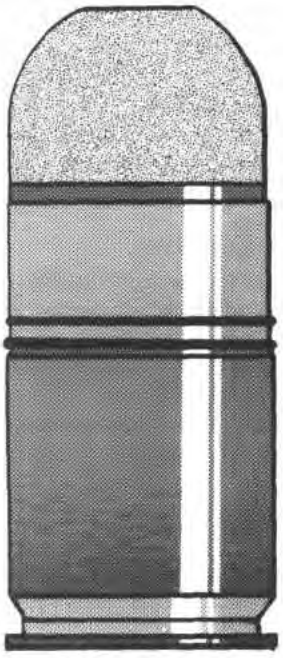


40mm HEDP

Grenade Launcher Rounds

30mm HE: Fired from the AGS-17 auto-grenade launcher.

Wt: 0.35 kg, 10 kg per 29-round drum.

Price: $3 each, $75 per drum (R/C).

40mm HE: Fired from the M203, HK-69, or Mk-19 grenade launcher.

Wt: 0.3 kg, 25 kg per case of 72.

Price: $4 each, $200 per case (C/S).

40mm HEDP: Fired from the M203, HK-69, or Mk-19.

Wt: 0.3 kg, 25 kg per case of 72.

Price: $5 each, $250 per case (S/R).

40mm CHEM: Irritant gas only. Fired from the HK-69, M203, or Mk-19.

Wt: 0.3 kg, 25 kg per case of 44.

Price: $4 each, $150 per case, (S/R).

40mm ILLUM: Fired from the HK-69, M203, or Mk-19.

Wt: 0.2 kg, 20 kg per case of 44.

Price: $6 each, $225 per case (S/R).

40mm Flechette: A 40mm flechette round, for use in all 40mm GLs except the Mk-19.

Wt: 0.3 kg, 44 kgs per case of 144

Price: $5 each (R/—).

40mm HVHE: Fired only from the Mk-19 grenade launcher, the round is a standard HE round with a larger propelling charge for greater range.

Wt: 0.4 kg, 20 kg per 50-round belt, 25 kg per case of 50, belted.

Price: $6 each, $250 per case (S/R).

40mm HVHEDP: Fired only from the Mk-19 grenade launcher, this is a standard HEDP round with a larger propelling charge.

Wt: 0.4 kg, 20 kg per 50-round case, 25 kg per case of 50 belted.

Price: $10 each, $400 per case (S/R).

Rockets

Folgore HEAT: Used in the Folgore launcher.

W: 5 kg.

Price: $120 (C/S).

58.3mm HEAT: Fired from the RPG-16 rocket launcher.

Wt: 3 kg, 10 kg per case of 3.

Price: $50 each, $125 per case (R/S).

82mm SMAW HE: Fired from the M12 SMAW.

Wt: 0.2 kg, 7 kg per case of 6.

Price: $75 each, $350 per case (S/—).

82mm SMAW HEAT: Fired from the M12 SMAW.

Wt: 0.2 kg, 7 kg per case of 6.

Price: $75 each, $350 per case (S/—).

84mm HEAT: Used in the Carl Gustav.

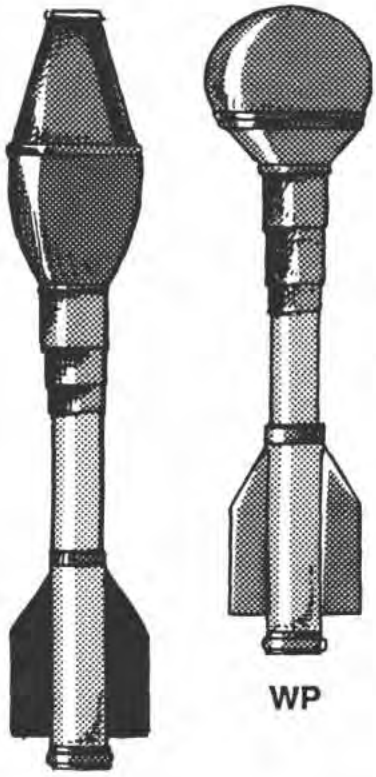
Wt: 3 kg.

Price: $120 (C/S).

89mm HEAT: Used in the LRAC F1.

Wt: 2 kg.

Price: $175 (R/—).



HEAT WP

Rifle Grenades



140mm RAW

Rifle Grenades

These weapons are fired using Heavy Weapons skill.

HEAT: Fired from any battle rifle or assault rifle.

Wt: 0.7 kg, 20 kg per 10-round case.

Price: $12, $100 per case (S/R).

WP: Fired from any battle rifle or assault rifle.

Wt: 0.7 kg, 20 kg per case of 10.

Price: $25 each, $200 per case (S/R).

140mm RAW (Rifle Assault Weapon) HE: A rocket-propelled grenade which can be fired from any assault rifle which fires 5.56mm N ammunition.

Wt: 3 kg.

Price: $50 each (S/R).

140mm RAW (Rifle Assault Weapon) HEAT: As above, but with a HEAT warhead

Wt: 3 kg.

Price: $100 each (S/R).

Conny Delshagen (order #3265201)

Antitank Missiles

These are fired using Heavy Weapons skill.

152mm HEAT (Tank Breaker): Fired from a Tank Breaker launcher. A self-guiding missile with an HEAT warhead. Not interchangeable with TOW 2.

Wt: 18 kg.

Price: $1000 each (S/R).

152mm HEAT (TOW 2A): A wire-guided missile with an HEAT warhead, fired from the TOW launcher on the M2 Bradley or on a tripod. Not interchangeable with Tank Breaker.

Wt: 28 kg.

Price: $1500 (S/R).

152mm HEAT (TOW 2B): A wire-guided missile with an HEAT warhead, the final version of the TOW antitank missile.

The TOW 2B is an overhead attack weapon like Tank Breaker. Fired from the TOW launcher on the M2 Bradley or on a tripod, the TOW 2B is not interchangeable with Tank Breaker.

Wt: 31 kg.

Price: $2100 (R/—).

AT-3 "Sagger": Fired from the AT-3 launcher.

Wt: 11 kg.

Price: $1200 (R/S).

AT-4 "Spigot": Fired from the AT-4 launcher. A wire-guided missile with a HEAT warhead. Soviet name is Fagot.

Wt: 7 kg.

Price: $750 (R/S).

AT-5 "Spandrel": Fired from the AT-5 launcher on the BMP-2. A wire-guided missile with a HEAT warhead.

Wt: 8 kg.

Price: $1200 (R/S).

AT-7 "Saxhorn": Fired from the AT-7 Saxhorn launcher. Soviet name is Metis

Wt: 7 kg.

Price: $1200 (—/R).

AT-8 "Songster": This is a 125mm gun-launched operator-guided ATGM fired from the T80 tanks. Dissatisfied with the long-range performance of tank gun range finders, the Soviets developed the AT-8 "Songster" to fire from the tank's guntube. Each AT-8 comes in two parts (propellant and warhead) and must be hand loaded by the gunner. This takes six combat actions. Each AT-8 missile carried displaces one conventional cannon round. Soviet name is Kobra.

Wt: 50 kg.

Price: $2000 (S/C).

AT-10 ATGM: This is a 100mm gun-launched operator-guided ATGM fired from the main gun of the BMP-3. The T-55, although possessing a gun of the proper caliber, does not have the necessary guidance system to fire the missile.

Wt: 25 kg.

Price: $2000 (—/R)

Reflecks ATGM: This is a 125mm gun-launched operator-guided ATGM fired from the T-90 tank, and is a follow-on to the AT-8 "Songster." Each Reflecks, designated 9M119 by the Soviets, comes in two parts: the round and a reduced-charge propellant casing and space plug. Designated "Sniper" by NATO.

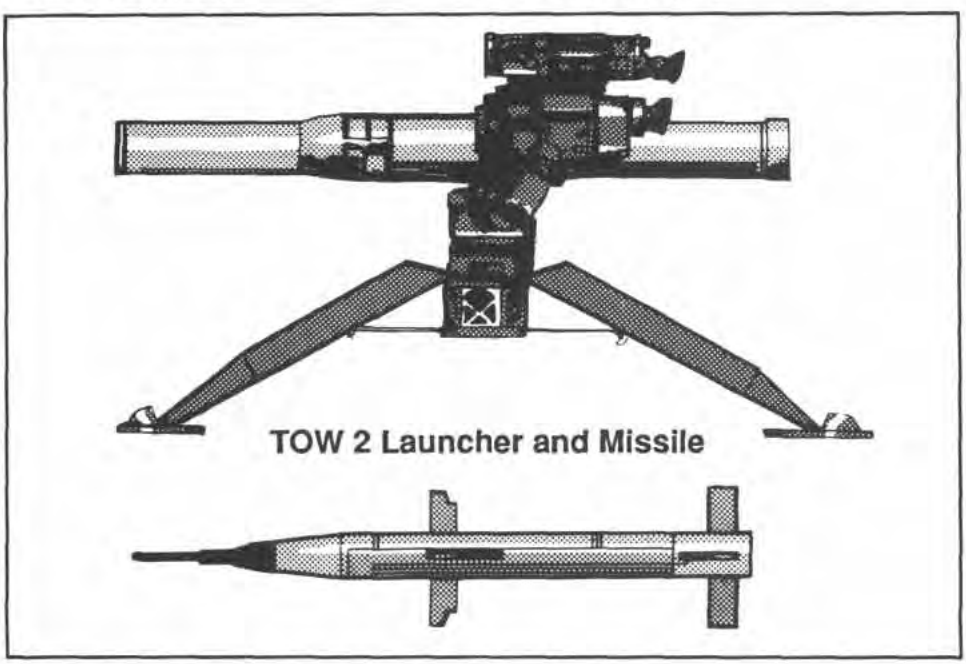
Wt: 40 kg.

Price: $2500 (R/S).

MILAN II: Fired from the MILAN II launcher. A wire-guided missile with an HEAT warhead.

Wt: 7 kg.

Price: $3000 (C/S).



TOW 2 Launcher and Missile

MILAN II-T: Fired from the MILAN II launcher. A wire-guided, top-attack missile like Tank Breaker.

Wt: 8 kg.

Price: $4500 (C/S).

HOT: Fired from the Euromissile HOT launcher. A wire-guided missile with an HEAT warhead.

Wt: 20 kg.

Price: $5500 (S/R).

Swingfire: Fired from the British Swingfire launcher. A wire-guided missile with an HEAT warhead.

Wt: 20 kg.

Price: $3000 (S/R).

127mm HEAT (Dragon PIP): Used with the Dragon launcher.

Wt: 7 kg.

Price: $1200 (R/—).

Autocannon Rounds

These are fired using Heavy Weapons skill.

23mm API:

Wt: 100 kg per case of 33, belted.

Price: $500 per case (S/C).

23mm HE:

Wt: 100 kg per case of 33, belted.

Price: $500 per case (S/C).

25mm API:

Wt: 100 kg per case of 33, belted.

Price: $650 per case (C/S).

25mm HE:

Wt: 100 kg per case of 33, belted.

Price: $650 per case (C/S).

25mm APDU:

Wt: 100 kg per case of 33, belted.

Price: $2500 per case (S/R).

30mm API:

Wt: 25 kg per case of 33, belted.

Price: $750 per case (S/C).

30mm HE:

Wt: 25 kg per case of 33, belted.

Price: $750 per case (S/C).

40mm HE:

Wt: 50 kg per case of 64.

Price: $6000 per case (C/S).

Large-Caliber Rounds

100mm APDS-T:

Wt: 25 kg.

Price: $750 (—/R)

100mm APHE:

Wt: 21 kg.

Price: $650 (—/S)

100mm HEAT:

Wt: 22 kg.

Price: $650 (—/S)

100mm WP:

Wt: 18 kg.

Price: $700 (—/S)

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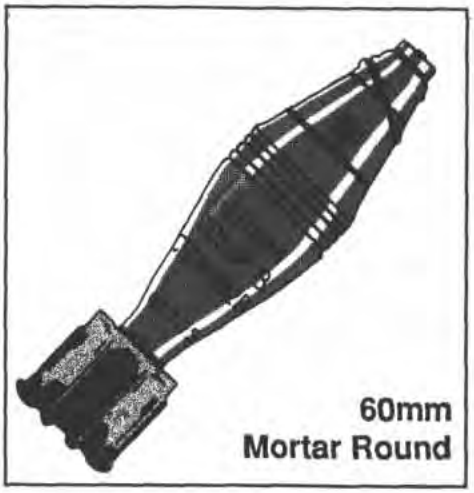
105mm HEAT:
Wt: 25 kg.
Price: $600 (C/S).
105mm APFSDS:
Wt: 25 kg.
Price: $600 (S/R).
105mm APDU:
Wt: 25 kg.
Price: $1000 (R/R).
105mm WP:
Wt: 25 kg.
Price: $1000 (R/R).
105mm Flech(LC):
Wt: 25 kg
Price: $700 (S/—)
120mm HEAT:
Wt: 50 kg.
Price: $800 (C/S).
120mm APFSDS:
Wt: 50 kg.
Price: $800 (S/R).
120mm APDU:
Wt: 50 kg.
Price: $1500 (R/R).
120mm WP:
Wt: 50 kg.
Price: $1000 (R/R).
125mm HE:
Wt: 40 kg.
Price: $800 (S/C).
125mm HEAT
Wt: 40 kg.
Price: $800 (R/S).
125mm APFSDS
Wt: 40 kg.
Price: $800 (S/R).

Assorted Tank Gun Rounds





60mm Mortar Round

125mm APDU:
Wt: 40 kg.
Price: $1500 (R/R).
125mm Powder Charge:
Wt: 25 kg.
Price: $80 (S/C).

Howitzer Rounds

122mm HE:
Wt: 25 kg *Price:* $350 (S/C).
122mm HEAT:
Wt: 25 kg *Price:* $500 (R/S).
122mm ICM:
Wt: 25 kg *Price:* $2000 (R/R).
122mm WP:
Wt: 25 kg *Price:* $700 (R/S).
122mm CHEM:
Wt: 25 kg *Price:* $350 (R/S).
122mm ILLUM:
Wt: 25 kg *Price:* $350 (R/R).
122mm Powder Charge:
Wt: 10 kg *Price:* $40 (C/V).
152mm HE:
Wt: 50 kg *Price:* $500 (S/C).
152mm HEAT:
Wt: 50 kg *Price:* $750 (R/S).
152mm ICM:
Wt: 50 kg *Price:* $3000 (R/R).
152mm WP:
Wt: 50 kg *Price:* $1000 (R/S).
152mm CHEM:
Wt: 50 kg *Price:* $500 (R/S).
152mm ILLUM:
Wt: 50 kg *Price:* $500 (R/R).
152mm Powder Charge:
Wt: 25 kg *Price:* $60 (C/V).
155mm HE:
Wt: 50 kg *Price:* $500 (C/S).
155mm HEAT:
Wt: 50 kg *Price:* $750 (C/S).
155mm ICMDP:
Wt: 50 kg *Price:* $3000 (R/R).
155mm WP:
Wt: 50 kg *Price:* $1000 (S/R).
155mm CHEM:
Wt: 50 kg *Price:* $500 (S/R).
155mm ILLUM:
Wt: 50 kg *Price:* $500 (S/R).
155mm FASCAM:
Wt: 50 kg *Price:* $5000 (R/R).
155mm Powder Charge:
Wt: 25 kg *Price:* $60 (V/C).

Mortar Rounds

60mm HE:
Wt: 25 kg per case of 12.
Price: $300 per case (C/S).
60mm WP:
Wt: 25 kg per case of 12.
Price: $600 per case (S/R).
60mm ILLUM:
Wt: 25 kg per case of 12.
Price: $300 per case (S/R).
81mm HE:
Wt: 25 kg case of 3.
Price: $150 per case (C/S).
81mm WP:
Wt: 25 kg case of 3.
Price: $300 per case (S/R).
81mm ILLUM:
Wt: 25 kg per case of 3.
Price: $150 per case (S/R).
82mm HE:
Wt: 50 kg per 5-round clip.
Price: $300 per clip (S/C).
82mm HEDP:
Wt: 50 kg per 5-round clip.
Price: $600 per clip (R/S).
82mm WP:
Wt: 25 kg per case of 3.
Price: $300 per case (R/S).
82mm ILLUM:
Wt: 25 kg per case of 3.
Price: $150 per case (R/S).
120mm HE:
Wt: 50 kg per case of 2.
Price: $200 per case (V/V).
120mm WP:
Wt: 50 kg per case of 2.
Price: $400 per case (S/S).
120mm CHEM:
Wt: 50 kg per case of 2.
Price: $250 per case (S/S).
120mm ILLUM:
Wt: 50 kg per case of 2.
Price: $200 per case (S/R).

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EXPLOSIVES

Explosives are described as follows.

Dynamite Stick: The most common explosive used by civil engineers for demolitions, it is relatively easy to manufacture and is coming into more common military use. A quarter-kilogram stick has a DP value of 1.

Wt: 30 kg per case.

Price: $10 per quarter-kilogram stick, $750 per case of 100 sticks (C/C).

Plastic Explosive: Plastic explosive can be molded to desired shapes and will adhere to desired surfaces. It will not explode if burned, and can only be detonated by another explosion, usually provided by a blasting cap. A one-kilogram block has a DP value of 6.

Wt: 30 kg per case.

Price: $30 per 1 kg block, $650 per case of 20 blocks (S/R).

Mine, Antipersonnel: The American M16A1 AP mine and similar devices by other armies. This mine has a DP value of 6.

Wt: 20 kg, 84 per case of 4.

Price: $50, $200 per case (C/C).

Mine, Antitank: The American M19 AT mine and similar devices by other armies. This mine has a DP value of 18.

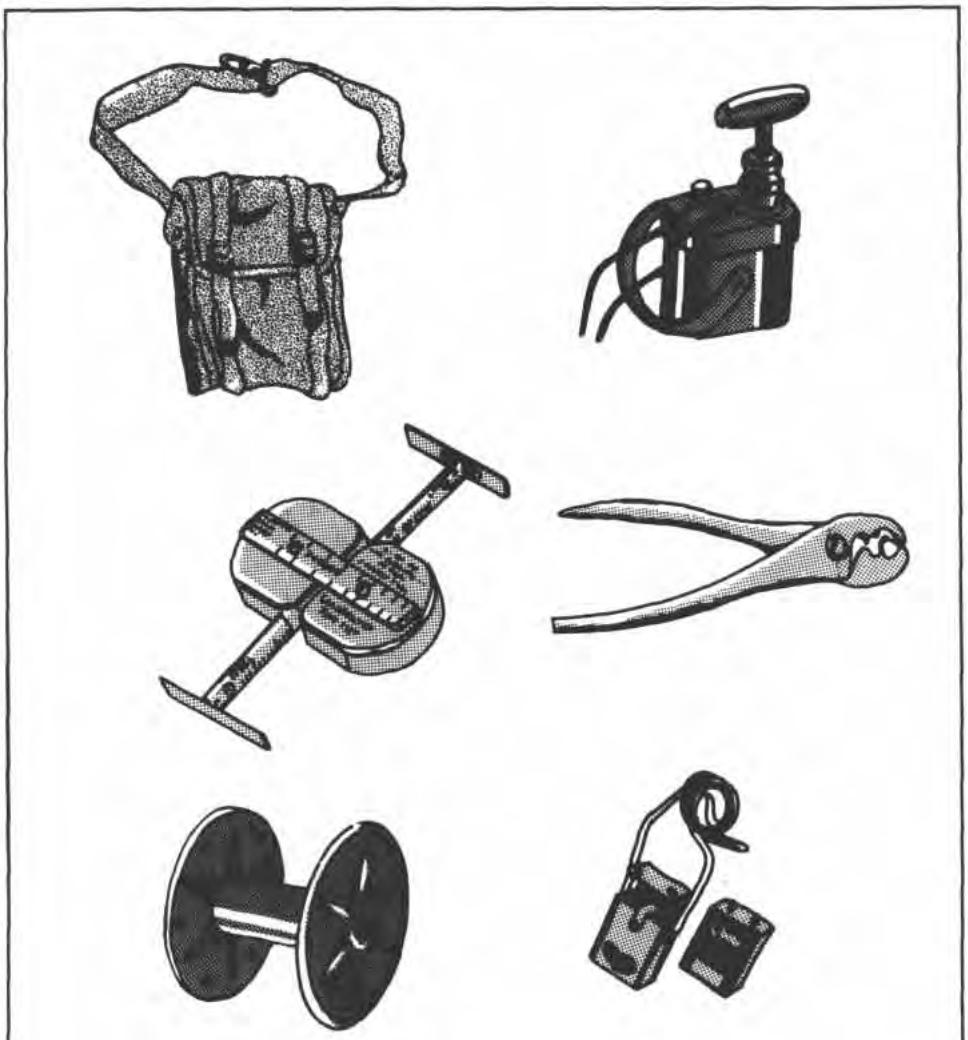
Wt: 35 kg, 74 per case of 2.

Price: $100, $200 per case (S/S).

Mine, Directional: A directional antipersonnel mine, typified by the American M18 Claymore or the Soviet MOC-50. It can be detonated by a tripwire or electrically (all necessary items are included with the mine and are disposable). The mine comes packaged in a canvas carrying case containing all items needed to emplace it. Special rules for its damage are discussed on page 202. This mine has a DP value of 4.

Wt: 2 kg, 12 per case of 6.

Price: $250, $800 per case (S/R).



Engineer Demolitions Kit

Engineer Demolitions Kit: This kit contains an assortment of items to enable a character to rig explosive charges and fuse them for detonation. Weight and price are given for individual items as well as for the kit as a whole. Items without weight, etc., are not available separately. The explosives must be purchased separately.

A single charge uses up one blasting cap, and whatever fuse, detonators, and so on that the character chooses to use. Wire, tools, and the blasting machine can be recovered after a blast, but all other items are used up. Quantities in a kit are noted in parentheses.

Tools (1 Set): Pliers, knife, tape, cap crimper, and other items needed to prepare explosive charges. *Wt:* 4 kg *Price:* $50 (C/C).

Cap, Blasting, Electric (50): At least one is required to set off a charge. *Wt:* Negligible *Price:* $2 each (C/C).

Cap, Blasting, Nonelectric: (50): At least one is required to set off a charge. *Wt:* Negligible *Price:* $2 (C/C).

Wire, Electrical (2×100m Spools): For use with electrical blasting caps. Any length can be fastened to up to 10 caps. Not normally reused. *Wt:* 5 kg/spool *Price:* $50 (V/V).

Wire, Trip (1×500m Spool): A thin wire used in booby traps and the like. Tripwires can be of any reasonable length, but it makes no sense to have them longer than the blast radius of the explosive. *Wt:* 2 kg/spool *Price:* $10/spool (V/V).

Blasting Machine (1): A hand-cranked electrical igniter which can fire up to 10 caps electrically. The machine generates current by muscular motion and never needs recharging or battery changes. *Wt:* 0.5 kg *Price:* $50 (C/C).

Fuse, Instant (2×100 m coils): Burns 5900 meters per second; for use with nonelectric blasting caps. May be ignited by any igniter or by flame, and it can be combined with itself (to set off more than one cap) or with time fuse. *Wt:* 3 kg/coil *Price:* $100/coil (C/C).

Fuse, Time (2×100m Coils): Burns 100 seconds per meter; for use with nonelectric blasting caps. May be ignited by any igniter or by flame, and it can be combined with itself (to set off more than one cap) or with instant fuse. *Wt:* 3 kg/coil *Price:* $75/coil (V/V).

Igniter, Fuse, M60 (50): A weatherproof pull igniter, which can be used to light either instant or time fuse. This igniter can be used in simple (pull-only tripwire) booby traps. Only one tripwire per igniter. It can be fixed directly to a nonelectric blasting cap. *Wt:* Negligible *Price:* $3 (C/C).

Timer, M2A1 (5): This detonator has a digital timer which can be set to any time from 30 seconds to 48 hours, in 30-second incre-

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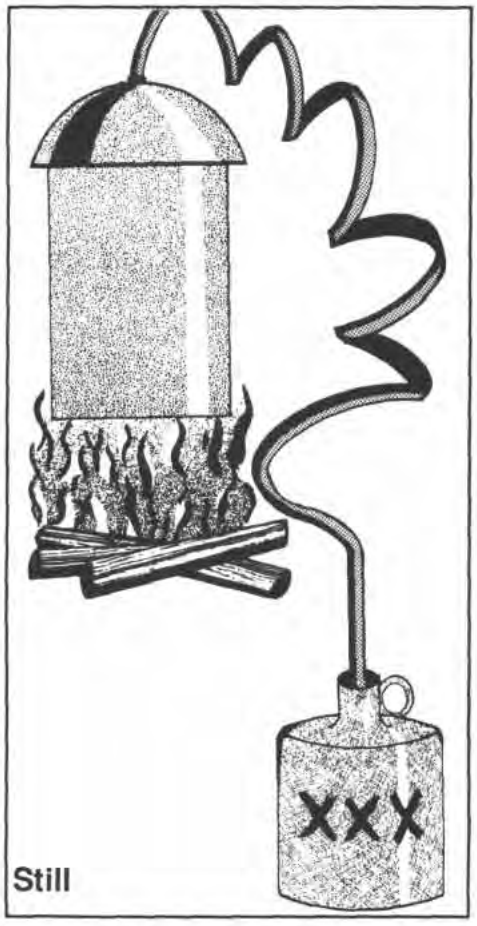


Still

ments. It will fire up to 10 electrical caps. Once set and sealed, it is waterproof, but it cannot be set underwater. *Wt:* 0.25 kg *Price:* $20 (S/S).

Igniter, M4A1 (5): A pull/release detonator, used for sophisticated booby traps. It will detonate either when pressure is placed on a tripwire or released from the tripwire (if a wire is cut, for example). Up to three tripwires may be attached. *Wt:* Negligible *Price:* $10 (R/R).

Full Kit: All of the above, packed in a wooden chest for transport. *Wt:* 30 kg *Price:* $750 (C/C).

STILLS

Small: Uses 30 kilograms of organic material per day and produces five liters of alcohol per day.

Wt: 700 kg.
Price: $500 (V/V).

Medium: Uses 80 kilograms of organic material per day and produces 35 liters of fuel per day.

Wt: 2000 kg.
Price: $2500 (V/V).

Large: Uses three tons of organic material per day and produces 2400 liters of alcohol per day.

Wt: 83 tons.
Price: $200,000 (C/C).

GENERATORS

1.5 Kilowatt:
Fuel Consumption: 2 liters per period.
Wt: 50 kg.
Price: $200 (C/C).

5 Kilowatt:
Fuel Consumption: 5 liters per period.
Wt: 150 kg.
Price: $700 (C/C).

10 Kilowatt:
Fuel Consumption: 7 liters per period.
Wt: 250 kg.
Price: $1200 (S/S).

60 Kilowatt:
Fuel Consumption: 40 liters per period.
Wt: 600 kg.
Price: $8000 (S/S).

100 Kilowatt:
Fuel Consumption: 55 liters per period.
Wt: 1000 kg.
Price: $15,000 (R/R).

500 Kilowatt:
Fuel Consumption: 170 liters per period.
Wt: 2500 kg.
Price: $50,000 (R/R).

Notes on Generators and Electrical Equipment: A variety of electrical devices are available, but they require electricity in order to function.

The Equipment List included in **Twilight: 2000** 2nd edition gives the power consumption, in kilowatts, of each electrical equipment item.

Those pieces of equipment which are listed as vehicle powered may only function when they are in the vehicle or when they are hooked to a generator. Other types of electrical equipment which only have a power consumption listed may only function when they are hooked to a generator.

A generator can power equipment as long as the total power consumption of equipment which is connected to the generator is less than or equal to the generator's output. (A 60-kilowatt generator has an output of 60 kilowatts.)

A generator consumes fuel at the rate noted above.

Some equipment listed is powered by internal batteries. Internal batteries will work for one day before they require recharging. For a battery to be recharged, it must be hooked to a generator for one period before it can again be used.

The generator must be operating when used to recharge, but no power consumption is charged against its capacity due to recharging (as the power consumption of battery-operated items in the game is insignificant when compared to even the smallest generator's output).

HEATERS AND COOLERS

Freezer, Small: A one-cubic-foot freezer suitable for preserving food or medical supplies. It can be powered either by a vehicle battery or a generator.

Power Consumption: 0.12 kw.
Wt: 20 kg.
Price: $100 (S/S).

Freezer, Large: A 14-cubic-foot freezer. It can only be powered by a generator.

Power Consumption: 1.4 kw.
Wt: 175 kg.
Price: $1000 (S/S).

Portable Heater: Suitable for one average-sized room.

Power Consumption: 4.75 kw.
Wt: 3 kg.
Price: $200 (C/C).

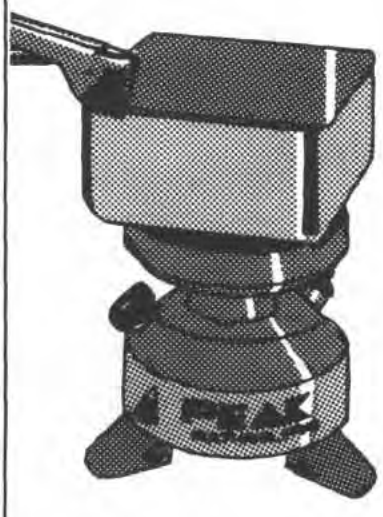
150-Liter Water Heater:
Power Consumption: 175 kw.
Wt: 180 kg.
Price: $1500 (C/C).

Refrigerator, Small: Suitable for preserving small quantities of food or medical supplies. It can be powered by a vehicle or a generator.

Power Consumption: 0.1 kw.
Wt: 20 kg.
Price: $100 (C/C).

Refrigerator, Large: 14 cubic feet.
Power Consumption: 1.3 kw.
Wt: 150 kg.
Price: $1000 (S/S).

Field Cooker, Military:
Fuel Consumption: 8 liters/period.
Wt: 250 kg.
Price: $1000 (C/C).


Field Cooker

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HAND TOOLS

Basic Tool Kit: Small hand tools which are suitable for a variety of purposes. These may include wrenches, pliers, screwdrivers, and so on.

Wt: 5 kg.
Price: $200 (V/V).

Power Hand Tools: A selection of power tools including a chainsaw, 9" rotary saw, drill, and other electrical tools.

Power consumption listed is for the whole set.

Power Consumption: 4 kw.
Wt: 35 kg.
Price: $500 (C/C).

Wheeled Vehicle Tools: Specialized tools for repair and maintenance of wheeled vehicles.

These vehicle tools include spark plug wrenches, torque wrenches, a grease gun, and so on.

Wt: 10 kg.
Price: $500 (C/C).

Tracked Vehicle Tools: As above, but for tracked vehicles.

Wt: 15 kg.
Price: $1000 (S/S).

Aircraft Tools: As above, but for aircraft.

Wt: 22 kg.
Price: $2000 (R/R).

Excavating Tools: Picks, shovels, mattocks, and so on.

Wt: 20 kg.
Price: $300 (V/V).

Construction Tools: Hammers, saws, squares, hatchets, chisels, and other woodworking tools.

Wt: 30 kg.
Price: $500 (C/C).

Small Arms Tools: Specialized tools for use in the maintenance and repair of small arms.

These tools are not suitable for the purpose of the construction of weapons from scratch, however.

Wt: 5 kg.
Price: $200 (S/S).

Heavy Ordnance Tools: As above, but for heavy ordnance.

Wt: 25 kg.
Price: $750 (S/S).

Electrical Repair: Specialized tools for work on electrical appliances, wiring, and non-solid state equipment.

Wt: 3 kg.
Price: $500 (C/C).

Electronic Repair: As above, but for work on solid state electrical devices such as radios, radar sets, etc.

Wt: 3 kg.
Price: $1000 (S/S).

Arc Welder: Operates off of an integral generator, which cannot be modified for other use.

Fuel Consumption: 40 liters per period.
Wt: 75 kg.
Price: $500 (S/S).

Portable Machine Shop: A trailer containing powered machine tools, including a bench grinder, horizontal and vertical boring machines, a milling machine, metalworking and woodworking lathes, and numerous other machine tools. Exact components and uses are left to the discretion of the referee. It can be towed by any truck except a ¼-ton.

Power Consumption: 60 kw.
Wt: 1.75 tons.
Price: $75,000 (R/R).

Lockpick Tools: Picks, torsion wrenches, shims, a stethoscope, and other equipment to open all types of locks.

Wt: 0.5 kg.
Price: $20 (V/V).

RADIOS

0.5km Hand: A small, readily man-portable radio similar to the U.S. AN/PRC-68 or Soviet R-126. Powered from internal batteries.

Wt: 0.5 kg.
Price: $250 (C/C).

1/6km Manpack/Vehicular: Small, portable radio similar to the U.S. AN/PRC-77 or Soviet R-107. Powered from internal batteries (for one-kilometer short range) or a vehicle (six-kilometer short range).

Wt: 5 kg.
Price: $500 (S/S).

1/6km Secure Manpack/Vehicular: A small, portable radio similar to the AN/PRC-70 (U.S.). Powered from internal batteries (for one-kilometer short range) or vehicle (six-kilometer short range). Includes an integral scrambler/descrambler (conversations can only be understood by another unit with a scrambler/descrambler).

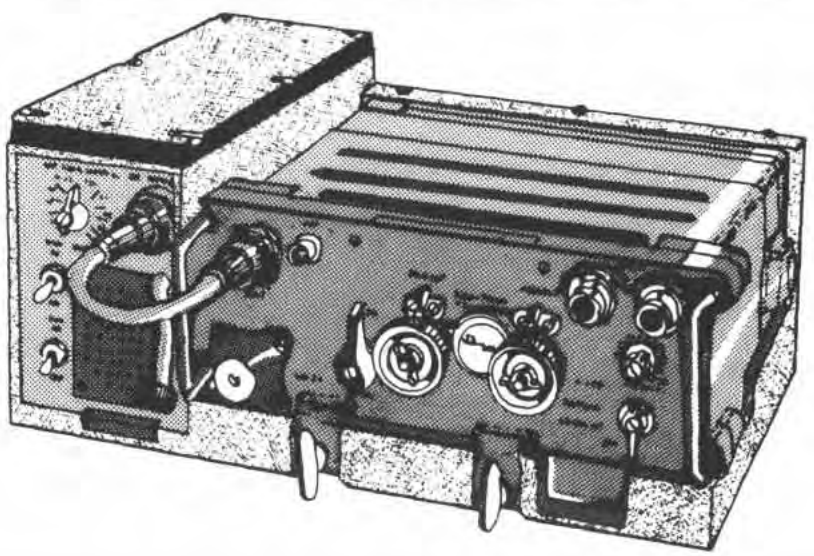
Wt: 10 kg.
Price: $2000 (S/S).

13km Vehicle: Vehicular radio similar to U.S. AN/VRC-12 or Soviet R-409. Powered by a vehicle.

Wt: 15 kg.
Price: $1500 (S/S).

13km Secure Vehicle: A vehicular radio capable of scrambled broadcasts. Powered by a vehicle, with integral scrambler/descrambler.

Wt: 15 kg.
Price: $6000 (R/R).



13km Vehicle Radio

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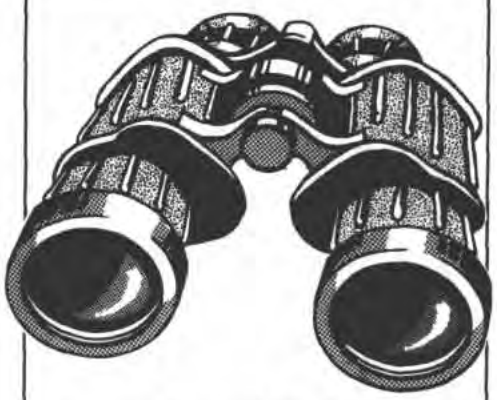


Binoculars

VISION DEVICES

4× Binoculars: Allows the user to see longer distances than normal.

Wt: 0.5 kg.

Price: $100 (V/V).

25× Image Intensifier: Allows the user to see in very little light. Powered from internal batteries. These act as binoculars also.

Wt: 1 kg.

Price: $2500 (S/S).

Telescopic Rifle Sight: May be attached to any rifle (Average: Gunsmith). If a scope is mounted, add 15 to the printed range figure for the rifle *when conducting aimed shots.* In addition, aimed shots at extreme range are conducted as if at long range for purposes of hit determination. Scopes have no effect on quick shots.

Wt: 0.5 kg.

Price: $500 (V/V).

Starlight Scope: Powered from internal batteries. May be attached to a rifle if desired (Easy: Gunsmith), making direct fire possible at night, but it is not telescopic and does not improve the chance to hit.

Wt: 2 kg.

Price: $1000 (R/R).

IR Goggles: Powered from internal batteries. Allows the user to see at night.

Wt: 0.5 kg.

Price: $250 (C/C).

IR Spotlight: Powered by a vehicle. IR goggles must be used to see by this light.

Wt: 3 kg.

Price: $150 (C/C).

White Light Spotlight: Powered by a vehicle.

Wt: 5 kg.

Price: $100 (V/V).

Thermal Sight: Powered from internal batteries.

Wt: 1 kg.

Price: $5000 (R/R).



MOPP Suit (Armor Crew)

RADARS

Ground Surveillance: Vehicle powered through a 100-meter cable to permit limited tactical mobility.

Wt: 7 kg.

Price: $40,000 (S/R).

Mortar Counterbattery: Vehicle powered through a 100-meter cable to permit limited tactical mobility.

Wt: 7 kg.

Price: $100,000 (S/R).

Artillery Counterbattery: Vehicle powered through a 100-meter cable to permit limited tactical mobility.

Wt: 7 kg.

Price: $200,000 (R/R).

LASER DESIGNATORS

Man Portable: Powered from internal batteries.

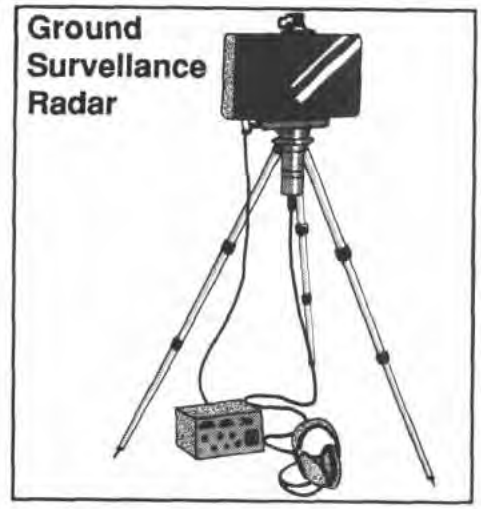
Wt: 3 kg.

Price: $1000 (S/R).

Vehicle Mounted: Vehicle powered.

Wt: 5 kg.

Price: $2000 (S/R).



NBC EQUIPMENT

Chemical Sniffer: Detects and identifies the varieties of chemical agents in common use. It is reusable and is constantly in operation if power is supplied. Powered by internal batteries.

Wt: 2 kg.

Price: $500 (C/C).

M256 Chemical Detector Kit: Detects and identifies the varieties of chemical agents in common use. The kit is usable only once and must then be disposed of.

Wt: Negligible.

Price: $20 (S/R).

Optical Chemical Sensor: Detects and identifies the varieties of chemical agents in common use. It is reusable and is constantly in operation if power is supplied. Powered by internal batteries.

Wt: 2 kg.

Price: $2000 (S/R).

Geiger Counter: Detects nuclear radiation. Powered by internal batteries.

Wt: 0.5 kg.

Price: $500 (C/C).

Gas Mask: The U.S. M17, M17A1 and similar models issued by other nations.

Wt: 1 kg.

Price: $150 (V/V).

Steam Decontamination Trailer: Operates from integral 60-kilowatt generator (requires fuel as on page 59). Removes radioactive particles and traces of chemical agents from the outside of vehicles. It will not make a radioactive object safe—it just rinses off fallout and the like.

Wt: 1 ton.

Price: $5000 (S/C).

Chemical Defense Suit: This is the U.S. Army MOPP suit or similar items issued by other armies.

Wt: 8 kg.

Price: $1000 (S/C).

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BODY ARMOR

Kevlar (Ballistic Nylon) Vest: This type of body armor is intended to provide protection from fragments, not to protect against direct hits from small arms.

Wt: 4 kg.

Price: $800 (C/S).

Flak Jacket: This type of body armor is intended to provide protection from fragments, not direct hits from small arms.

Wt: 8 kg.

Price: $400 (C/C).

Kevlar (Ballistic Nylon) Helmet: This is intended to provide protection from fragments, not direct hits from small arms.

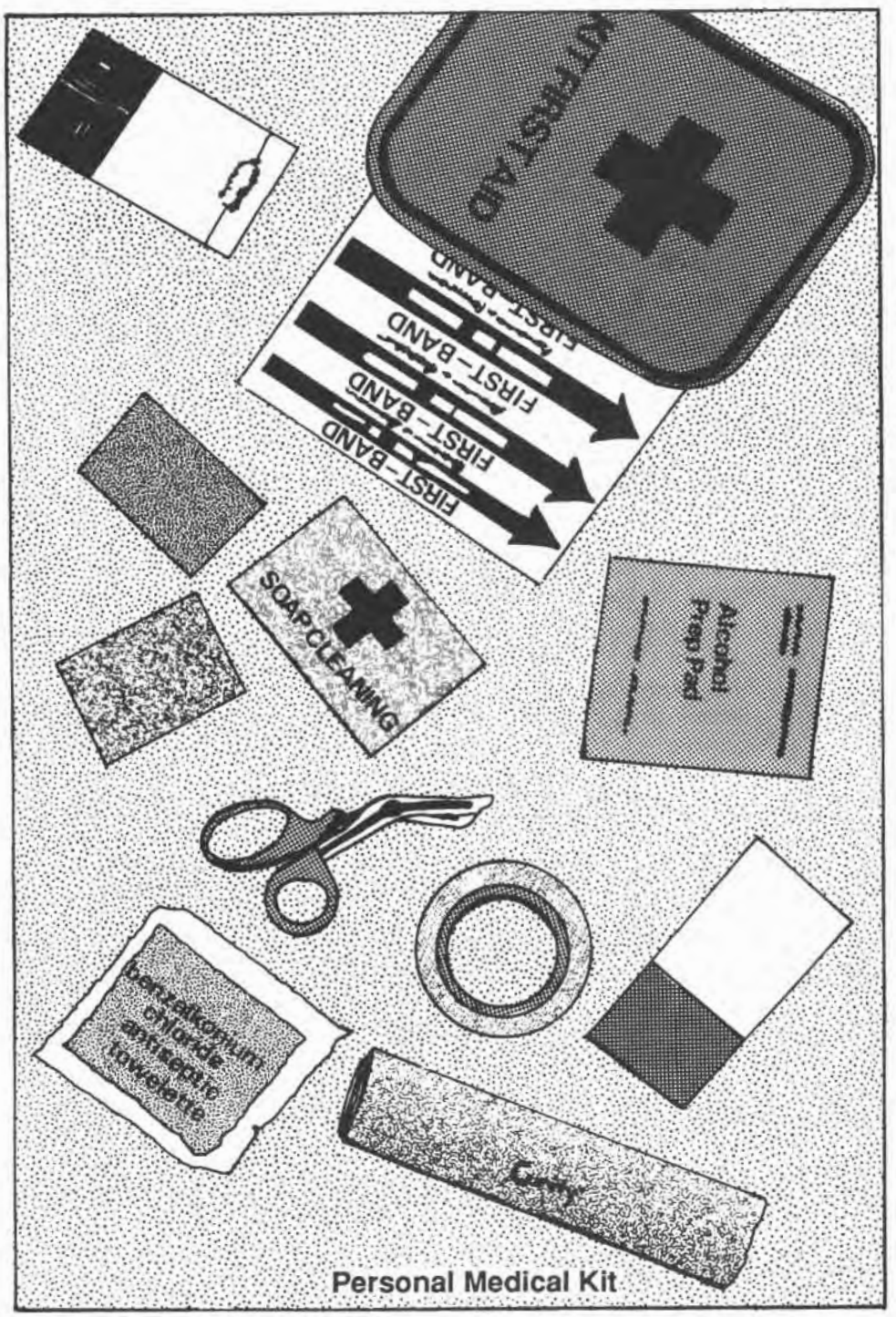
Wt: 0.5 kg.

Price: $100 (C/S).

Steel Helmet: This is intended to provide protection from fragments, not direct hits from small arms.

Wt: 1 kg.

Price: $50 (C/C).



Personal Medical Kit

MEDICAL SUPPLIES

Anesthetic, Total (100 Units): Available in two forms: liquid (for injection) and gaseous.

Wt: 0.1 kg.

Price: $1000 (R/R).

Anesthetic, Local (100 Units): Available only in liquid form (for injection)

Wt: 0.5 kg.

Price: $1000 (R/R).

Antibiotic (100 Units) +, –, and ± Varieties: Available in two forms: liquid (which requires refrigeration) and oral (which does not). Oral costs $250 more per 100 units.

Wt: 0.2 kg.

Price: $500 (R/R).

Antifever (100 Units):

Wt: 0.5 kg.

Price: $500 (R/R).

Atropine (100 Units): Liquid form.

Wt: 0.2 kg.

Price: $500 (R/R).

Atropine (Autoinjector): Premeasured, automatic injectors, which can be operated by nonmedical personnel. One dose, disposable.

Wt: 0.5 kg per kit of 10.

Price: $75 (R/R).

Pain-Reliever, Mild (100 Units): Oral (pill) form only.

Wt: 0.5 kg.

Price: $500 (R/R).

Sedative, Mild (100 Units): Oral form only.

Wt: 0.5 kg.

Price: $500 (R/R).

Sedative, Strong (100 Units): Liquid (for injection) form only.

Wt: 0.5 kg.

Price: $500 (R/R).

Blood, Whole (1 Unit):

Wt: 0.5 kg.

Price: $25 (S/S).

Plasma (1 Unit):

Wt: 0.5 kg.

Price: $10 (S/S).

Surgical Instruments: Scalpels, forceps, hemostats, clamps, and other tools for major surgery.

Wt: 5 kg.

Price: $2500 (R/R).

Personal Medical Kit: An individual soldier's first aid kit. Includes bandages, one unit of ± antibiotic, and other first aid materials. This kit is used up in one first aid operation.

Wt: 0.2 kg.

Price: $100 (C/C).

Doctor's Medical Kit: Medical equipment and drugs. Includes 10 units of each drug type, plus bandages and tools for minor surgery.

Wt: 5 kg.

Price: $1000 (S/S).

Conny Delshagen (order #3265201)

OTHER EQUIPMENT

20-Liter Jerrycan: For fuel and other liquids.
Wt: 1 kg (empty).
Price: $25 (V/V).

Four-Man Tent:
Wt: 12 kg.
Price: $100 (C/C).

10-Man Tent:
Wt: 35 kg.
Price: $250 (S/S).

Horse Tack: Saddle, bridle, straps, stirrups, saddle blanket, and so on.
Wt: 10 kg.
Price: $50 (C/C).

Pack Saddle: A saddle especially designed for cargo.
Wt: 5 kg (empty).
Price: $40 (C/C).

Aqualung: Two compressed air tanks, fins, mask and regulator. One tank contains enough air for 30 minutes underwater. Up to two may be connected to a single regulator for use.
Wt: 12 kg.
Price: $300 (C/C).

Air Tank, Aqualung: For use with above. Can be refilled when empty in five minutes with a compressor.
Wt: 5 kg.
Price: $100 (C/C).

Rebreather: A device which absorbs carbon dioxide from exhaled air and bleeds pure oxygen into it. One oxygen tank is used at a time with it, and it contains enough for 30 minutes underwater. Fins and a mask are included.
Wt: 10 kg.
Price: $400 (R/R).

Rebreather Recharge Kit: For use with the rebreather. This kit includes a can of carbon dioxide absorbent and a small tank of pure oxygen (enough to recharge a rebreather for 30 minutes underwater).
Wt: 5 kg.; *Price:* $100 (R/R).

Air Compressor: For filling aqualung tanks, tires, rafts, and other items needing compressed air.
Fuel Consumption: 2 liters per period.
Wt: 45 kg.; *Price:* $200 (R/R).

Skis, Cross-Country: Includes poles, skis, boots, and binders.
Wt: 8 kg.; *Price:* $250 (C/C).

Raft, Inflatable: Inflates using an air compressor in two minutes, or using hand-pump in 10 minutes. Capacity is 1000 kilograms.
Wt: 30 kg.; *Price:* $500 (C/C).

Reactive Armor Blocks: Reactive armor blocks are special explosive charges fitted to the outside of an AFV for additional armor protection.
Price: $5000 (R/R); *Wt:* 10 kg

PERSONAL GEAR

Basic Load: Each soldier receives one of these as a basic equipment issue. It consists of a set of fatigues, a steel helmet, a pack, a shelter half, a gas mask, and one set of combat webbing.

Weapons include one bayonet, one personal weapon and six magazines, six frag grenades, two smoke grenades, and 180 additional rounds of ammunition for the personal weapon. Officers and vehicle crewmen also receive a sidearm and three full magazines for it. Additional items must be purchased. Personal weapons are as indicated on the Personal Weapons Table under the particular army.

American quartermasters are somewhat more generous compared to those of other armies. In addition to the above, the basic load includes a sleeping bag, flashlight, personal medical kit, thermal fatigues, and a kevlar vest. In addition, the helmet is kevlar instead of steel.
Wt: 12 kg (15 kg for U.S.).

Fatigues: These include boots, socks, undergarments, gloves, poncho, and so on. These are in a camouflage pattern and contain numerous pockets for storage of incidental gear.
Wt: 4 kg.
Price: $50 (V/V).

Pack: A pack is capable of carrying up to 30 kilograms of equipment. Weight given is empty.
Wt: 2 kg.
Price: $20 (V/V).

Flashlight: Powered by internal batteries.
Wt: 0.2 kg.
Price: $20 (C/C).

Combat Webbing: This is a load-bearing harness with various pouches, packets, and attachment points to allow efficient transport of weapons, equipment and supplies. In the U.S., it is also called ALICE gear.
Wt: 2 kg.
Price: $10 (V/V).

Shelter Half: A rubberized canvas sheet which can be combined with another to form a two-person tent or used by itself as a one-person tarp. Tent pegs, cord, and everything else needed to erect it are included.
Wt: 1 kg.
Price: $25 (C/C).

Sleeping Bag:
Wt: 4 kg.
Price: $50 (C/C).

Thermal Fatigues: Includes boots, socks, etc.
Wt: 6 kg.
Price: $100 (S/S).

Parka: Includes overboots, socks, etc.
Wt: 3 kg.
Price: $150 (C/C).



Poncho, Boots, and Sleeping Bag

Conny Delshagen (order #3265201)

VEHICLE CARDS

Price: Includes all weapons listed under Armament, all ammunition listed under Ammo, and one full load of fuel. *FC:* Fire control bonus. *Stabilization:* Any special weapon stabilization machinery. *Armament:* The weapon or weapons with which the vehicle is normally equipped and which are included in the vehicle price (*MG:* Machinegun *GL:* Grenade launcher). *Ammo:* The amount of ammunition carried in ammunition stores (additional ammo may be purchased and carried, but counts as cargo). *Tr Mov:* Travel movement (km per 4 hours). *Com Mov:* Combat movement (meters per 5-second turn). *Fuel Cap:* Fuel capacity, in liters. *Fuel Cons:* Fuel consumption rate, in liters of gasoline per 4-hour period. *Fuel Type:* Types of fuel the vehicle can use (*G:* Gasoline *AvG:* Aviation gasoline *D:* Diesel *A:* Alcohol—methanol and ethanol *C:* Coal *W:* Wood). *Load:* Interior cargo capacity, given in kilograms (1 tonne=1000kg). *Veh Wt:* Gross weight in metric tons (tonnes), including ammo and fuel but not cargo. *Crew:* Number of crew+number of passengers. *Mnt:* Maintenance number.

Radiological: Vehicle resistance to radiation (Open, Enclosed, or Radiologically Shielded).

Weapons Mounts: Most weapons are fired by the vehicle's gunner. Weapons fired by other crewmembers are mounted in weapons mounts. A weapons mount will accept any machinegun or the AGS-17 or Mk-19 grenade launcher; most mounts have a weapon in them already, but this may be removed at will. The entry for each vehicle explains the location of its weapons mounts (if any) and who fires weapons in them (*C:* Commander, *L:* Loader, *P:* Passenger).

Firing Ports: Firing ports are small doors in the sides of some vehicles which are used to permit passengers to fire certain small arms while inside. The following limitations apply: Only assault rifles, battle rifles, submachineguns, and sporting rifles may be used in firing ports. Drivers and gunners may not use firing ports, but all other crewmembers may (one each). Range is limited to short.



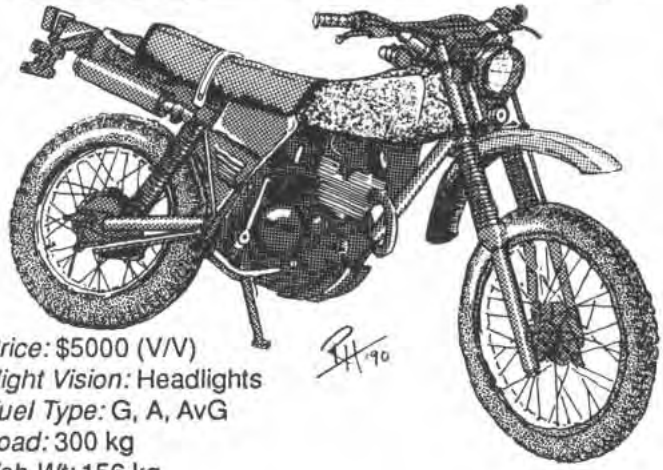
Bicycle

A rugged, military model. Bicycles are among the few vehicles still being manufactured in any quantity.

***Tr Mov:* 65/15**
***Com Mov:* 15/4**

Combat Statistics
None. Driver and passengers are fired at as mounted targets.

Price: $100 (V/V)
Veh Wt: 15 kg
Crew: 1+1
Mnt: 1



Motorcycle

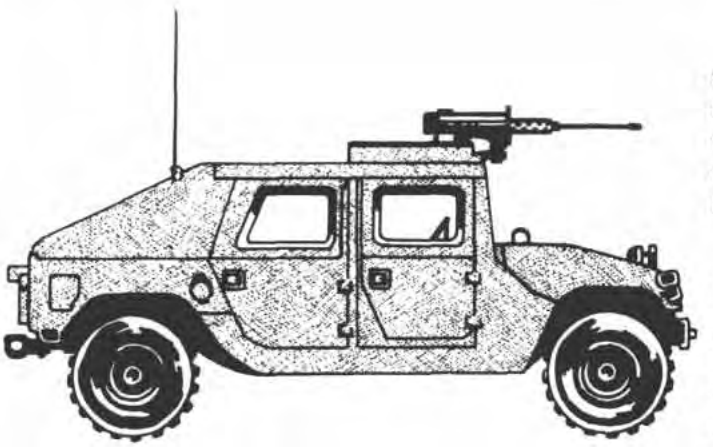
One of a variety of rugged off-road dirt bikes used primarily for scouting.

***Tr Mov:* 195/85**
***Com Mov:* 45/20**
***Fuel Cap:* 16**
***Fuel Cons:* 8**

Combat Statistics
None. Driver and passengers are fired at as mounted targets.

Price: $5000 (V/V)
Night Vision: Headlights
Fuel Type: G, A, AvG
Load: 300 kg
Veh Wt: 156 kg
Crew: 1+1
Mnt: 2

Conny Delshagen (order #3265201)



HMMWV (Hum-Vee)

The above letters stand for high-mobility, multipurpose wheeled vehicle. The HMMWV is a four-wheel-drive, off-road vehicle designed as a light scout, utility, and cargo vehicle. It has replaced the jeep in U.S. service. It has a weapons mount (C) above the commander's seat; however, no weapon is provided.

***Tr Mov:* 215/85**
***Com Mov:* 50/20**
***Fuel Cap:* 90**
***Fuel Cons:* 30**

Price: $20,000 (C/S)
Fuel Type: D, G, A
Load: 1.25 tonnes
Veh Wt: 2 tonnes
Crew: 2+4
Mnt: 2
Night Vision: Headlights
Radiological: Open

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(2) HS: 1
HR: 1



UAZ-469

The Eastern bloc equivalent of the jeep or 1/4-ton truck, the UAZ-469 is a light wheeled utility vehicle. It has a weapons mount (P) on a post behind the front seat; however, no weapon is provided.

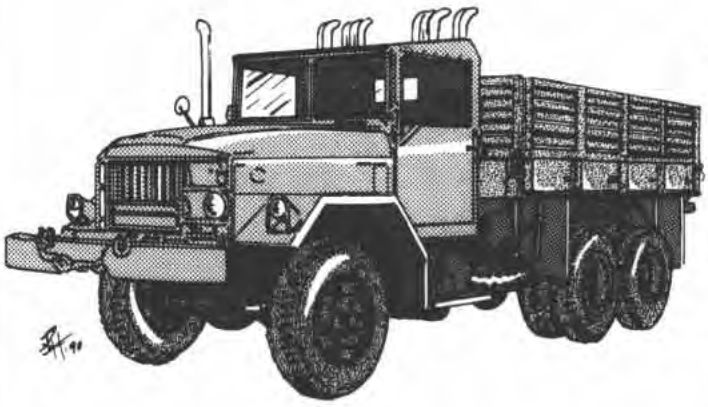
***Tr Mov:* 215/45**
***Com Mov:* 50/10**
***Fuel Cap:* 60**
***Fuel Cons:* 20**

Price: $8000 (S/C)
Fuel Type: G, A
Load: 0.5 tonnes
Veh Wt: 1.6 tonnes
Crew: 2+3
Mnt: 2
Night Vision: Headlights
Radiological: Open

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(2) HS: 1
HR: 1

Conny Delshagen (order #3265201)

2½-Ton Truck



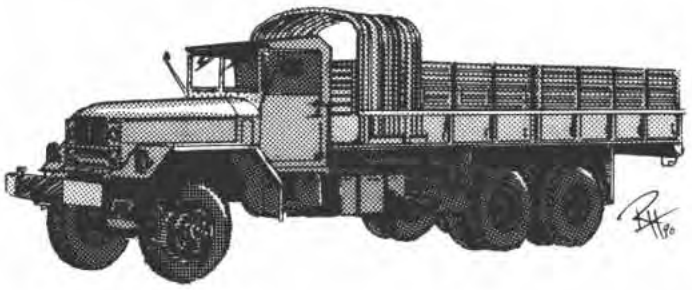
A standard 6×6 cargo truck with moderate cross-country performance, capable of carrying 2½ tons of cargo or an equivalent load of passengers.

***Tr Mov:* 175/35**
***Com Mov:* 40/8**
***Fuel Cap:* 195**
***Fuel Cons:* 65**

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(3) HS: 1
HR: 1

Price: $15,000 (C/C)
Fuel Type: D, A
Load: 2.5 tonnes
Veh Wt: 6 tonnes
Crew: 2
Mnt: 4
Night Vision: Headlights
Radiological: Open

5-Ton Truck



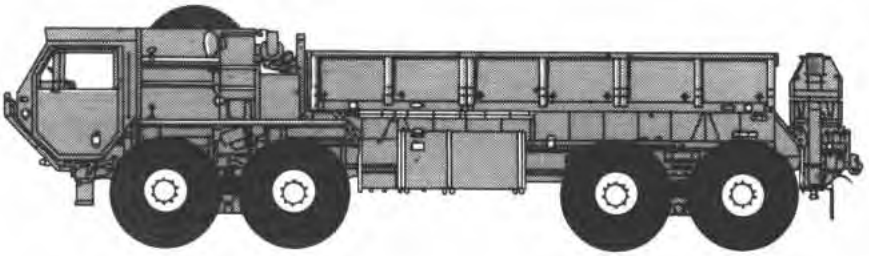
A standard 4×6 cargo truck with limited off-road performance, capable of carrying five tons of cargo or an equivalent load of passengers.

***Tr Mov:* 175/35**
***Com Mov:* 40/8**
***Fuel Cap:* 280**
***Fuel Cons:* 70**

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(3) HS: 1
HR: 1

Price: $20,000 (S/S)
Fuel Type: D, A
Load: 5 tonnes
Veh Wt: 10 tonnes
Crew: 2
Mnt: 4
Night Vision: Headlights
Radiological: Open

Conny Delshagen (order #3265201)



M977 HEMTT 10-Ton Truck

The HEMTT (Heavy Expanded Mobility Tactical Truck, pronounced "Hemmit") is an 8×8 cargo truck with excellent off road performance. It can carry 10 tons of cargo or an equivalent load of passengers.

Price: $25,000 (S/S)
Fuel Type: D, A
Load: 10 tonnes
Veh Wt: 17 tonnes
Crew: 2
Mnt: 4
Night Vision: Headlights
Radiological: Open

***Tr Mov:* 175/65**
***Com Mov:* 40/15**
***Fuel Cap:* 600**
***Fuel Cons:* 200**

Combat Statistics
Unarmored Vehicle

Config: Veh	HF: 1	
Susp: W(4)	HS: 1	
	HR: 1	

3/4-Ton Truck

A civilian type 4×4 pickup truck used for military service. It can carry three-quarters of a ton of cargo or an equivalent load of passengers.



Price: $10,000 (S/S)
Fuel Type: G, A, AvG
Load: 750 kg
Veh Wt: 4 tonnes
Crew: 2
Mnt: 2
Night Vision: Headlights
Radiological: Open

***Tr Mov:* 195/35**
***Com Mov:* 45/8**
***Fuel Cap:* 90**
***Fuel Cons:* 30**

Combat Statistics
Unarmored Vehicle

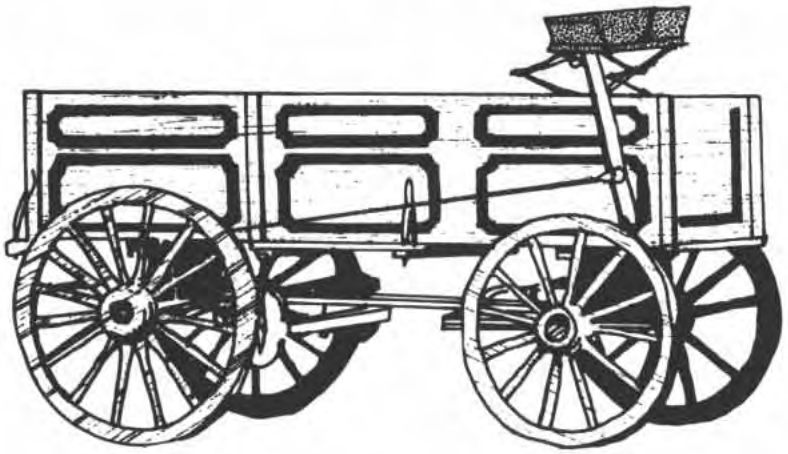
Config: Veh	HF: 1	
Susp: W(2)	HS: 1	
	HR: 1	

Conny Delshagen (order #3265201)

Wagon

A large-bed wagon drawn by either two or four horses (or oxen). Four are required in hills or difficult terrain, two on roads. (If oxen are used, speed is halved, and load is doubled.)

Tr Mov: **20/5**
Com Mov: **10/2**

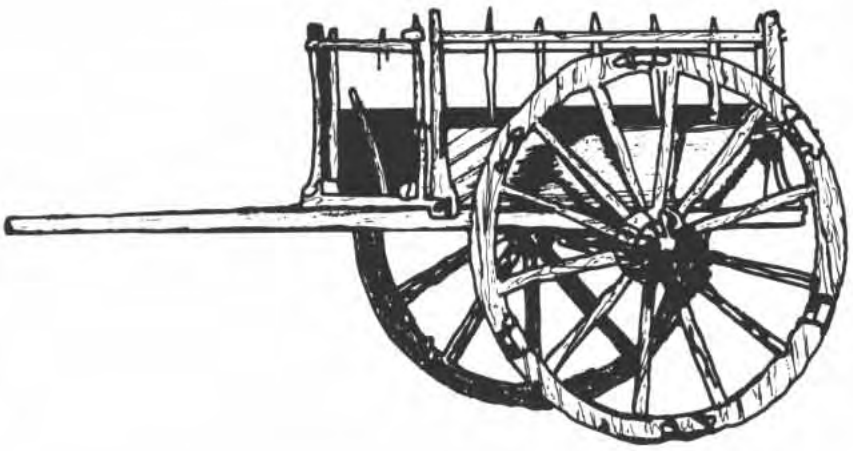


Price: $1000 (V/V)
Load: 1 tonne
Veh Wt: 0.5 tonnes
Crew: 1
Mnt: 1

Cart

A two-wheeled cart drawn by one animal. If it is used in hills or difficult country, the maximum load is halved. There is no provision made for harnessing a second animal to the cart. (If an ox is used, speed is halved, and load is doubled.)

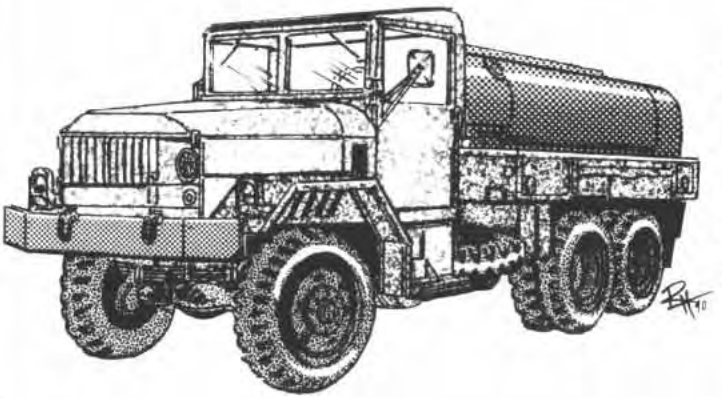
Tr Mov: **20/5**
Com Mov: **10/2**



Price: $500 (V/V)
Load: 0.5 tonnes
Veh Wt: 0.25 tonnes
Crew: 1
Mnt: 1

Conny Delshagen (order #3265201)

5000-Liter (Five-Ton) Tank Truck



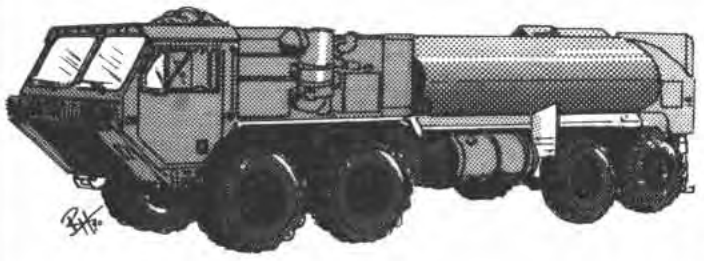
A five-ton truck with the cargo bed replaced with a 5000-liter sealed tank for transportation of bulk liquids.

Tr Mov: **175/35**
Com Mov: **40/8**
Fuel Cap: **280**
Fuel Cons: **70**

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(3) HS: 1
HR: 1

Price: $15,000 (C/C)
Fuel Type: D, A
Load: 5000 liters
Veh Wt: 10 tonnes
Crew: 2
Mnt: 4
Night Vision: Headlights
Radiological: Open

M978 10,000-Liter (10-Ton) Tank Truck



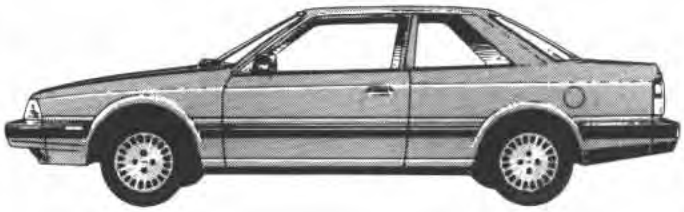
A HEMTT with the cargo bed replaced with a 10,000-liter sealed tank.

Tr Mov: **175/65**
Com Mov: **40/15**
Fuel Cap: **600**
Fuel Cons: **200**

Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(4) HS: 1
HR: 1

Price: $25,000 (S/S)
Fuel Type: D, A
Load: 10,000 liters
Veh Wt: 17 tonnes
Crew: 2
Mnt: 4
Night Vision: Headlights
Radiological: Open

Conny Delshagen (order #3265201)



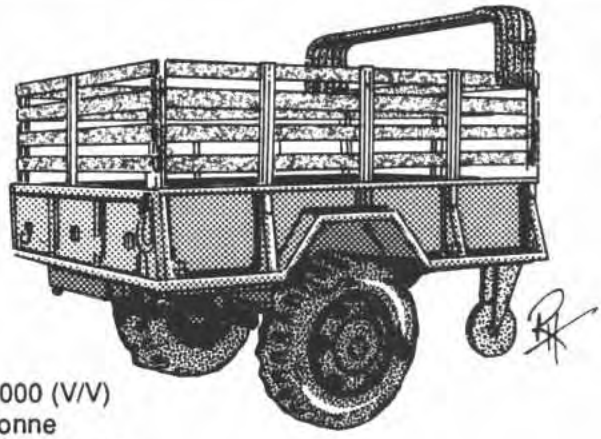
Civilian Car

One of a variety of makes and models of light passenger cars.

Tr Mov: **215/35**
Com Mov: **50/8**
Fuel Cap: **80**
Fuel Cons: **20**

Price: $6000 (V/V)
Fuel Type: G, A
Load: 0.5 tonnes
Veh Wt: 1 tonne
Crew: 2+3
Mnt: 2
Night Vision: Headlights
Radiological: Open

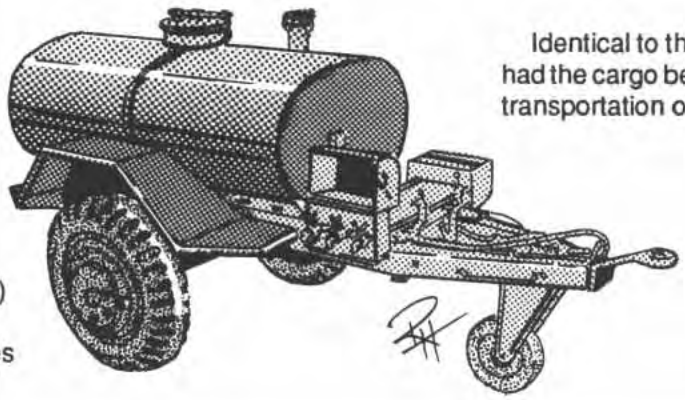
Combat Statistics
Unarmored Vehicle
Config: Veh HF: 1
Susp: W(2) HS: 1
HR: 1



One-Ton Cargo Trailer

A small two-wheeled cargo trailer which can be towed behind any motor vehicle (except a motorcycle).

Price: $1000 (V/V)
Load: 1 tonne
Veh Wt: 0.5 tonnes
Mnt: 1

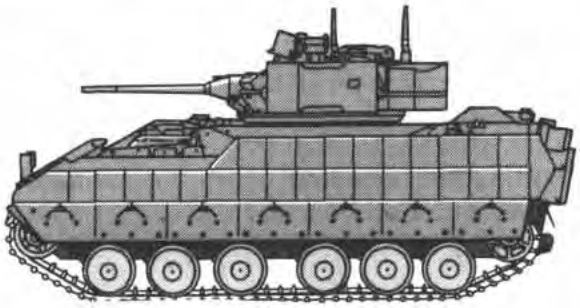


1000-Liter (One-Ton) Tank Trailer

Identical to the one-ton cargo trailer, the tank trailer has had the cargo bed replaced with a 1000-liter sealed tank for transportation of bulk liquid.

Price: $1000 (V/V)
Load: 1000 liters
Veh Wt: 0.5 tonnes
Mnt: 1

Conny Delshagen (order #3265201)



M2A2 Bradley

A tracked, amphibious (with preparation: 15 minutes), infantry fighting vehicle. This is an upgraded version of the original Bradley infantry fighting vehicle, the principal changes being the addition of 30 millimeters of applique armor to the front and sides of the vehicle, and adoption of a more powerful engine to deal with the increased vehicle weight. Main entrance to the passenger compartment is by two large, hinged doors in the rear of the vehicle. There is a driver's hatch on the left front hull deck and hatches for the commander and gunner on top of the turret. There are two firing ports on the hull rear. These firing ports will accept only the M231 submachinegun, and the M231 can fire to extreme range.

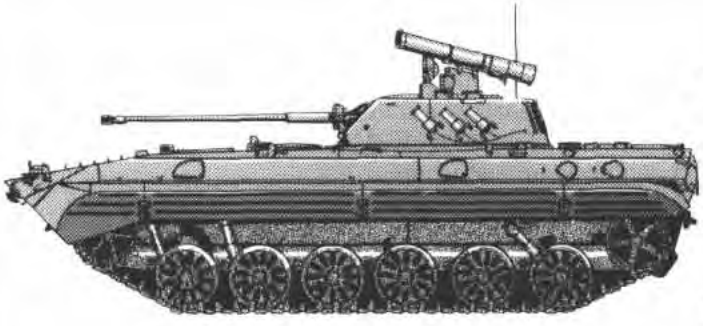
There are attachment lugs for reactive armor on the hull and turret front and sides (HF, HS, TF, TS)

Price: $200,000 (S/R)
Fire Control: +1
Stabilization: Good
Armament: 25mm autocannon, twin TOW launcher, MAG MG, 2×M231
Ammo: 900×25mm, 7×TOW 2, 2200×7.62mm, 5040×5.56mm
Fuel Type: D, A
Load: 1.5 tonnes
Veh Wt: 33 tonnes
Crew: 3+6
Mnt: 8
Night Vision: Passive IR/thermal imaging
Radiological: Shielded

***Tr Mov:* 130/110**
***Com Mov:* 30/25/4**
***Fuel Cap:* 660**
***Fuel Cons:* 220**

Combat Statistics

Config: Veh	TF: 12	HF: 14
Susp: T: 4	TS: 6-Sp	HS: 12-Sp
	TR: 4-Sp	HR: 6



BMP-2

The BMP-2 (*Bronevaya Maschina Piekhota* or armored vehicle, infantry) is one of the standard Eastern Bloc tracked, amphibious, armored personnel carriers. Main access to the vehicle interior is by a drop ramp in the vehicle rear. There is a driver's hatch on the left front deck, a commander's hatch behind it, a gunner's hatch on top of the turret, and two long, oval-shaped hatches on the rear deck for the passengers. Three rifle firing ports and one machinegun firing port are located on each side of the vehicle. The machinegun firing port will accept any battle rifle, assault rifle, or the PK machinegun.

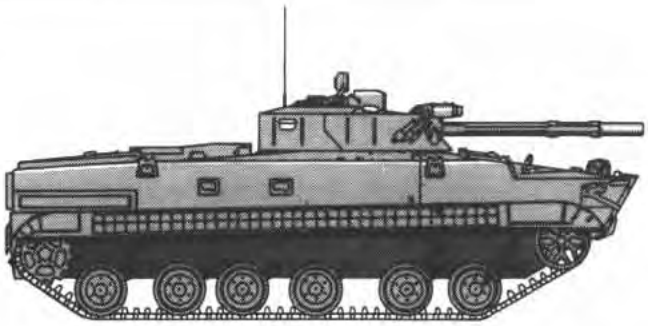
Price: $150,000 (R/S)
Armament: 30mm autocannon, AT-5 launcher, PK MG
Stabilization: Basic
Ammo: 500×30mm, 4×AT-5, 2000×7.62mm
Load: 1.5 tonnes
Veh Wt: 14.3 tonnes
Fuel Type: D, G, AvG, A
Crew: 3+8
Mnt: 12
Night Vision: Passive IR, image intensification
Radiological: Shielded

***Tr Mov:* 130/85**
***Com Mov:* 30/20/4**
***Fuel Cap:* 460**
***Fuel Cons:* 100**

Combat Statistics

Config: Veh	TF: 5	HF: 4
Susp: T: 2	TS: 3	HS: 3
	TR: 2	HR: 3

Conny Delshagen (order #3265201)



BMP-3

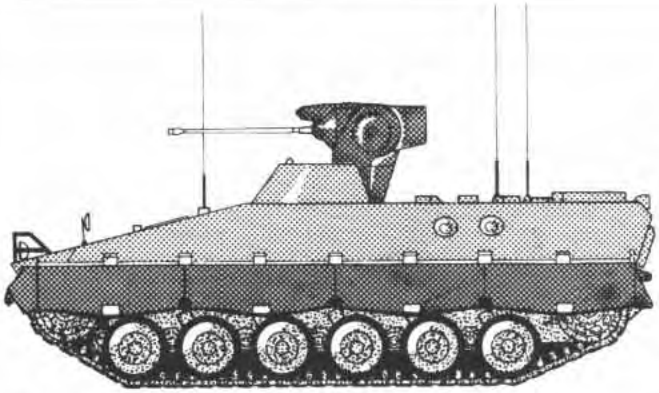
Another tracked, amphibious armored personnel carrier, the BMP-3 is a completely new design. Its 100mm rifled gun can fire standard rounds or AT-10 ATGMs. It has a coaxial 30mm autocannon and 7.62mm MG. Two additional MGs are mounted, fixed forward, on either side of the hull front.

***Tr Mov:* 130/85**
***Com Mov:* 30/20/6**
***Fuel Cap:* 460**
***Fuel Cons:* 100**

Combat Statistics

Config: Veh	TF: 8	HF: 6
Susp: T: 3	TS: 4	HS: 4
	TR: 2	HR: 3

Price: $175,000 (R/S)
Fire Control: +1
Armament: 100mm rifled gun, 30mm autocannon coaxial, PK MG coaxial, 2×PK MG fixed forward
Stabilization: Good
Ammo: 40×100mm, 6×AT-10, 500×30mm, 6000×7.62mm
Fuel Type: D, G, A, AvG
Load: 1.5 tonnes
Veh Wt: 18.7 tonnes
Crew: 3+7
Mnt: 12
Night Vision: Passive IR, image intensification
Radiological: Shielded



Marder

The Marder is an aging warhorse; it has been in service in one form or another since the 1960s. The most recent variant incorporates a 25mm autocannon and an external mount for the squad's MILAN II ATGM. The Marder has two firing ports on each side.

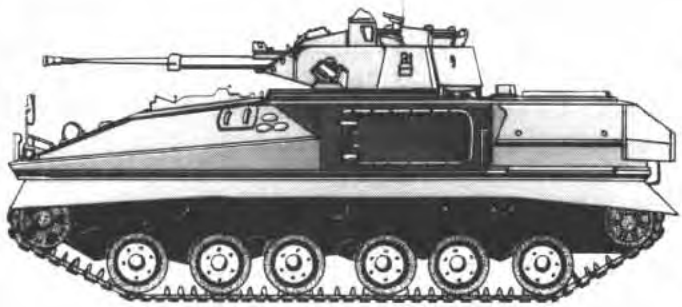
***Tr Mov:* 150/110**
***Com Mov:* 35/25**
***Fuel Cap:* 650**
***Fuel Cons:* 185**

Combat Statistics

Config: Veh	TF: 12	HF: 25
Susp: T: 4	TS: 8	HS: 10
	TR: 8	HR: 5

Price: $200,000 (S/R)
Fire Control: +1
Stabilization: Basic
Armament: 25mm AC, MG3 coaxial
Ammo: 1100×25mm, 5000×7.62mm
Fuel Type: D, A
Load: 600 kg
Veh Wt: 29 tonnes
Crew: 3+6
Mnt: 10
Night Vision: Passive/active IR, IR searchlight
Radiological: Shielded

Conny Delshagen (order #3265201)



Warrior

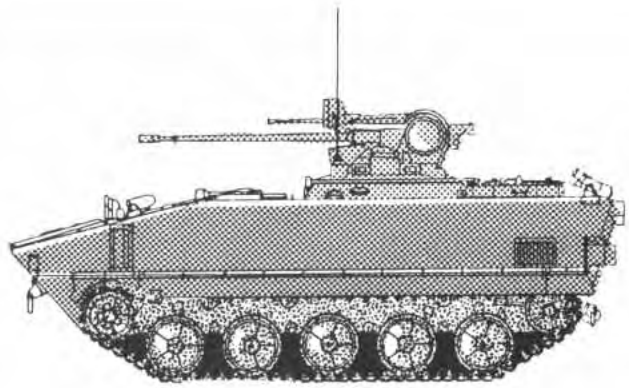
This is the standard IFV of the British Army. It has a driver's hatch on the forward deck, commander's and gunner's hatches atop the turret, a hatch on the rear deck, and a drop ramp in the rear for departure of troops.

***Tr Mov:* 150/110**
***Com Mov:* 35/25**
***Fuel Cap:* 770**
***Fuel Cons:* 175**

Price: $250,000 (S/R)
Fire Control: +1
Stabilization: Good
Armament: 30mm Rarden AC, MAG coaxial
Ammo: 200×30mm
Fuel Type: D, A
Load: 600 kg
Veh Wt: 24 tonnes
Crew: 2+8
Mnt: 12
Night Vision: White light/IR spotlight, active/passive IR
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 6	HF: 6
Susp: T: 4	TS: 4	HS: 4
	TR: 2	HR: 3



AMX-10P

An amphibious French armored personnel carrier of conventional layout and characteristics.

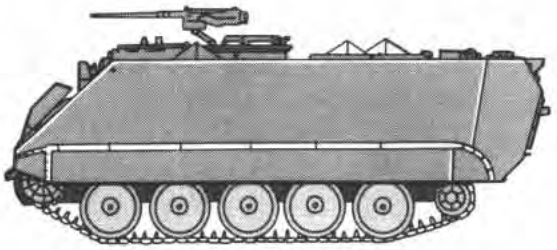
***Tr Mov:* 130/85**
***Com Mov:* 30/20/4**
***Fuel Cap:* 530**
***Fuel Cons:* 115**

Price: $100,000 (S/R)
Stabilization: Basic
Armament: 20mm AC, AAT coaxial
Ammo: 760×20mm, 2000×7.62mm
Fuel Type: D, A
Load: 500 kg
Veh Wt: 14 tonnes
Crew: 3+8
Mnt: 12
Night Vision: Passive IR
Radiological: Shielded

Combat Statistics

Config: Veh	HF: 6	TF: 6
Susp: T: 2	HS: 4	TS: 4
	HR: 4	TR: 4

Conny Delshagen (order #3265201)



M113A3

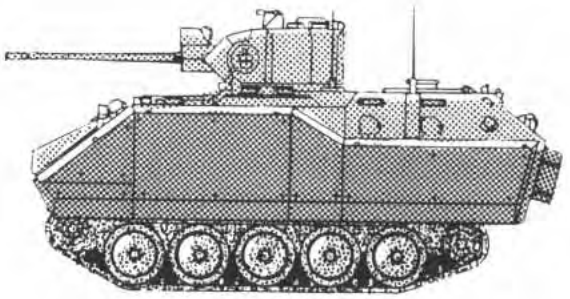
A tracked, amphibious, armored personnel carrier. There is a hatch on the left front deck for the driver, a hatch in the center of the deck for the commander—which has a weapons mount (C)—a large, rear drop ramp for access to the vehicle interior, and a large rectangular hatch on the rear deck. There are two other weapons mounts (P): one on either side of the large rear deck hatch. These are used by passengers standing up in the open large hatch; however, no weapons are provided.

***Tr Mov:* 130/85**
***Com Mov:* 30/20/4**
***Fuel Cap:* 360**
***Fuel Cons:* 90**

Combat Statistics

Config: Veh		HF: 6
Susp: T: 2		HS: 4
		HR: 4

Price: $75,000 (S/R)
Armament: M2HB MG (C)
Ammo: 2000×.50 BMG
Fuel Type: D, A
Load: 2 tonnes
Veh Wt: 11 tonnes
Crew: 2+11
Mnt: 6
Night Vision: Headlights, passive IR
Radiological: Shielded



AIFV

An improved version of the M113 developed by FMC. The AIFV has been adopted by the Belgian and Dutch armies, among others. In Dutch service, the vehicle is called the YPR-765.

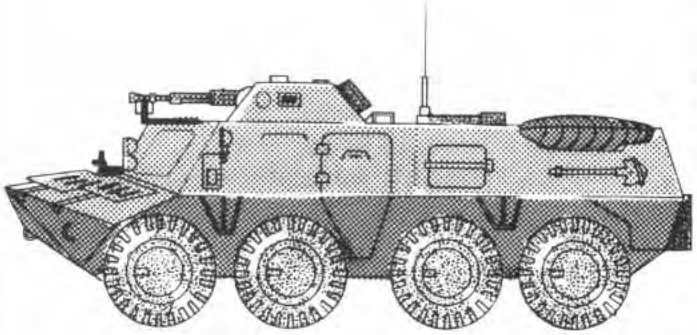
***Tr Mov:* 130/85**
***Com Mov:* 30/20/4**
***Fuel Cap:* 400**
***Fuel Cons:* 100**

Combat Statistics

Config: Veh	TF: 4	HF: 8
Susp: T: 2	TS: 2	HS: 6
	TR: 2	HR: 4

Price: $80,000 (R/—)
Stabilization: Basic
Armament: 25mm AC, MAG MG coaxial
Ammo: 324×25mm, 1840×7.62mm
Fuel Type: D, A
Load: 800 kg
Veh Wt: 13.6 tonnes
Crew: 3+7
Mnt: 10
Night Vision: White light/IR spotlight, active/passive IR
Radiological: Shielded

Conny Delshagen (order #3265201)



BTR-80

(*Bronetransportr* or Armored Carrier)

An eight-wheeled, amphibious, armored personnel carrier. The BTR-80 has a side door and roof hatch for both the driver and commander, and a hatch in the deck of the turret for the gunner. There are large overhead hatches for the passengers on the vehicle deck and a hatch on each side in the middle of the vehicle. Three firing ports are located on each side of the vehicle.

***Tr Mov:* 150/65**
***Com Mov:* 35/15/6**
***Fuel Cap:* 290**
***Fuel Cons:* 80**

Price: $75,000 (S/C)
Armament: KPV MG, PK MG coaxial
Ammo: 500×14.5mm, 2000×7.62mm
Fuel Type: D, A
Load: 2.5 tonnes
Veh Wt: 13.6 tonnes
Crew: 3+7
Mnt: 6
Night Vision: Headlights
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 2	HF: 3
Susp: W(4)	TS: 2	HS: 1
	TR: 2	HR: 1



OT-64

An eight-wheeled, amphibious, armored personnel carrier jointly developed by the Czech and Polish armies, the OT-64 is used by the Czechs and Poles instead of the BTR-70. OT-64s were also used by the East German Army, but few are still serviceable due to a shortage of spare parts. The OTR-64 is identical in layout to the BTR-70.

***Tr Mov:* 195/85**
***Com Mov:* 45/20/6**
***Fuel Cap:* 320**
***Fuel Cons:* 80**

Price: $80,000 (S/C)
Armament: KPV MG, PK MG coaxial
Ammo: 500×14.5mm, 2000×7.62mm
Fuel Type: D, A
Load: 3 tonnes
Veh Wt: 14 tonnes
Crew: 2+15
Mnt: 6
Night Vision: Headlights
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 3	HF: 4
Susp: W(4)	TS: 3	HS: 2
	TR: 3	HR: 2

Conny Delshagen (order #3265201)



LAV-25

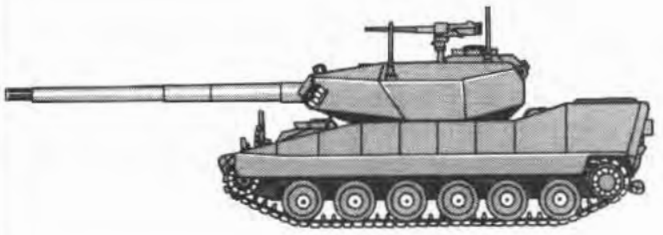
An eight-wheeled, amphibious, armored personnel carrier/scout vehicle based on the Mowag Piranha (an eight-wheeled armored car). There is a driver's hatch on the left front deck, hatches for the gunner and commander on the turret deck, and two large hinged doors on the rear of the vehicle. Three firing ports are located on each side of the vehicle.

***Tr Mov:* 195/85**
***Com Mov:* 45/20/6**
***Fuel Cap:* 300**
***Fuel Cons:* 90**

Price: $100,000 (S/R)
Fire Control: +1
Armament: 25mm autocannon, MAG MG coaxial
Stabilization: Basic
Ammo: 630×25mm, 1620×7.62mm
Fuel Type: D, A
Load: 2 tonnes
Veh Wt: 12 tonnes
Crew: 3+6
Mnt: 6
Night Vision: Passive IR
Radiological: Enclosed

Combat Statistics

Config: Veh	TF: 6	HF: 6
Susp: W(6)	TS: 3	HS: 3
	TR: 3	HR: 3



M8 AGS

The M8 Armored Gun System is a light, airportable system intended to get mobile fire support for light forces to distant trouble spots in a hurry. It is *not* a tank.

It is based on the Bradley Fighting Vehicle hull and carries a crew of three. The driver has a hatch in the center of the front deck, and the gunner and commander each have a hatch on the starboard turret deck.

To better respond to crisis situations yet remain airportable, the AGS has three different weight/armor configurations. Level 1 allows the AGS to be air-dropped; Levels 2 and 3 provide greater protection with modular add-on armor. The vehicle weight and armor entries have three entries for Level 1/Level 2/Level 3.

The commander's weapons station can alternately be fitted with a MAG MG or MK 19 AGL.

Due to the nature of the M1 turret, a turret (but not hull) hit which results in an ammunition explosion (see page 219) does *not* automatically kill the crew and destroy the vehicle. Instead, consider all armament, sensors, and electronics to be damaged and inoperative. Then apply 50 points of concussion damage to the commander and gunner.

Price: $250,000 (R/R)
Fire Control: +2
Armament: 105mm gun, MAG MG coaxial, M2HB(C)
Stabilization: Good
Ammo: 30×105mm,
4500×7.62mm, 600×.50 BMG
Fuel Type: D, A
Load: 200 kg
Veh Wt: 38.5/44.5/49.5 tonnes
Crew: 3
Mnt: 10
Night Vision: passive IR/thermal
Radiological: Shielded

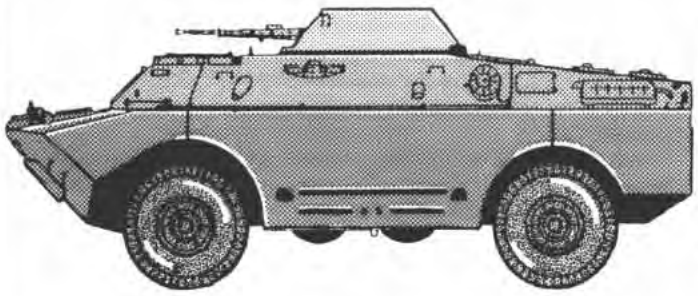
***Tr Mov:* 150/130**
***Com Mov:* 35/30**
***Fuel Cap:* 570**
***Fuel Cons:* 170**

Combat Statistics

Config: Veh	TF: 6/6/16-Sp	HF: 4/6-Sp/20-Sp
Susp: T: 4	TS: 6-Sp/6-Sp/16-Sp	HS: 3/6-Sp/14-Sp
	TR: 4-Sp/4-Sp/4-Sp	HR: 4-Sp/4-Sp/4-Sp

Conny Delshagen (order #3265201)

BRDM-4



A four-wheeled, amphibious armored scout car, the BRDM-4 has four additional retractable wheels which can be lowered to improve off-road performance. There is a driver's hatch and commander's hatch on the front deck, and a gunner's hatch on the turret deck.

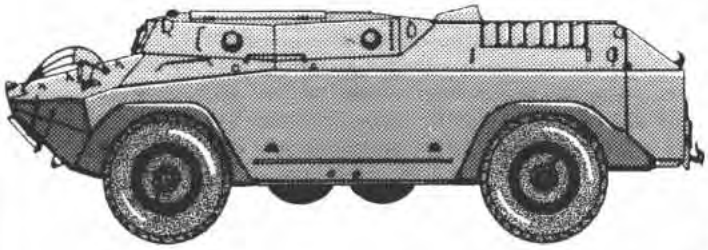
Tr Mov: **195/85**
Com Mov: **45/20/6**
Fuel Cap: **290**
Fuel Cons: **80**

Price: $50,000 (S/C)
Armament: 30mm autocannon, PK MG
Stabilization: Basic
Ammo: 100×30mm, 2000×7.62mm
Fuel Type: G, AvG, A
Load: 600 kg
Veh Wt: 8 tonnes
Crew: 4
Mnt: 4
Night Vision: Headlights, image intensification
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 2	HF: 2
Susp: W(2)	TS: 2	HS: 1
	TR: 2	HR: 1

OT-65 FUG



An independent development by the Hungarian Army, the OT-65 is an amphibious, four-wheeled, armored scout car. It is used in place of the BRDM by Poland, Hungary, Czechoslovakia, and Bulgaria. It has a side door on each side of the car and a hatch on the turret deck for the gunner.

Tr Mov: **175/65**
Com Mov: **40/15/6**
Fuel Cap: **200**
Fuel Cons: **60**

Price: $45,000 (S/C)
Armament: PK MG
Ammo: 1250×7.62mm
Fuel Type: D, A
Load: 700 kg
Veh Wt: 7 tonnes
Crew: 2+4
Mnt: 4
Night Vision: Headlights, Passive IR for driver
Radiological: Enclosed

Combat Statistics

Config: Veh	TF: 2	HF: 2
Susp: W(2)	TS: 2	HS: 1
	TR: 2	HR: 1

Conny Delshagen (order #3265201)

M1



A tracked main battle tank with a large turret. There is a driver's hatch in the center of the front deck, and a commander's and loader's hatch on the turret deck. The tank's gunner uses the commander's hatch. A weapons mount is located by each of the commander's and loader's hatches. Supplanted in regular service by the M1A1 and M1A2, the M1 remains in service with national guard units.

Due to the nature of the M1 turret, a turret (but not hull) hit which results in an ammunition explosion (see page 219) does *not* automatically kill the crew and destroy the vehicle. Instead, consider all armament, sensors, and electronics to be damaged and inoperative. Then apply 50 points of concussion damage to the commander, gunner, and loader.

NOTE: The fuel consumption listed below is due to the fact that the M1's gas turbine engine consumes vast amounts of fuel even when it is only idling in order to provide basic electrical power for night vision systems, etc.

Players may attach a generator of 60+ kilowatts (or a salvaged engine) to the M1 to provide this power, allowing the turbine to be shut down. This is an Average test of Mechanic and Electronics, taking 2D6 hours. Once installed, the generator allows the M1 to consume fuel at only *one half* the rate listed below. The generator consumes fuel at its normal listed rate (see page 59).

Price: $600,000 (R/R)
Fire Control: +2
Armament: 105mm gun, MAG MG coaxial, M2HB MG (C), MAG MG (L)
Stabilization: Good
Ammo: 55×105mm, 1000×.50 BMG, 11,400×7.62mm
Fuel Type: D, G, AvG, A
Load: 700 kg
Veh Wt: 54 tonnes
Crew: 4
Mnt: 14
Night Vision: Passive IR/thermal (shared by commander and gunner)
Radiological: Shielded

***Tr Mov:* 150/130**
***Com Mov:* 35/30**
***Fuel Cap:* 1900**
***Fuel Cons:* 1100**

Combat Statistics

Config: Veh	TF: 80-Cp	HF: 160-Cp
Susp: T: 6	TS: 40	HS: 16-Sp
	TR: 16	HR: 16

M1A1



An extensively improved version of the basic M1. The most significant changes are the substitution of a 120mm smoothbore gun for the rifled 105mm gun of the M1, and the use of depleted uranium armor inserts to increase the armor protection on the hull and turret front.

Due to the nature of the M1 turret, a turret (but not hull) hit which results in an ammunition explosion (see page 219) does *not* automatically kill the crew and destroy the vehicle. Instead, consider all armament, sensors, and electronics to be damaged and inoperative. Then apply 50 points of concussion damage to the commander, gunner, and loader.

NOTE: The fuel consumption listed below is due to the fact that the M1's gas turbine engine consumes vast amounts of fuel even when it is only idling in order to provide basic electrical power for night vision systems, etc.

Players may attach a generator of 60+ kilowatts (or a salvaged engine) to the M1 to provide this power, allowing the turbine to be shut down. This is an Average test of Mechanic and Electronics, taking 2D6 hours. Once installed, the generator allows the M1 to consume fuel at only *one half* the rate listed below. The generator consumes fuel at its normal listed rate (see page 59).

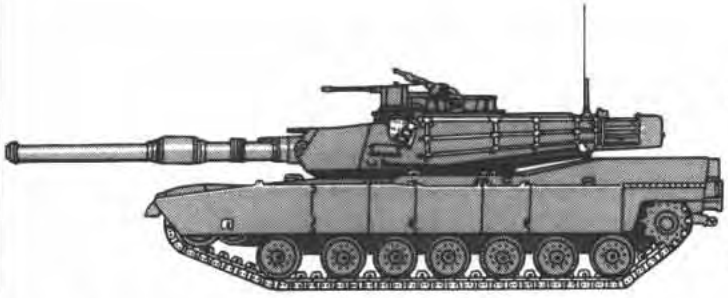
Price: $650,000 (R/R)
Fire Control: +2
Armament: 120mm gun, MAG MG coaxial, M2HB MG (C), MAG MG (L)
Stabilization: Good
Ammo: 40×120mm, 1000×.50 BMG, 11,400×7.62mm
Fuel Type: D, G, AvG, A
Load: 700 kg
Veh Wt: 63 tonnes
Crew: 4
Mnt: 14
Night Vision: Passive IR/thermal (shared by commander and gunner)
Radiological: Shielded

***Tr Mov:* 130/110**
***Com Mov:* 30/25**
***Fuel Cap:* 1900**
***Fuel Cons:* 1200**

Combat Statistics

Config: Veh	TF: 120-Cp	HF: 200-Cp
Susp: T: 6	TS: 40	HS: 16-Sp
	TR: 16	HR: 16

Conny Delshagen (order #3265201)



M1A2

An improved M1A1 with more advanced electronics and communications.

One important feature of the M1A2 is the addition of a diesel auxillary power unit. This allows a vast increase in fuel efficiency, as the gas turbine engine uses huge amounts of fuel even when only idling to provide basic electrical power.

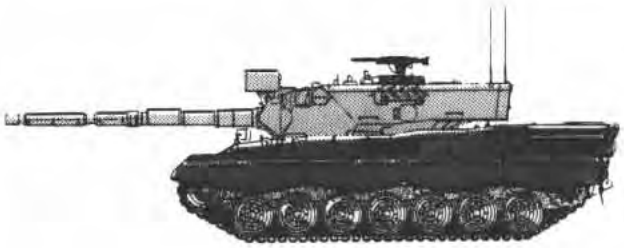
Commander has an independent, stabilized thermal sight.

Price: $700,000 (R/R)
Fire Control: +2
Armament: 120mm gun, MAG MG coaxial, M2HB MG (C), MAG MG (L)
Stabilization: Good
Ammo: 40×120mm, 1000×.50 BMG, 11400×7.62mm
Fuel Type: D, G, AvG, A
Load: 700 kg
Veh Wt: 63 tonnes
Crew: 4
Mnt: 16
Night Vision: Passive IR/thermal (for each commander, driver, and gunner)
Radiological: Shielded

***Tr Mov:* 130/110**
***Com Mov:* 30/25**
***Fuel Cap:* 1900**
***Fuel Cons:* 600**

Combat Statistics

Config: Veh	TF: 120-Cp	HF: 200-Cp
Susp: T: 6	TS: 40	HS: 16-Sp
	TR: 20	HR: 16



Leopard I

The first German postwar tank was the Leopard I. It has been extensively modernized, particularly in the areas of fire control and armor protection. Although supplanted in front-line German service by the Leopard II, it remains in use by territorial units as well as by the Belgian, Dutch, and Canadian armies. There is a driver's hatch on the middle front deck, and a loader's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

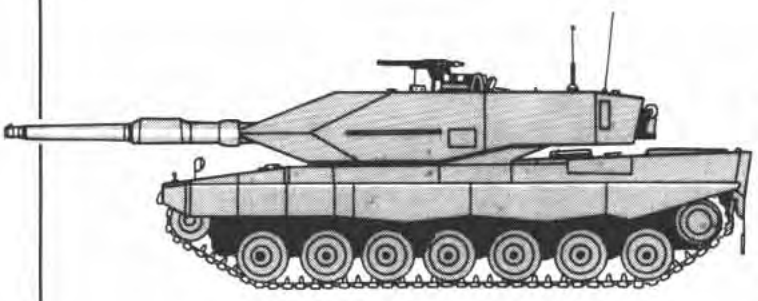
Price: $420,000 (S/R)
Fire Control: +1
Armament: 105mm gun, MG3 MG coaxial, MG3 (C)
Stabilization: Basic
Ammo: 60×105, 5500×7.62mm
Fuel Type: D, G, A
Load: 700 kg
Veh Wt: 40 tonnes
Crew: 4
Mnt: 8
Night Vision: White light or IR searchlight, active/passive IR
Radiological: Shielded

***Tr Mov:* 130/85**
***Com Mov:* 30/20**
***Fuel Cap:* 955**
***Fuel Cons:* 200**

Combat Statistics

Config: Veh	TF: 50-Sp	HF: 26
Susp: T: 6	TS: 12-Sp	HS: 7
	TR: 12-Sp	HR: 5

Conny Delshagen (order #3265201)



Leopard 2(I)

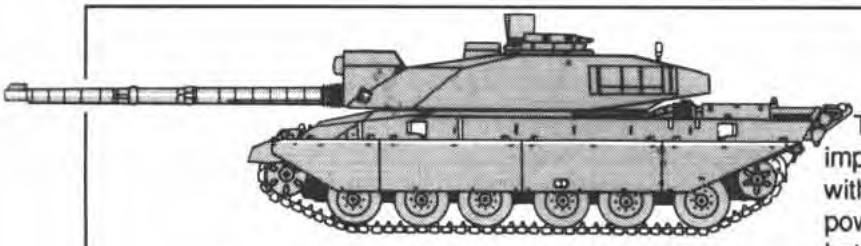
Despite its name, the Leopard 2 actually represents an entirely new design rather than an upgrade of the Leopard I. Protection has been enhanced by the use of a form of compound armor, and the Leopard 2 was the first Western tank to mount the 120mm smoothbore gun which has since become nearly universal. The version listed here is the improved, up-armored version introduced in the mid-1990s. There is a driver's hatch on the middle front deck, and a loader's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

Price: $650,000 (S/R)
Fire Control: +2
Armament: 120mm smoothbore gun, MG3 coaxial, MG3 (C)
Stabilization: Good
Ammo: 42×120mm, 4750×7.62mm
Fuel Type: G, D, A
Load: 700 kg
Veh Wt: 62.5 tonnes
Crew: 4
Mnt: 14
Night Vision: White light or IR searchlight, active/passive IR
Radiological: Shielded

***Tr Mov:* 140/110**
***Com Mov:* 35/25**
***Fuel Cap:* 1200**
***Fuel Cons:* 315**

Combat Statistics:

Config: Veh	TF: 100-Cp	HF: 160-Cp
Susp: T: 6	TS: 24	HS: 24
	TR: 20	HR: 10



Challenger 2

This British tank entered service in the 1990s. It is an improved version of the earlier Challenger main battle tank, with an improved turret and fire control, and an all-new more powerful model of the 120mm rifled gun. There is a driver's hatch on the middle front deck, and a gunner's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

Commander has a stabilized independent day sight.

Price: $850,000 (R/—)
Fire Control: +2
Armament: 120mm rifled gun (L30), MAG MG coaxial, MAG MG (C)
Stabilization: Good
Ammo: 52×120mm, 4000×7.62mm
Fuel Type: D, G, AvG, A
Load: 500 kg
Veh Wt: 62.5 tonnes
Crew: 4
Mnt: 16
Night Vision: White light/IR searchlight, active/passive/thermal imaging (shared by commander and gunner)
Radiological: Shielded

***Tr Mov:* 130/110**
***Com Mov:* 30/25**
***Fuel Cap:* 1800**
***Fuel Cons:* 500**

Combat Statistics

Config: Veh	TF: 120-Cp	HF: 200-Cp
Susp: T: 6	TS: 40	HS: 24
	TR: 16	HR: 20

Conny Delshagen (order #3265201)



M60A3

This version of the U.S. M60 tank incorporates improved fire control and a thermal imaging sight. There is a driver's hatch on the middle front deck and a gunner's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

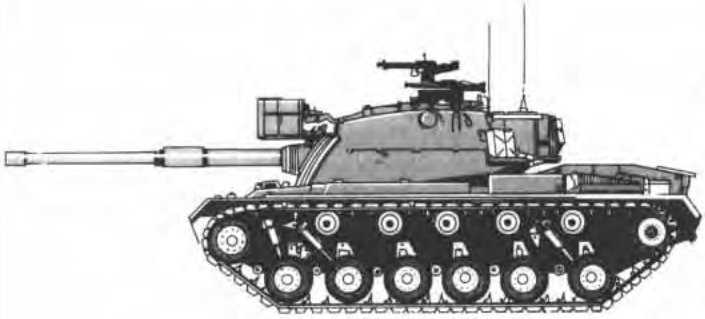
Attachment points for reactive armor are fitted to the turret front and sides and hull front (TF, TS, and HF).

***Tr Mov:* 110/65**
***Com Mov:* 25/15**
***Fuel Cap:* 1400**
***Fuel Cons:* 280**

Combat Statistics

Config: Veh	TF: 50	HF: 50
Susp: T: 6	TS: 15	HS: 24
	TR: 15	HR: 24

Price: $350,000 (S/R)
Fire Control: +1
Armament: 105mm gun, MAG coaxial, M2HB MG (C)
Stabilization: Basic
Ammo: 63×105mm, 900×.50 BMG, 5950×7.62mm
Fuel Type: D, A
Load: 600 kg
Veh Wt: 52.6 tonnes
Crew: 4
Mnt: 10
Night Vision: Passive/thermal IR, white/IR searchlight
Radiological: Shielded



M48A5

This is the final variant of the M48, a 1950s-vintage American main battle tank. Its main difference over previous versions is the installation of the 105mm tank gun and a sophisticated fire control system. Although a few examples of this vehicle remain in service with U.S. National Guard units, its primary employment is by the Greek and Turkish armies, where it forms a substantial part of the tank forces. There is a driver's hatch on the middle front deck, and a gunner's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

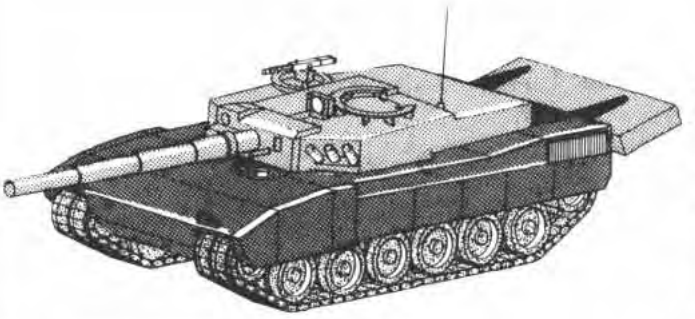
***Tr Mov:* 110/65**
***Com Mov:* 25/15**
***Fuel Cap:* 1400**
***Fuel Cons:* 280**

Combat Statistics

Config: Veh	TF: 44	HF: 48
Susp: T: 6	TS: 15	HS: 22
	TR: 15	HR: 22

Price: $350,000 (S/R)
Fire Control: +1
Armament: 105mm gun, MAG coaxial, MAG MG (C)
Stabilization: Basic
Ammo: 54×105mm, 10,000×7.62mm
Fuel Type: D, A
Load: 500 kg
Veh Wt: 49 tonnes
Crew: 4
Mnt: 10
Night Vision: Passive IR, white light searchlight
Radiological: Enclosed

Conny Delshagen (order #3265201)



EPC "Leclerc"

The EPC (*Engin Principal de Combat*, or main battle tank) began entering service in the early 1990s with French units deployed along the Rhine River. It replaced the earlier AMX-30B2. It is a fairly advanced design and was the first Western tank to include an autoloader for its 120mm smoothbore gun. There is a driver's hatch on the middle front deck, and a gunner's hatch and commander's hatch on the turret deck. The gun is automatically reloaded. A weapons mount is located by the commander's hatch, and is operated by remote control.

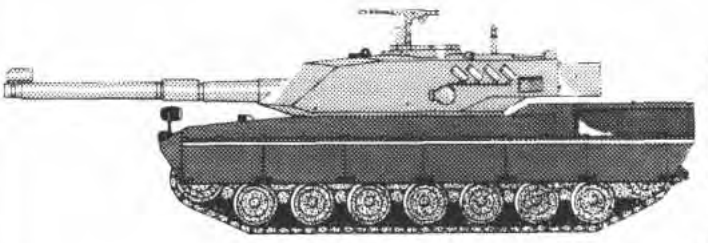
Commander has a stabilized independent sight.

Price: $700,000 (S/R)
Fire Control: +2
Armament: 120mm smoothbore gun, M2HB coaxial, MAG MG (C)
Stabilization: Good
Ammo: 40×120mm
Fuel Type: D, A
Load: 700 kg
Veh Wt: 53 tonnes
Crew: 3
Mnt: 14
Night Vision: White light searchlight, image intensifier
Radiological: Shielded

***Tr Mov:* 150/130**
***Com Mov:* 35/30**
***Fuel Cap:* 1300**
***Fuel Cons:* 350**

Combat Statistics

Config: Veh	TF: 100-Cp	HF: 140-Cp
Susp: T: 6	TS: 20	HS: 20
	TR: 10	HR: 10



C-1 "Ariete"

Adopted in the early 1990s, the C-1 became the principal combat tank in Italian service, replacing the M60 and older tanks of U.S. manufacture. There is a driver's hatch on the middle front deck, and a loader's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch. Commander has a stabilized independent sight.

Due to the nature of the turret, a turret (but not hull) hit which results in an ammunition explosion (see page 219) does *not* automatically kill the crew and destroy the vehicle. Instead, consider all armament, sensors, and electronics to be damaged and inoperative. Then apply 50 points of concussion damage to the commander, gunner, and loader.

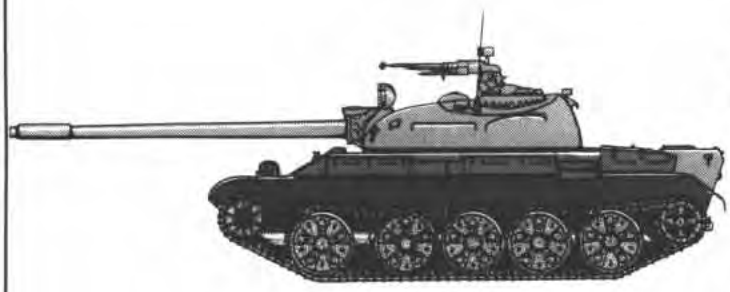
Price: $700,000 (S/R)
Fire Control: +2
Armament: 120mm smoothbore gun, MAG coaxial, MAG MG (C)
Stabilization: Good
Ammo: 40×120mm, 2000×7.62mm
Fuel Type: D, A
Load: 700 kg
Veh Wt: 54 tonnes
Crew: 4
Mnt: 12
Night Vision: White light searchlight, image intensifier
Radiological: Shielded

***Tr Mov:* 130/110**
***Com Mov:* 30/25**
***Fuel Cap:* 1400**
***Fuel Cons:* 350**

Combat Statistics

Config: Veh	TF: 90-Cp	HF: 140-Cp
Susp: T: 6	TS: 20	HS: 20
	TR: 10	HR: 10

Conny Delshagen (order #3265201)



T-55

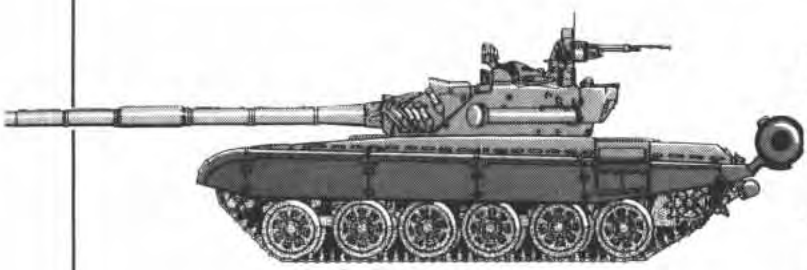
This Soviet tank was produced in great numbers from the 1950s through the mid-1980s, first for Soviet use and later for export. Although long since supplanted in Soviet front-line service by more recent models, it remains the most numerous tank in Polish, Bulgarian, Yugoslavian, and Albanian service. Many examples have been returned to service in the Soviet, Czech, and Hungarian armies as well to replace battle losses. It was widely exported to Africa, and is produced by China as the Type 59. There is a driver's hatch on the left front deck, and a gunner's hatch and commander's hatch on the turret deck. A weapons mount is located by the commander's hatch.

Price: $300,000 (R/S)
Armament: 100mm gun, PK MG coaxial, DShK (C)
Ammo: 43×100mm, 3000×7.62mm, 500×12.7mm
Fuel Type: D, A
Load: 400 kg
Veh Wt: 36 tonnes
Crew: 4
Mnt: 8
Night Vision: Active/passive IR, white light or IR searchlight
Radiological: Shielded

***Tr Mov:* 110/65**
***Com Mov:* 25/15**
***Fuel Cap:* 950+380 in jettisonable rear drums**
***Fuel Cons:* 190**

Combat Statistics

Config: Veh	TF: 41	HF: 40
Susp: T: 6	TS: 26	HS: 16
	TR: 12	HR: 12



T-72

A tracked main battle tank of Soviet manufacture. There is a driver's hatch on the middle front deck, and a gunner's hatch and commander's hatch on the turret deck. The gun is automatically reloaded. A weapons mount is located by the commander's hatch.

Attachment lugs for reactive armor are fitted to the turret and hull front (TF and HF).

Price: $400,000 (R/R)
Fire Control: +1
Armament: 125mm gun, PK MG, DShK MG (C)
Stabilization: Basic
Ammo: 45×125mm, 300×12.7mm, 2000×7.62mm
Load: 500 kg
Veh Wt: 44.5 tonnes
Fuel Type: D, A
Crew: 3
Mnt: 16
Night Vision: White light/IR spotlight, active/passive IR
Radiological: Shielded

***Tr Mov:* 150/110**
***Com Mov:* 35/25**
***Fuel Cap:* 1000+400 in jettisonable rear drums**
***Fuel Cons:* 350**

Combat Statistics

Config: Veh	TF: 70	HF: 100-Cp
Susp: T: 6	TS: 24	HS: 16
	TR: 20	HR: 10

Conny Delshagen (order #3265201)



T-80

An improved gas turbine powered version of the T-72, the T-80 has an identical layout but strengthened armor protection.

The 125mm gun fires the AT-8 "Songster" (known as the Kobra to the Soviets) in addition to conventional rounds. Although the gun is served by an autoloader, the two-part missile round is loaded by hand.

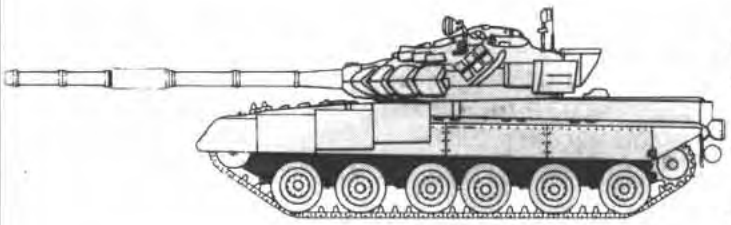
Attachment lugs for reactive armor are fitted to the turret and hull front (TF and HF).

Price: $500,000 (R/R)
Fire Control: +2
Armament: 125mm gun, PK MG, DShK MG (C)
Stabilization: Basic
Ammo: 36×125mm, 5×AT-8 ATGM, 300×12.7mm, 1250×7.62mm
Fuel Type: D, G, AvG, A
Load: 500 kg
Veh Wt: 43 tonnes
Crew: 3
Mnt: 16
Night Vision: White light/IR spotlight, active/passive IR
Radiological: Shielded

***Tr Mov:* 150/110**
***Com Mov:* 35/25**
***Fuel Cap:* 1000+400 in jettisonable rear drums**
***Fuel Cons:* 350**

Combat Statistics

Config: Veh	TF: 90	HF: 120-Cp
Susp: T: 6	TS: 24	HS: 16
	TR: 20	HR: 10



T-90

Unveiled in 1993, the T-90 marks a return to diesel power following the gas turbine T-80. As an improved T-80, the T-90 also has the same layout as the T-72.

The T-90 also fires an ATGM from its 125mm gun, the 9M119 Reflecks (known by NATO as the AT-11 "Sniper").

Attachment lugs for reactive armor are fitted to the turret and hull front (TF and HF).

Price: $600,000 (R/R)
Fire Control: +2
Armament: 125mm gun, PK MG coaxial, DShK MG (C)
Stabilization: Good
Ammo: 36×125mm, 6×Reflecks ATGM, 300×12.7mm, 1250×7.62mm
Fuel Type: D, G, AvG, A
Load: 500 kg
Veh Wt: 45 tonnes
Crew: 3
Mnt: 18
Night Vision: White light/IR spotlight, active/passive IR
Radiological: Shielded

***Tr Mov:* 150/110**
***Com Mov:* 35/25**
***Fuel Cap:* 1000+400 in jettisonable rear drums**
***Fuel Cons:* 350**

Combat Statistics

Config: Veh	TF: 90	HF: 140-Cp
Susp: T: 6	TS: 24	HS: 25-Sp
	TR: 20	HR: 10

Conny Delshagen (order #3265201)



M109A2/A3

A tracked, self-propelled howitzer with a large turret on the rear vehicle deck. There is a driver's hatch on the left front deck, a commander's hatch and gunner's hatch on the turret deck, and hinged doors on both sides of the turret, the rear of the turret, and the rear of the hull.

A weapons mount is located by the commander's hatch.

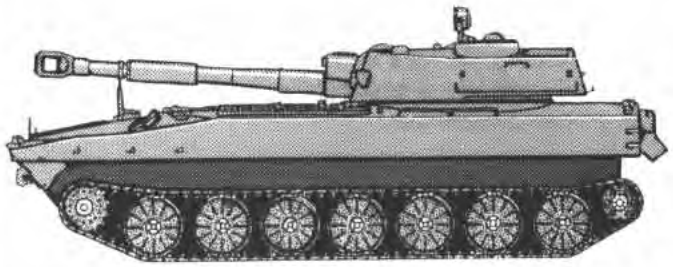
The M109 can be made amphibious by use of a special kit not normally carried (R/—). The kit consists of nine large air bags and allows a combat move of 4.

***Tr Mov:* 110/70**
***Com Mov:* 25/15**
***Fuel Cap:* 495**
***Fuel Cons:* 165**

Combat Statistics

Config: Veh	TF: 4	HF: 10
Susp: T: 4	TS: 4	HS: 3
	TR: 4	HR: 3

Price: $300,000 (R/R)
Armament: 155mm howitzer, M2HB MG (C)
Ammo: 36×155, 500×.50 BMG
Fuel Type: D, A
Load: 1 tonne
Veh Wt: 25 tonnes
Crew: 6
Mnt: 10
Night Vision: Headlights
Radiological: Shielded



SO-122 Akatsiya

An amphibious, tracked, self-propelled howitzer. The SO-122 has a driver's hatch on the front left deck, and a commander's hatch and loader's hatch on the turret deck.

Akatsiya is Russian for "Acacia."

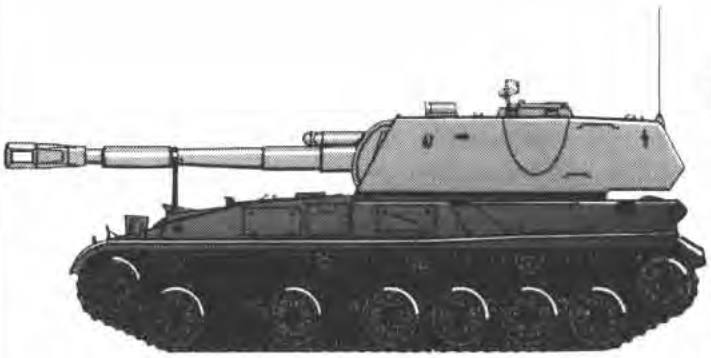
***Tr Mov:* 130/80**
***Com Mov:* 30/20/2**
***Fuel Cap:* 540**
***Fuel Cons:* 135**

Combat Statistics

Config: Veh	TF: 5	HF: 6
Susp: T: 4	TS: 5	HS: 4
	TR: 3	HR: 3

Price: $200,000 (R/R)
Armament: 122mm howitzer
Ammo: 40×122
Fuel Type: D, A
Load: 600 kg
Veh Wt: 16 tonnes
Crew: 4
Mnt: 10
Night Vision: Headlights
Radiological: Shielded

Conny Delshagen (order #3265201)



SO-152 Gvozdika

A tracked, self-propelled howitzer. The SO-152 has a driver's hatch on the front left deck, a commander's hatch on the turret deck, and a loader's hatch on the right turret side (not deck).

A weapons mount (C) is located by the commander's hatch.

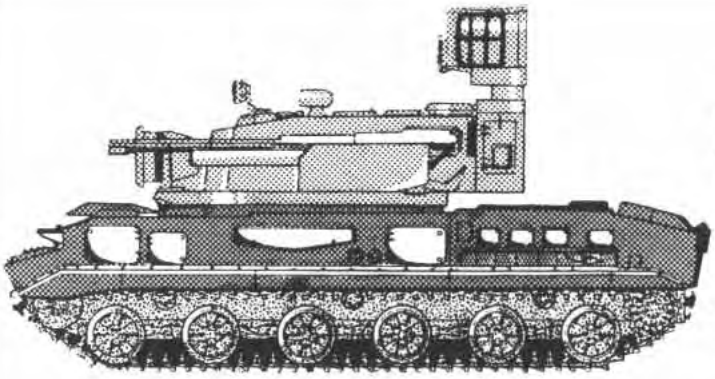
Gvozdika is Russian for "Carnation."

***Tr Mov:* 100/60**
***Com Mov:* 25/15**
***Fuel Cap:* 840**
***Fuel Cons:* 210**

Price: $250,000 (R/R)
Armament: 152mm howitzer, PK MG (C)
Ammo: 46×152mm, 1000×7.62mm
Fuel Type: D, A
Load: 800 kg
Veh Wt: 30 tonnes
Crew: 5
Mnt: 10
Night Vision: Headlights
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 5	HF: 6
Susp: T: 4	TS: 5	HS: 4
	TR: 3	HR: 3



ZSO-30-4

A self-propelled air defense gun. The ZSO-30-4 has hinged doors on the right and left front sides for the driver and loader, and has a commander's hatch and gunner's hatch on the turret deck.

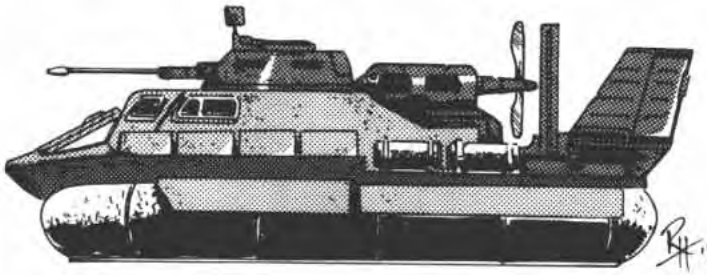
***Tr Mov:* 100/60**
***Com Mov:* 25/15**
***Fuel Cap:* 880**
***Fuel Cons:* 220**

Price: $100,000 (R/R)
Fire Control: +1
Armament: 4×30mm guns, 8 SA-19 missiles
Stabilization: Basic
Ammo: 1904×30mm, 8×SA-19
Fuel Type: D, A
Load: 600 kg
Veh Wt: 34 tonnes
Crew: 4
Mnt: 12
Night Vision: Headlights
Radiological: Shielded

Combat Statistics

Config: Veh	TF: 4	HF: 6
Susp: T: 4	TS: 3	HS: 4
	TR: 3	HR: 4

Conny Delshagen (order #3265201)



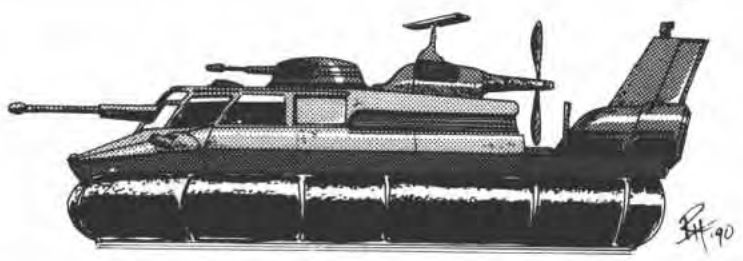
KvP-92

An amphibious, air cushion vehicle developed in the middle 1990s for the Soviet Naval Infantry. It has a hatch on the front deck for the driver, hatches on the top deck for the commander and gunner, a bow cargo ramp, and a door on either side for passengers.

***Tr Mov:* 240/195**
***Com Mov:* 55/45**
***Fuel Cap:* 420**
***Fuel Cons:* 60**

Price: $300,000 (—/R)
Armament: 30mm autocannon
Ammo: 200×30mm
Fuel Type: D, A
Load: 1 tonne
Veh Wt: 11 tonnes
Crew: 3+8
Mnt: 24
Night Vision: IR spotlight

Combat Statistics
Config: Stnd HF: 1
Susp: P(8) HS: 1
HR: 1



SK-25

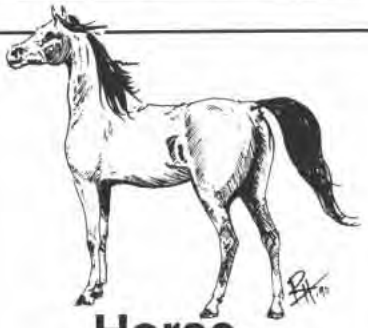
An updated version of the Vietnam-era combat hovercraft used to such good effect in the Mekong delta.

***Tr Mov:* 240/195**
***Com Mov:* 55/45**
***Fuel Cap:* 250**
***Fuel Cons:* 50**

Price: $112,000 (R/—)
Armament: 20mm autocannon, twin 50s, P/S Mk-19 GLs
Ammo: 500×20mm, 800 40mm, .50 caliber stored as cargo.
Fuel Type: D, A
Load: 400 kg
Veh Wt: 9 tonnes
Crew: 6
Mnt: 24
Night Vision: Image intensifier

Combat Statistics
Config: Stnd HF: 2
Susp: P(8) HS: 2
HR: 1

Conny Delshagen (order #3265201)



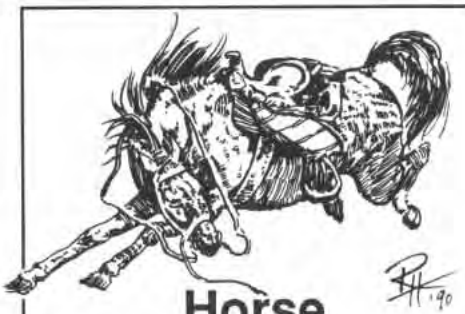
Horse (Broken)

Used as a mount, pack animal, or draft animal.

Price: $2000 (S/S)
Hits: 60
Meat: 90 kg

***Tr Mov:* 20/20**
***Com Mov:* 10/30/60**

Feed: 12 kg+graze
Load: 120 kg
Wt: 350 kg



Horse (Unbroken)

An animal unused to carrying a saddle. It must be broken before being put to any work.

Price: $1000 (S/S)
Hits: 60
Meat: 90 kg

***Tr Mov:* 20/20**
***Com Mov:* 10/30/60**

Feed: 12 kg+graze
Load: 120 kg
Wt: 350 kg



Mule

Sterile hybrid offspring of a horse and donkey. Used as a pack and draft animal.

Price: $600 (S/S)
Hits: 40
Meat: 70 kg

***Tr Mov:* 20/20**
***Com Mov:* 10/20/40**

Feed: 10 kg+graze
Load: 80 kg
Wt: 300 kg



Ox

A neutered bovine used as a draft animal.

Price: $600 (C/C)
Hits: 70
Meat: 250 kg

***Tr Mov:* 5/5**
***Com Mov:* 10/20/30**

Feed: Graze
Load: 70 kg
Wt: 600 kg



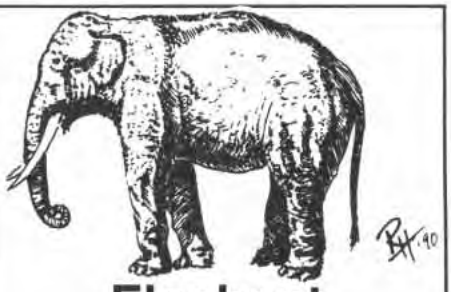
Camel

A beast of burden used in some parts of Africa and Asia for its superior dry-weather durability. Camels are almost never hooked to wagons or carts.

Price: $1200 (S/C)
Hits: 65
Meat: 350 kg

***Tr Mov:* 15/15**
***Com Mov:* 10/20/40**

Feed: Graze
Load: 120 kg
Wt: 1200 kg



Elephant

Elephants are used in parts of Asia as beasts of burden. They can be used to pull wagons and the like, but are not usually put to this task.

Price: $20,000 (R/S)
Hits: 120
Meat: 800 kg

***Tr Mov:* 10/5**
***Com Mov:* 10/20/30**

Feed: Graze
Load: 600 kg
Wt: 3 tonnes

Conny Delshagen (order #3265201)



Very Small Open Boat

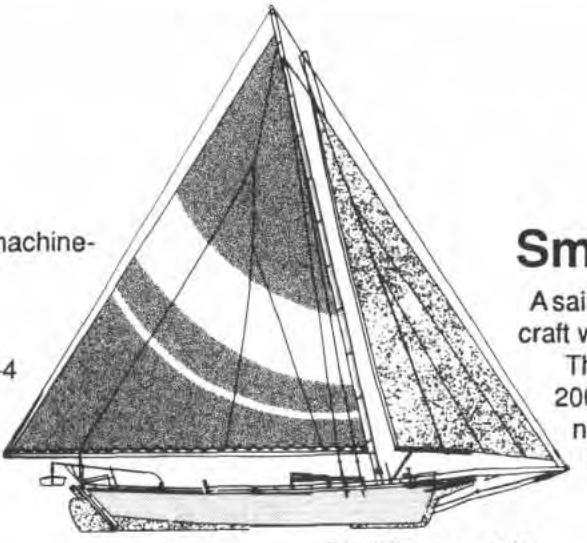
Rowboats, canoes, assault boats, and other open craft four meters long or less. These can often be carried by one or two people, and can usually be stored on top of a vehicle as cargo. Inflatable versions are even more portable.

Price: $100 (C/C)
Armament: None
Length: 1
Draft: 0.5 m
Speed: 10-meter grid squares
Turn: 4
Acceleration: 1 meter per turn
Pumps: None
Night Vision: None
Load: 100 kg
Minimum/Optimum Crew: 2/4
Mnt: 1

Full Speed ☐
Dead in Water ☐
Sunk ☐

***Tr Move:* 4/4**

Config:Vessel
Tonnage: 1
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Muscle power
Size: 1



Small Sailing Boat

A sail-powered, wooden-hulled pleasure craft with a small cabin below deck. These boats are still fairly common in 2000 since they require little maintenance and no fuel, although they can be hard to maneuver in cramped estuaries and the like.

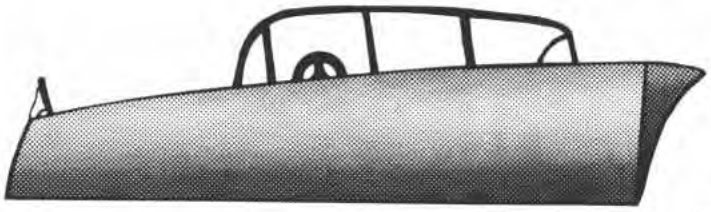
Price: $5000 (C/C)
Armament: None, although one machine-gun can be fitted.
Length: 1
Draft: 2 m
Speed: 1D6+2 downwind, 1D6+4 upwind
Turn: 2
Acceleration: 0.5 meters per turn
Pumps: None
Night Vision: None
Load: 1 tonne
Minimum/Optimum Crew: 2/4
Mnt: 2

Full Speed ☐☐☐☐☐ ☐☐☐☐☐
Dead in Water ☐☐☐☐☐ ☐☐☐☐☐
Sunk ☐☐☐☐☐ ☐☐☐☐☐

***Tr Move:* 8/8**

Config: Vessel
Tonnage: 10
Hull Armor: 0
Waterline Armor: 0
Propulsion: Sails
Size: 1

Conny Delshagen (order #3265201)



Small Motorboat

A wooden-hulled, open, "runabout" pleasure boat or small private fishing boat.

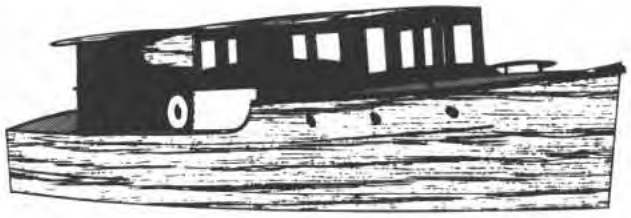
These boats are mostly gasoline-fueled craft, and the few still in operation now use alcohol. They are seldom used for anything resembling "pleasure" any more.

***Tr Move:* 16/16**
***Fuel Cap:* 220**
***Fuel Cons:* 20**

Price: $10,000 (C/C)
Armament: None, although one machinegun or grenade launcher can be fitted.
Length: 1
Draft: 1 m
Speed: 10-meter grid squares
Turn: 4
Acceleration: 4 meters per turn
Pumps: 1
Night Vision: None
Load: 1 tonne
Minimum/Optimum Crew: 1/2
Mnt: 4

Full Speed	□□□□□ □□□□□
Dead in Water	□□□□□ □□□□□
Sunk	□□□□□ □□□□□

Fuel Type: D, A
Config: Vessel
Tonnage: 10
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 1



Medium Motorboat

A medium-sized, wooden-hulled pleasure boat with a small cabin (a cabin cruiser) or small commercial fishing vessel. This is the most popular type of craft with small merchants, but fishing boats of this size are usually operated by several families in a communal consortium.

***Tr Move:* 12/12**
***Fuel Cap:* 400**
***Fuel Cons:* 40**

Price: $20,000 (C/C)
Armament: None, although one or more machineguns can easily be fitted.
Length: 2
Draft: 1 m
Speed: 10-meter grid squares
Turn: 2
Acceleration: 1 meter per turn
Pumps: 1
Night Vision: 1 white light spotlight
Load: 2 tonnes
Minimum/Optimum Crew: 2/8
Mnt: 6

Full Speed	□□□□□ □□□□□ □□□□□ □□□□□
Dead in Water	□□□□□ □□□□□ □□□□□ □□□□□
Sunk	□□□□□ □□□□□ □□□□□ □□□□□

Fuel Type: D, A
Config: Vessel
Tonnage: 20
Hull Armor: 0
Waterline Armor: 0
Propulsion: Motor
Size: 2

Conny Delshagen (order #3265201)



PBR (Patrol Boat, River)

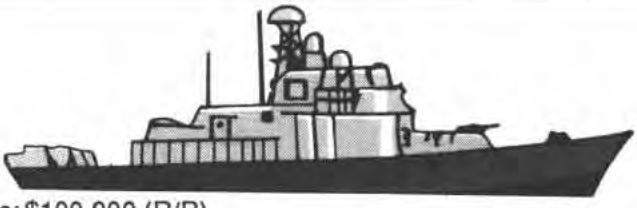
A small, armed, fiberglass or wooden-hulled river patrol boat or its equivalent. Many of these are former government revenue boats or customs patrol boats which are now in private hands.

***Tr Move:* 24/24**
***Fuel Cap:* 500**
***Fuel Cons:* 50**

Price: $40,000 (R/R)
Armament: Pintle-mounted AGS-17 forward, two DShK (port/starboard pintle mounts)
Length: 2
Draft: 1 m
Speed: 10-meter grid squares
Turn: 4
Acceleration: 4 meters per turn
Pumps: 1
Night Vision: White light spotlight
Load: 1 tonne
Minimum/Optimum Crew: 2/8
Mnt: 6

Fuel Type: D, A
Config: Vessel
Tonnage: 20
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 2

Full Speed	□□□□□	□□□□□	□□□□□	□□□□□
Dead In Water	□□□□□	□□□□□	□□□□□	□□□□□
Sunk	□□□□□	□□□□□	□□□□□	□□□□□



Torpedo Boat

This is a small, steel-hulled, oceangoing warship suitable for use on the river as well. Vessels of this type are very expensive to operate and are seldom found in private hands. Occasionally, they can be found in use by the riverine equivalent of marauders.

***Tr Move:* 12/12**
***Fuel Cap:* 1800**
***Fuel Cons:* 110**

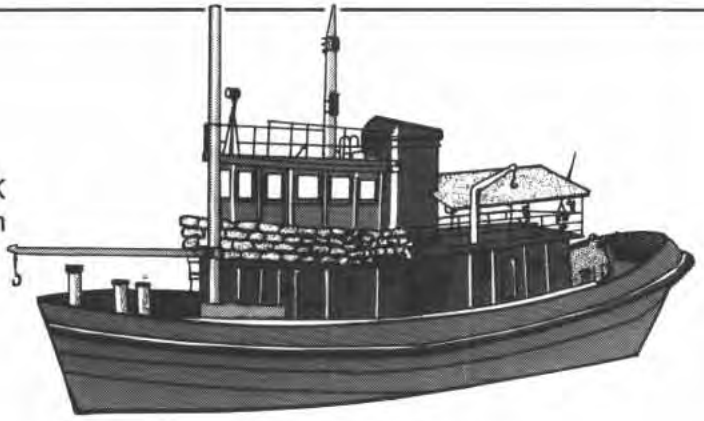
Price: $100,000 (R/R)
Armament: Two twin 23mm autocannons (one forward, one aft). Two torpedo tubes (no longer operational, and probably used for storage now). Four PK machineguns mounted on the superstructure.
Length: 3
Draft: 1 m
Speed: 10-meter grid squares
Turn: 3
Acceleration: 1 meter per turn
Pumps: 3
Night Vision: White light spotlight
Load: 5 tonnes
Minimum/Optimum Crew: 3/16
Mnt: 10

Fuel Type: D, A
Config: Vessel
Tonnage: 70
Hull Armor: 2
Waterline Armor: 2
Superstructure Armor: 2
Propulsion: Motor
Size: 2

Full Speed	□□□□□	□□□□□	□□□□
Dead In Water	□□□□□	□□□□□	□□□□
Sunk	□□□□□	□□□□□	□□□□

(Each box equals five flotation hits.)

Conny Delshagen (order #3265201)



River Tug

A river tug is a medium-sized, wooden-hulled tugboat which is frequently used for moving barges up and down the river.

Price: $200,000 (S/S)
Armament: Various, but usually has at least four PK or DShK machineguns on the superstructure and one larger gun on either the forward or aft deck.
Length: 4
Draft: 2 m
Speed: 10-meter grid squares
Turn: 1
Acceleration: 0.5 meters per turn
Pumps: 5
Night Vision: 2 white light spotlights
Load: 20 tonnes
Minimum/Optimum Crew: 4/10
Mnt: 15

Full Speed □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
Dead in Water □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
Sunk □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
(Each box equals five flotation hits.)

***Tr Move:* 8/8**
***Fuel Cap:* 1000 kg**
***Fuel Cons:* 100 kg**

Fuel Type: C, W
Config: Vessel
Tonnage: 200
Hull Armor: 2
Waterline Armor: 2
Superstructure Armor: 1
Propulsion: Motor
Size: 3



Barge

A 60-meter-long, 10-meter-wide steel shell divided into four compartments by wooden bulkheads.

A barge has a small deck at each end for the crewmembers to stand on during operations. It also includes a narrow walkway down each side to allow communication from bow to stern.

Price: $50,000 (C/C)
Armament: None fitted
Length: 6
Beam: 8 m
Draft: 2 m
Speed: As tug
Turn: As tug
Acceleration: As tug
Pumps: None
Night Vision: None
Load: 1400 tonnes
Minimum/Optimum Crew: 1/2
Mnt: 2

Full Speed □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
Dead in Water □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
Sunk □□□□□ □□□□□ □□□□□ □□□□□ □□□□□
(Each box equals 40 flotation hits.)

***Tr Move:* Towed**

Config: Vessel
Tonnage: 1400 (loaded)
Hull Armor: 1
Waterline Armor: 1
Propulsion: None fitted
Size: 3

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WEAPON CARDS

FIREARMS

Magazines and ammunition (and tripods for machineguns and grenade launchers) must be purchased separately. They are not counted into weight or price.

Ammo: Type of ammunition used.

Mag: The number of rounds per magazine. (A weapon's magazine is a detachable box unless indicated otherwise. If the Mag rating is missing, then that weapon has no magazine).

Remember that for belt-fed weapons, two or three belts may be linked together if the weapon is not moved (that is, if the weapon is vehicle mounted or firing from a dug-in position).

Linking belts counts as an action, but can be done by the weapon's loader while the weapon is firing.

REVOLVERS, SINGLE-SHOT PISTOLS

Revolvers carry their rounds (usually six) in a revolving cylinder.

Recocking the pistol advances the cylinder and brings a fresh cartridge in line with the firing pin.

Single-shot pistols have no feed mechanism and require reloading after every shot. Both types are fired using the Pistol cascade of the Small Arms skill.

AUTOMATIC PISTOLS

Automatics are fed from a magazine held in the pistol grip.

Each time the pistol fires, the recoil energy is used to eject the spent cartridge, recock the pistol, and move a new cartridge into the chamber.

They are fired using the Pistol cascade of the Small Arms skill.

BATTLE RIFLES

Battle rifles are very similar to assault rifles in design, but fire full-power rifle cartridges. This gives them greater range and penetration, but makes it more difficult to control them when attempting to fire multiple single shots or when using automatic fire.

They are fired using the Rifle cascade of the Small Arms skill.

SUBMACHINEGUNS

Submachineguns are light-weight automatic weapons. Almost all such weapons fire pistol ammunition to reduce recoil, although a few submachineguns are simply cut-down assault rifles. They are fired using the Rifle cascade of the Small Arms skill.

ASSAULT RIFLES

Assault rifles are capable of firing either single shots or bursts of automatic fire. To make controlled firing easier, they generally fire less powerful cartridges than those fired by traditional rifles.

This may be achieved either by firing a standard rifle bullet with a weaker powder charge (as with the 7.62 Short fired by the AKM) or a smaller rifle bullet with a full powder charge (as with the 5.56 NATO fired by the M16 and most other Western assault rifles). Assault rifles are fired using the Rifle cascade of the Small Arms skill.

SPORTING RIFLES

These include a variety of civilian rifles used for hunting or target practice. They are fired using the Rifle cascade of the Small Arms skill.

SNIPER RIFLES

Sniper rifles are standard semiautomatic or bolt-action target rifles fitted with telescopic sights. They are fired using the Rifle cascade of the Small Arms skill.

SHOTGUNS

Shotguns are usually civilian hunting weapons. Their standard ammunition in a combat setting is 00 Buckshot. At longer ranges this ammo produces a fair approximation of the area fire effects of a burst of submachinegun fire, while at closer ranges it produces devastating wounds. Shotguns are fired using the Rifle cascade of the Small Arms skill.

AUTOMATIC RIFLES

Automatic rifles are either heavy versions of battle rifles (fitted with bipods and heavy barrels to reduce overheating) or very light machineguns firing assault rifle cartridges. They are fired using the Rifle cascade of the Small Arms skill.

MACHINEGUNS

Machineguns are belt-fed automatic weapons which fire rifle cartridges. They are generally fired from bipods, tripods, or vehicle mounts. Very strong (or very foolish) characters can fire them from the hip without benefit of a mount.

They are fired using the Autogun skill.

GRENADE LAUNCHERS

Grenade launchers use a low or hi-low pressure system to propel 30 to 40 millimeter grenades in excess of 100 meters. Most break open like a shotgun, but the American M203 has a unique slide open system. Grenade launchers are fired using Grenade Launcher skill.

ROCKET LAUNCHERS

The rocket launcher is one of the most important developments of the modern battlefield, giving a readily portable and quite lethal antitank punch to infantry. These weapons, in company with the antitank missile, set the tone of modern ground combat. They are fired using Grenade Launcher skill.

ANTITANK MISSILE LAUNCHERS

The development of a weapon that could punch through a tank's armor without requiring a giant gun to shoot it is probably the salient feature of modern ground combat—relatively small vehicles can now overpower tanks that would have required gigantic AT guns not all that long ago. They are fired using Tac Missile skill.

LARGE-CALIBER GUNS, HOWITZERS

Most of the heavy artillery in the game is mounted on tanks, AFVs, or some form of self-propelled vehicular platform. Indirect Fire weapons use Heavy Artillery skill. Direct Fire weapons use Heavy Gun skill. Autocannons use either Autogun or Heavy Gun skill.

HEAVY MACHINEGUNS

These are identical in function to other machineguns except that they fire very powerful bullets. They are fired using Autogun skill.

MORTARS

Mortars are fired using Heavy Gun or Grenade Launcher skill.

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Melee Weapons

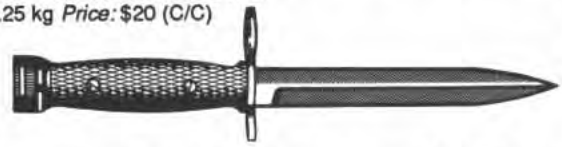
Melee weapons include a variety of lethal objects.

Knife: About the size of a kitchen butcher knife. Of limited use because of its short reach, but deadly in the right hands.

Wt: 0.25 kg *Price:* $5 (V/V)

Bayonet: A military knife which can be held in the hand or attached to the end of an assault or battle rifle.

Wt: 0.25 kg *Price:* $20 (C/C)



Spear: A short, broad blade mounted on a long wooden shaft. It is a thrusting weapon—awkward, but useful because of its reach. Civilians use spears as defense against animals.

Wt: 2 kg *Price:* $10 (V/V)

Club: Blunt, a half-meter long, used as a bashing instrument.

Wt: 2 kg *Price:* Free for the taking in most places (V/V)



Hatchet: Short-handled chopping tool used to trim firewood.

Wt: 1 kg *Price:* $20 (V/V)

Axe: A long, shafted, heavy chopping instrument.

Wt: 2 kg *Price:* $50 (V/V)

Machete: A long-bladed slashing tool to clear away underbrush.

Wt: 1.5 kg *Price:* $50 (C/C)

Garotte: A length of rope or piano wire used to strangle a victim.

Wt: 0.2 kg *Price:* Usually improvised (V/V)

Bows

Once only for hunting and target practice, bows are now used in combat where ammunition is scarce. The longbow requires Archery skill, a crossbow uses Early Firearms skill.

Longbow: Includes fiberglass composite bows and wooden self-bows, of 30 to 50 pounds pull.

Ammo: Arrows
Wt: 1 kg
Price: $300 (C/C)



						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Rld*	*Blk*	*SS*	*Brst*	*Rng*
Hunting Bow	SS	–1	Nil	1	5	10	—	15

Crossbow: Includes prewar manufactures and recent weapons produced from old rifle stocks and truck springs. Pulls vary from 100 to 200 pounds.

Ammo: Bolts
Wt: 4 kg
Price: $350 (C/C)



						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Rld*	*Blk*	*SS*	*Brst*	*Rng*
Crossbow	SS	1	Nil	4	6	4	—	20

Zip Gun

This is a primitive, one-shot firearm jerry-built out of pipe, wood, and other nonstandard materials. It is designed to fire standard ammunition—usually small-caliber pistol ammo. The end result is much the same, regardless of ammunition.

Ammo: .22 or .380 ACP
Wt: 0.5 kg
Mag: 1 individual
Price: $75 (V/V)

							—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Rld*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Zip Gun	SS	–1	Nil	1	1	1i	2	—	6

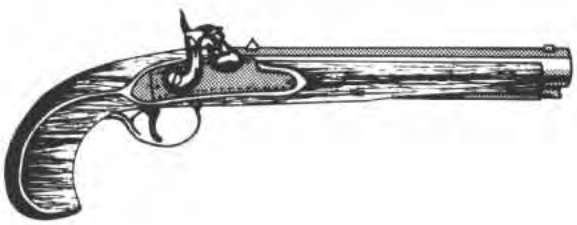


Black Powder Pistol

Either a museum piece or a modern sporting reproduction.

Ammo: Loose black powder and ball
Wt: 0.5 kg
Mag: 1 individual
Price: $125 (S/S)

							—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Rld*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
BP Pistol	SS	1	Nil	2	2	1i	3	—	8



Conny Delshagen (order #3265201)

.38 Special

The standard sidearm for U.S. aircrews, including helicopter crews. The pistol is also in use by many civilian police forces worldwide.

Ammo: .38 Special
Wt: 0.5 kg
Mag: 6 revolver
Price: $450 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.38 Special	DAR	1	Nil	1	6R	3	—	10



.38 Special Snubnose

The "snubbie" is a weapon preferred by some civilian plainclothes policemen because its short barrel makes it more concealable and easier to draw.

Ammo: .38 Special
Wt: 0.5 kg
Mag: 6 revolver
Price: $375 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.38 Snub	DAR	1	Nil	1	6R	4	—	4

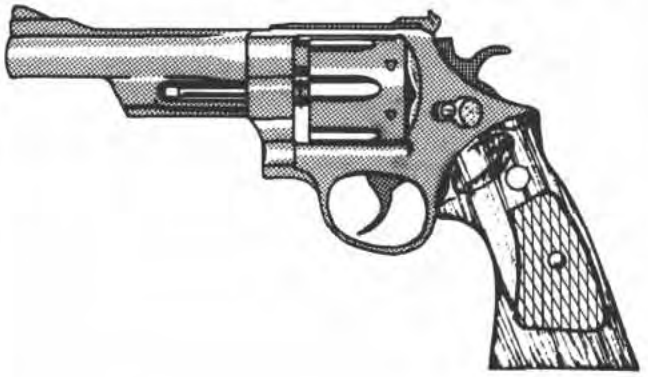


.357 Magnum

A more powerful revolver preferred by some civilian police officers and private security guards. It is rarely found in military service.

Ammo: .357 Magnum
Wt: 0.5 kg
Mag: 6 revolver
Price: $450 (C/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.357 Mag	DAR	2	1-Nil	1	6R	3	—	10



.44 Magnum

This weapon is one of the more powerful handguns made, and is considered too powerful for police use in most departments. It is not standard in the military and is relatively expensive in 2000.

Ammo: .44 Magnum
Wt: 1 kg
Mag: 6 revolver
Price: $1250 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
44 Mag	DAR	3	2-Nil	2	6R	4	—	16



Conny Delshagen (order #3265201)

M1911A1

The standard military sidearm of the United States until the late 1980s, the M1911A1 has been supplanted in general issue by the 9mm M9. However, M9 procurement has never been sufficient to completely replace the M1911A1 in military use, and thus it is still encountered, especially in national guard units.

Ammo: .45 ACP
Wt: 1 kg
Mag: 7 box
Price: $100 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M1911A1	SA	2	Nil	1	7	3	—	12
10mm	SA	2	1-Nil	1	6	3	—	15



M9 (M92S)

The standard sidearm for U.S. military forces, the M9 is essentially identical to the M92S.

Ammo: 9mm P
Wt: 1 kg
Mag: 15 box
Price: $150 (V/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M9 (M92S)	SA	1	Nil	1	15	3	—	12



HP-35

The standard military sidearm of the British (and several other armies), the HP-35 is considered by many to be the finest 9mm semiautomatic pistol made.

Ammo: 9mm P
Wt: 1 kg
Mag: 13 box
Price: $150 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
HP-35	SA	1	Nil	1	13	2	—	12



P7 M13

The standard sidearm of German forces.

Ammo: 9mm P
Wt: 1 kg
Mag: 13 box
Price: $150 (V/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
P7 M13	SA	1	Nil	1	13	3	—	12



Conny Delshagen (order #3265201)

P-64

The Polish standard sidearm.
Ammo: 9mm M
Wt: 1 kg
Mag: 6 box
Price: $170 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
P-64	SA	1	Nil	1	6	2	—	10



PM Makarov

The standard military sidearm of most eastern European states and widely used by police and internal security forces.
Ammo: 9mm M
Wt: 0.5 kg
Mag: 8 box
Price: $150 (S/V)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
PM Makarov	SA	1	Nil	1	8	3	—	10



PA-15

The French standard military sidearm.
Ammo: 9mm P
Wt: 1 kg
Mag: 15 box
Price: $150 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
PA-15	SA	1	Nil	1	15	2	—	12



Conny Delshagen (order #3265201)

M1933 Tokarev

Formerly in widespread use by eastern European military and police, but now widely supplanted by the Makarov. Due to the large numbers produced, it is still found in use by some police and is widely used by militias.

Ammo: 7.62mm T
Wt: 0.5 kg
Mag: 8 box
Price: $100 (R/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M1933 Tokarev	SA	1	Nil	1	8	4	—	12



Vz-52

Standard sidearm of Czech military forces.

Ammo: 7.62mm T
Wt: 0.5 kg
Mag: 8 box
Price: $100 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Vz-52	SA	1	Nil	1	8	4	—	12



.380 (Automatic)

This heading represents a variety of small pistols widely used by western European police forces.

Ammo: .380 ACP
Wt: 0.5 kg
Mag: 7 box
Price: $100 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.380 Auto	SA	1	Nil	1	7	3	—	10



.22 (Automatic)

A widely used civilian "plinking" pistol, found in most industrialized countries.

Ammo: .22 LR
Wt: 0.5 kg
Mag: 7 box
Price: $50 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.22 Auto	SA	–1	Nil	0	6	2	—	10



Conny Delshagen (order #3265201)

FN-FAL

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
L1A1 (FN-LAR)	SA	4	2-3-Nil	5	20	4	—	65
FN-FAL	5	4	2-3-Nil	5	20	4	8	65

A Belgian battle rifle manufactured for local service and for export, the FAL was a very popular weapon and came into widespread use throughout the world. The British Army, before transitioning to the L85, also used a semiautomatic variant of the FAL, the FN-LAR. It was called the L1A1 in British service, and some examples may still be found. The FAL and LAR magazines are *not* interchangeable.

Ammo: 7.62mm N
Wt: 5 kg
Mag: 20 box
Price: $600 (S/R)

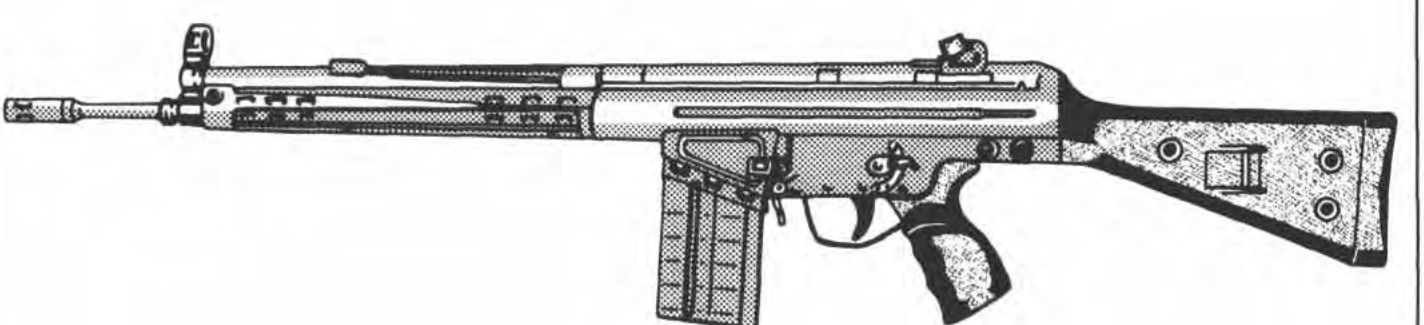


G3

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
G3	5	4	2-3-Nil	5	20	4	7	65

The standard German assault rifle until replaced by the G11, the G3 was still widely used by territorial and internal security troops and is now back in service with German troops.

Ammo: 7.62mm N
Wt: 5 kg
Mag: 20 box
Price: $500 (C/R)



Conny Delshagen (order #3265201)

L2A3 Sterling

The standard military submachinegun of the British Army, the Sterling has also found its way into general use by other armies and some police and government agencies.

Ammo: 9mm P
Wt: 3 kg
Mag: 34 box
Price: $600 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Sterling	5	2	Nil	2/3	34	2	5	30



Uzi

Once the standard military submachinegun of the German Army, the Uzi is now returning to service as ammunition for the G11 becomes increasingly hard to find.

Ammo: 9mm P
Wt: 4 kg
Mag: 25 box or 32 box
Price: $500 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Uzi	5	2	Nil	2/3	25/32	2	5	30



M231

The standard firing-port weapon on the M2 Bradley, the M231 is a satisfactory vehicle weapon for suppressive fires but a mediocre submachinegun. Nevertheless, with large numbers of Bradleys no longer operational, it was inevitable that the M231 would be dismounted and used in large numbers. It cannot be fitted with the M203 40mm GL.

Ammo: 5.56mm N
Wt: 3 kg
Mag: 20 box or 30 box
Price: $300 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M231	5	2	1-Nil	3/4	20/30	1	4	25



M177

A shortened, carbine version of the M16 automatic rifle. It cannot be fitted with the M203 40mm GL, but can use rifle grenades.

Ammo: 5.56mm N
Wt: 2.5 kg
Mag: 20 box or 30 box
Price: $750 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M177 Carbine	5	3	1-Nil	3/4	20/30	3	7	40



Conny Delshagen (order #3265201)

MP-5

The standard submachinegun of German territorial troops and police.

Ammo: 9mm P
Wt: 3 kg
Mag: 15 box or 30 box
Price: $400 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
MP-5	5	2	Nil	4	15/30	2	5	20



PPSh-41

A WWII-vintage Soviet submachinegun, still used by some nations.

Ammo: 7.62mm T
Wt: 3.5 kg
Mag: 35 box or 71 drum
Price: $300 (—/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
PPSh-41	5	2	1-Nil	4	35/71	1	4	30



AKR

The standard Eastern Bloc military submachinegun (with few exceptions), the AKR is merely a cut-down version of the AK-74. Although a bit heavy for a submachinegun, it has good accuracy and stopping power.

Ammo: 5.45mm B
Wt: 4 kg
Mag: 30 box
Price: $300 (S/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AKR	5	2	1-Nil	2/3	30	1	4	30



Conny Delshagen (order #3265201)

M3A1

Called the "grease gun" because of its fancied resemblance to an automotive maintenance tool, this weapon is no longer in U.S. Army service, but it is used by a number of other armies and some police forces throughout the world.

Ammo: .45 auto
Wt: 3.5 kg
Mag: 30 box
Price: $300 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M3A1	5	2	Nil	3/4	30	2	4	30



Vz-24

The standard Czech submachinegun, mostly found with militia and internal security forces.

Ammo: 7.62mm T
Wt: 4 kg
Mag: 32 box
Price: $300 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Vz-24	5	2	1-Nil	3	32	1	3	30



AMD-65

A Hungarian submachinegun, basically a shortened version of the AK-47.

Ammo: 7.62mm S
Wt: 4 kg
Mag: 30 box
Price: $300 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AMD-65	5	2	1-Nil	3/4	30	1	4	40



Vz-61/62 Skorpion

Commonly referred to as a machine pistol, the Skorpion is small enough to carry in a shoulder holster. Its short range and underpowered ammunition make it of limited combat value, but its ease of concealment has made it very popular with Eastbloc covert agents. It is also frequently carried by Czech airborne forces, particularly by officers.

Ammo: .32 ACP
Wt: 2 kg
Mag: 10 box or 20 box
Price: $250 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Vz-61/62	5	1	Nil	1	10/20	3	6	4
w/stock	5	1	Nil	3	10/20	1	4	12



Conny Delshagen (order #3265201)

MAT-49

The French standard military and police submachinegun.
Ammo: 9mm P
Wt: 4 kg
Mag: 32 box
Price: $300 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
MAT-49	5	2	Nil	3/4	32	1	4	30



M12

The Italian standard military and police submachinegun.
Ammo: 9mm P
Wt: 3 kg
Mag: 32 box or 40 box
Price: $400 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M12	5	1	Nil	2/3	20/40	1	2	40



G11

A weapon of radical design and great effectiveness, the G11 replaced the G3 as the standard assault rifle and the Uzi as the standard submachinegun of the German Army. It is a "bullpup" configuration weapon, which means the action is placed behind the firing hand in the normally empty stock. Thus, bullpup rifles can have a shorter length without needing a shorter barrel.

It differs from other combat rifles in that it fires caseless 4.7mm bullets. The compact nature of the weapon and low recoil of its round makes it as handy as a submachinegun (even though it is a rifle), and it is included with submachineguns for this reason.

Its caseless ammunition is extremely compact, allowing a large magazine capacity. Since there is no spent cartridge casing to eject, the rifle's action is completely enclosed and thus is very reliable in a dirty environment. However, there is no way to reload the round, since it is completely consumed, and manufacture has largely ceased. Currently, although the weapon is fairly common, ammunition for it is increasingly rare, and most German soldiers have equipped themselves with obsolete weapons.

Ammo: 4.7mm Cls
Wt: 4 kg
Mag: 50 box
Price: $400 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
G11	3	3	1-Nil	4	50	2	3	55



Conny Delshagen (order #3265201)

M16A2

The standard combat rifle of the U.S. and Canadian armies, the M16A2 (commonly called just M16) is in widespread use and is a popular and effective weapon.

Ammo: 5.56mm N
Wt: 3 kg
Mag: 20 box or 30 box
Price: $400 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M16A2	3	3	1-Nil	5	20/30	3	5	55



AKMR

As the AK-74 supplanted the AKM in service, large numbers of AKMs were rechambered (AKMR) to fire the AK-74's 5.45-caliber cartridge to enable standardization of supply without discarding mountains of AKMs. Widely used in Eastbloc military units alongside the AK-74.

Ammo: 5.45mm B
Wt: 4 kg
Mag: 30 box
Price: $300 (C/V)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AKMR	5	3	1-Nil	5	30	3	6	45



AK-74

The standard combat rifle of the Eastern Bloc forces.

Ammo: 5.45mm B
Wt: 4 kg
Mag: 30 box
Price: $300 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AK-74	5	3	1-Nil	5	30	3	6	50



L85 (IW)

The standard British combat rifle, replacing the FAL. Like the G11, the L85 is a bullpup configuration rifle. It is rare outside of British service.

Ammo: 5.56mm N
Wt: 5.5 kg
Mag: 20 box or 30 box
Price: $1500 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
L85 (IW)	5	3	1-Nil	4	20	3	6	50



Conny Delshagen (order #3265201)

AKM

The modern version of the ubiquitous AK-47, the AKM is perhaps the most widely used military small arm in the world, and is a very popular one despite its underpowered and unstable cartridge. Replaced in frontline service by the AK-74, many AKMs were rechambered to fire 5.45 Bloc ammunition (designated AKMR, for AKM Rechambered). Thus true AKMs are mostly found in use by militia units.

Ammo: 7.62 S
Wt: 4 kg
Mag: 30 box
Price: $300 (C/V)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AKM	5	3	2-Nil	5	30	3	7	50



FN-FNC

This is the 5.56mm N assault rifle version of the famed FN-FAL battle rifle.

Ammo: 5.56mm N
Wt: 4 kg
Mag: 30 box
Price: $500 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
FN-FNC	3	3	1-Nil	5	30	3	6	50

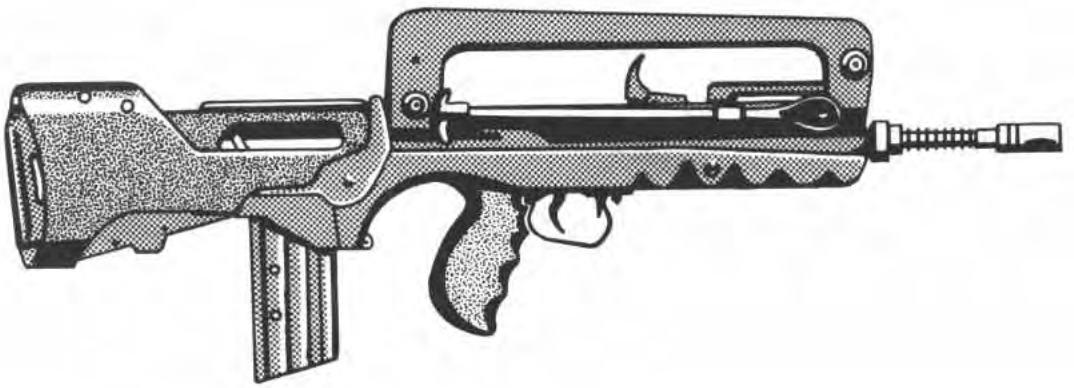


FA-MAS

The standard French military rifle, the FA-MAS is a bullpup configuration weapon and is rare outside of French service.

Ammo: 5.56mm N
Wt: 4 kg
Mag: 25 box
Price: $500 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
FA-MAS	5	3	1-Nil	4	25	3	7	50



Conny Delshagen (order #3265201)

AR-70

This weapon is the standard assault rifle of the Italian military forces.

Ammo: 5.56mm N
Wt: 3.5 kg
Mag: 30 box
Price: $500 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AR-70	5	3	1-Nil	5	30	3	7	55



M71

This is a Finnish version of the AK series of assault rifles, notable for its bullpup configuration.

Ammo: 5.45mm B
Wt: 3.5 kg
Mag: 15 box or 30 box
Price: $450 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M71	SA	3	1-Nil	4	15/30	3	—	50



.30-30

A popular sporting arm found in civilian hands even in eastern Europe, the .30-30 is a lever-action rifle.

Ammo: .30-30
Wt: 3 kg
Mag: 6 individual
Price: $250 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.30-30	LA	3	2-Nil	5	6i	3	—	50



.30-06

Another popular hunting rifle, the .30-06 is a bolt-action rifle.

Ammo: .30-06
Wt: 4 kg
Mag: 5 individual
Price: $300 (C/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.30-06	BA	4	2-3-Nil	5	5i	3	—	75



Conny Delshagen (order #3265201)

.22 Bolt-Action Rifle

A widely available light hunting rifle, the .22 is excellent for squirrels and other small game, but it does not have sufficient stopping power to be reliable against larger targets. It is a bolt-action rifle.

Ammo: .22 LR
Wt: 2 kg
Mag: 5 individual
Price: $150 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.22 BA	BA	–1	Nil	4	5i	2	—	50

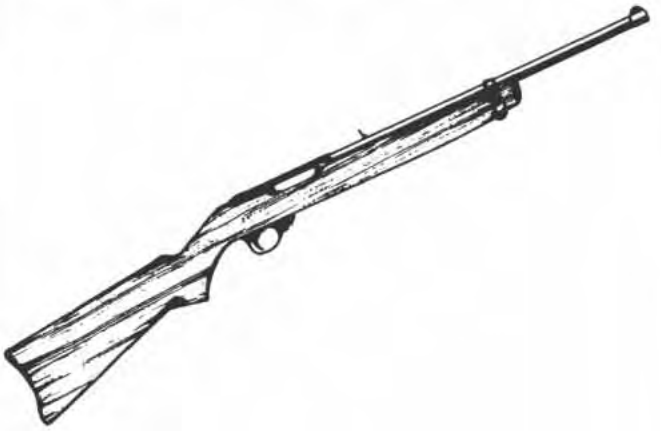


.22 Semiautomatic

Another widely available light hunting rifle, this version of the .22 is semiautomatic.

Ammo: .22 LR
Wt: 2 kg
Mag: 10 individual
Price: $100 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
.22 SA	SA	–1	Nil	4	10i	2	—	50



Mauser Bolt-Action Rifle

A bolt-action civilian version of the German WWII rifle, this weapon is in very widespread use due to the tremendous numbers manufactured.

Ammo: 8mm M
Wt: 4 kg
Mag: 5 individual
Price: $150 (C/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Mauser BA	BA	4	2-3-Nil	5	5i	4	—	65



Conny Delshagen (order #3265201)

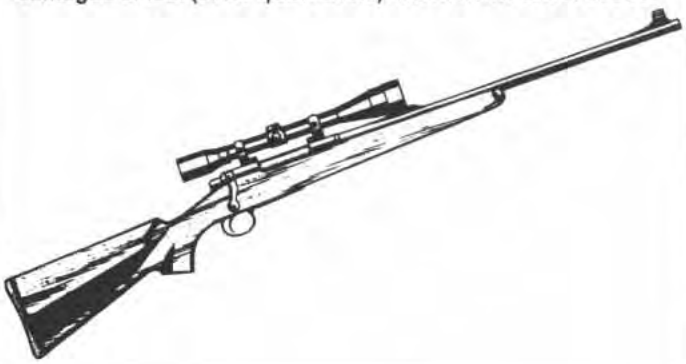
M40

The standard U.S. Marine sniper rifle, a bolt-action, magazine-fed rifle with a telescopic sight.

Ammo: 7.62mm N
Wt: 3 kg
Mag: 5 individual
Price: $700 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M40	BA	4	2-3-Nil	5	5i	6	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



SVD

The standard Eastern Bloc sniper rifle (except in Czech service), a semiautomatic, clip-fed rifle with a telescopic sight.

Ammo: 7.62mm L
Wt: 4 kg
Mag: 10 box
Price: $500 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
SVD	SA	4	2-3-Nil	6	10	4	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



M21

The standard U.S. Army sniper rifle, the M21 is essentially a well made M14 assault rifle (the U.S. Army's service rifle prior to the M16) fitted with a telescopic sight and a bipod.

Ammo: 7.62mm N
Wt: 5 kg
Mag: 20 box
Price: $400 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M21	SA	4	2-3-Nil	6	20	4	—	65
bipod	SA	4	2-3-Nil	6	20	2	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



PSG1

The standard German sniper rifle, a development of the G3 assault rifle fitted with a telescopic sight.

Ammo: 7.62mm N
Wt: 8 kg
Mag: 20 box
Price: $600 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
PSG1	SA	4	2-3-Nil	6	20	5	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



Conny Delshagen (order #3265201)

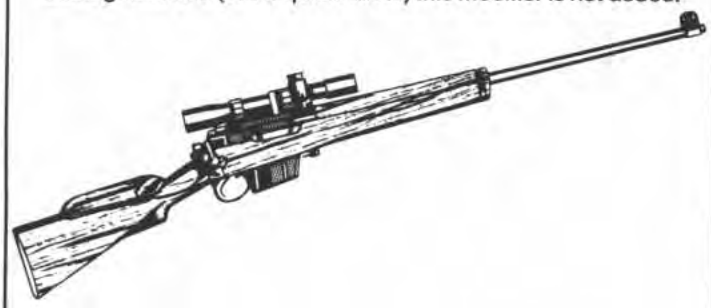
L42

The standard sniper rifle of the British Army is a progressive development of the bolt-action Short Magazine Lee Enfield (the WWII British service rifle), rechambered to fire more modern ammunition and fitted with a telescopic sight.

Ammo: 7.62mm N
Wt: 4 kg
Mag: 10 box
Price: $400 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
L42	BA	4	2-3-Nil	5	5	4	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



Vz-54

The standard Czech sniper rifle is a progressive development of the bolt-action Mauser (the German Army's WWII service rifle) fitted with a telescopic sight.

Ammo: 8mm M
Wt: 4.5 kg
Mag: 5 individual
Price: $300 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Vz-54	BA	4	2-3-Nil	5	5i	5	—	65

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



C3 (Parker-Hale)

The standard Canadian sniper rifle is a well made civilian hunting rifle adapted to military use and fitted with a telescopic sight.

Ammo: 7.62mm N
Wt: 4 kg
Mag: 3 individual
Price: $400 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
C3	BA	4	2-3-Nil	5	3i	5	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



FR-F1

The French military sniper rifle, rare outside of French service.

Ammo: 7.62mm N
Wt: 5 kg
Mag: 10 box
Price: $900 (R/—)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
FR-F1	SA	4	2-Nil	6	10	3	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots) this modifier is not added.



Conny Delshagen (order #3265201)

Double-Barreled Shotgun

The double-barreled shotgun (in either the side-by-side or over-under configuration) is the most widely used hunting weapon in eastern Europe and is also used extensively in the West. The weapon breaks open at the action, and the two rounds are reloaded individually.

Ammo: 12 gauge
Wt: 3 kg
Mag: 2 individual
Price: $200 (V/V)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Double	SA	4	3-4-Nil	5	2i	5	—	40
Short w/buckshot*	SA	9	Nil					
Medium w/buckshot*	5x10	1	Nil					

*See Shotguns and Flechettes on page 204.



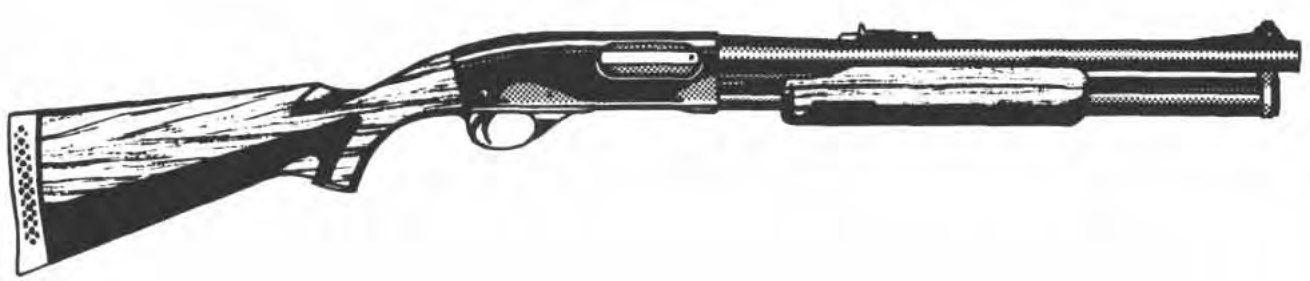
Pump-Action Shotgun

Pump-action shotguns are widely used in western Europe and have been widely taken into military use. The magazine given is for a common, extended-capacity, police-issue weapon.

Ammo: 12 gauge
Wt: 4 kg
Mag: 7 individual
Price: $300 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Pump	PA	4	3-4-Nil	4	8i	4	—	40
Short w/buckshot*	PA	9	Nil					
Medium w/buckshot*	5x10	1	Nil					

*See Shotguns and Flechettes on page 204.



Conny Delshagen (order #3265201)

Semiautomatic Shotgun

Semiautomatic shotguns are more complicated than their pump-action cousins. Nevertheless, they are increasingly popular with sportsmen and police agencies as they become more reliable. The Mag rating is for a common, extended-capacity, police-issue weapon.

Ammo: 12 gauge
Wt: 4 kg
Mag: 7 individual
Price: $300 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Semiauto	SA	4	3-4-Nil	5	5i	3	—	40
Short w/buckshot*	SA	9	Nil					
Medium w/buckshot*	5x10	1	Nil					

*See Shotguns and Flechettes on page 204.



H&K Combat Assault Weapon

The standard combat shotgun of the German and U.S. armies (the U.S. weapon being a slightly modified version produced under license by Olin), the Heckler & Koch CAW is a bullpup configuration weapon, like the G11.

Ammo: 12 gauge
Wt: 4 kg
Mag: 10 box
Price: $800 (C/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
H&K CAW	5†	4	3-4-Nil	4	10	3	7	40
Short w/buckshot*	5	9	Nil					
Medium w/buckshot*	5x10	1	Nil					

*See Shotguns and Flechettes on page 204.
†See special H&K CAW rule under Shotguns and Flechettes on page 205.



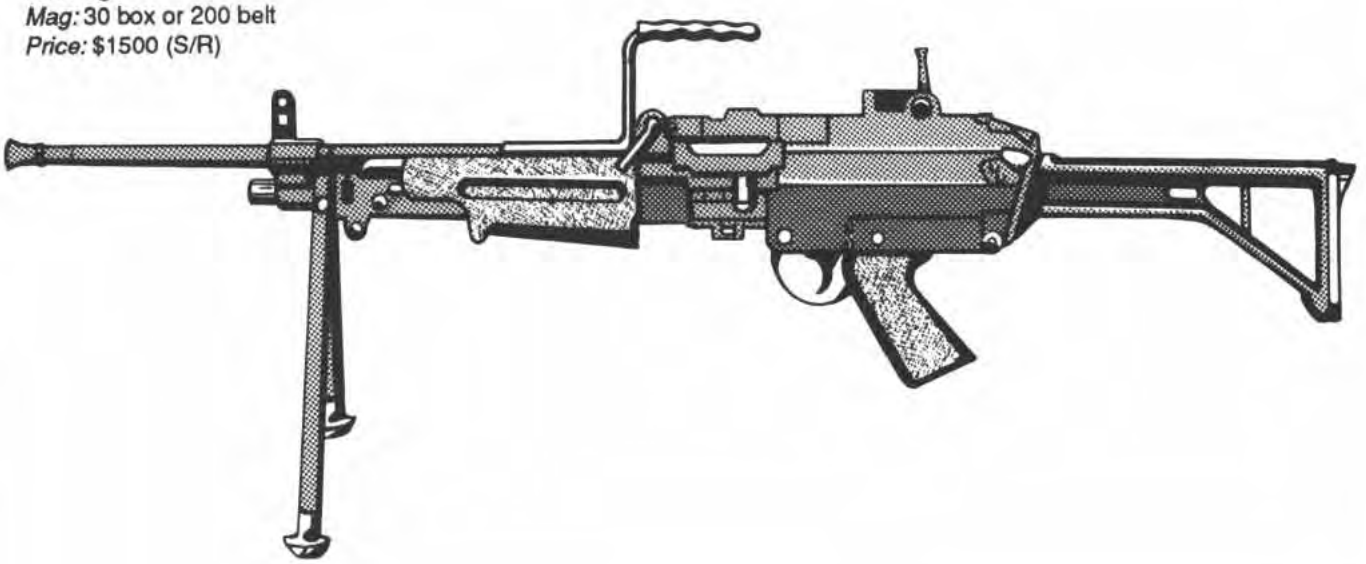
Conny Delshagen (order #3265201)

M249

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
M249 SAW	10	2	1-Nil	5	30/200B	1	3	60
bipod	10	2	1-Nil	5	30/200B	1	3	75

The M249 Squad Automatic Weapon (SAW) is the standard U.S. light automatic support weapon. It can accept either the standard 30-round magazine of the M16A2 or a 200-round belt. It is equipped with a bipod.

Ammo: 5.56 N
Wt: 7 kg
Mag: 30 box or 200 belt
Price: $1500 (S/R)

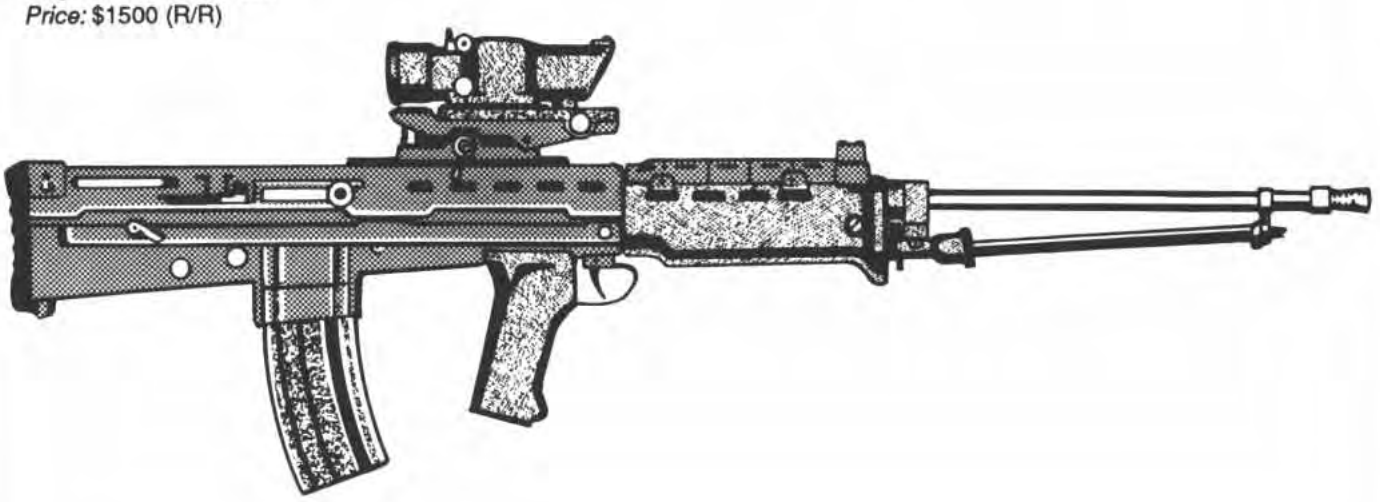


L86A1 LSW

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
L86A1 LSW	10	3	1-Nil	5	30/100B	2	10	50
bipod	10	3	1-Nil	5	30/100B	1	5	65

The heavy-barreled support version of the L85, the L86A1 Light Support Weapon uses the same magazines as the L85 and is equipped with a bipod.

Ammo: 5.56mm N
Wt: 4.5 kg
Mag: 30 box or 200 belt
Price: $1500 (R/R)



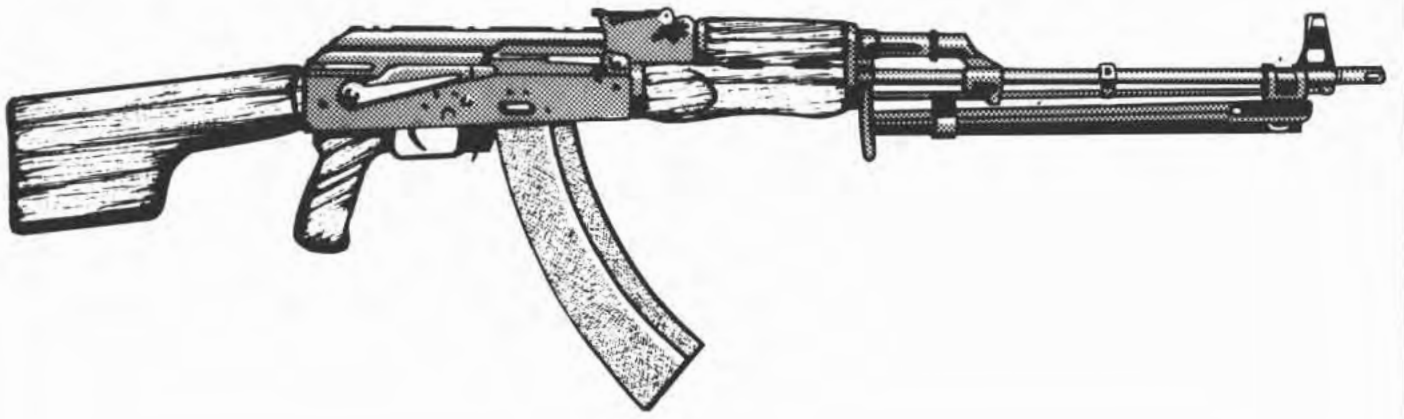
Conny Delshagen (order #3265201)

RPK-74

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
RPK-74	10	2	1-Nil	5	30/40	1	5	50
bipod	10	2	1-Nil	5	30/40	1	3	75

The standard Eastbloc light automatic support weapon, the RPK-74 can accept either the same magazine as the AK-74 or an oversized magazine.

Ammo: 5.45mm B
Wt: 4.5 kg
Mag: 30 box or 40 box
Price: $1000 (S/C)



RPK

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
RPK	10	3	2-Nil	5	30/40/75	1	5	60
bipod	10	3	2-Nil	5	30/40/75	1	3	75

The older version of the RPK-74, this automatic rifle fires the 7.62mm Short fired by the AKM assault rifle. In addition to the standard magazines fired from the assault rifle, it also has a very long 75-round magazine. This weapon is usually found only in units also using the AKM.

Ammo: 7.62mm S
Wt: 5 kg
Mag: 30 box or 40 box or 75 box
Price: $1000 (S/C)



Conny Delshagen (order #3265201)

M60

The standard U.S. general-purpose machinegun, a development of the WWII German MG42. It is equipped with a bipod and can also be fired from a tripod (NLT). It accepts 100-round belts.

Ammo: 7.62mm N
Wt: 10 kg
Mag: 100 belt
Price: $1500 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60	5	4	2-3-Nil	6	100B	1	4	65
bipod	5	4	2-3-Nil	6	100B	1	2	90
tripod	5	4	2-3-Nil	6	100B	1	1	125



MG3

The standard German general purpose machinegun is a slightly improved copy of the wartime MG42. It is equipped with a bipod and can also be fired from a tripod (NMT). It accepts 50-round belts.

Ammo: 7.62mm N
Wt: 8 kg
Mag: 50 belt
Price: $1500 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
MG3	5	4	2-3-Nil	6	100B	1	4	65
bipod	5	4	2-3-Nil	6	100B	1	2	90
tripod	5	4	2-3-Nil	6	100B	1	1	125



MAG/L7A2 GPMG

This Belgian-made weapon is the standard general-purpose machinegun in the Belgian Army, where it is called the MAG, and in the British Army, where it is the L7A2 GPMG. It is also the standard vehicle-mounted light machinegun of the US Army, which calls it the M240. It is equipped with a bipod and can also be fired from a tripod (NMT). It accepts 100-round belts.

Ammo: 7.62mm N
Wt: 12 kg
Mag: 50 belt
Price: $1500 (S/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
L7A2 (MAG)	10	4	2-3-Nil	6	100B	1	6	65
bipod	10	4	2-3-Nil	6	100B	1	4	90
tripod	10	4	2-3-Nil	6	100B	1	2	125



PK

The standard Eastbloc medium machinegun, the PK is usually found mounted on a vehicle. It is equipped with a bipod and can also be fired from a tripod (PLT). It accepts 50-round belts.

Ammo: 7.62mm L
Wt: 10 kg
Mag: 50 belt
Price: $2000 (R/S)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
PK	5	4	2-3-Nil	6	50B	2	5	65
bipod	5	4	2-3-Nil	6	50B	1	3	90
tripod	5	4	2-3-Nil	6	50B	1	2	125



Conny Delshagen (order #3265201)

Vz-59

The standard medium machinegun of the Czech Army, the Vz-59 is a local design which is equipped with a bipod and can also be fired from a tripod (PLT). It accepts 50-round belts.

Ammo: 7.62mm L
Wt: 9 kg
Mag: 50 belt
Price: $1500 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
Vz-59	10	4	2-3-Nil	6	50B	2	8	65
bipod	10	4	2-3-Nil	6	50B	1	5	90
tripod	10	4	2-3-Nil	6	50B	1	4	125

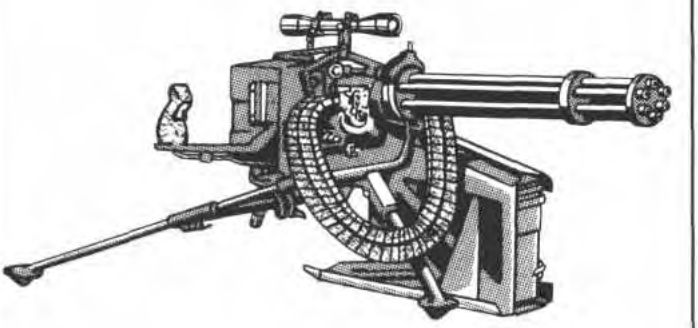


M214 6-Pac

The M214 is a six-barreled Gatling gun, fed by a 1000-round drum. It may be fired only from a tripod (NHT) or vehicle mount.

Ammo: 5.56 N
Wt: 20 kg
Mag: 1000 drum
Price: $10,000 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M214 6-Pac	5	3	1-Nil	4	1000	1	5	60
tripod	50	3	1-Nil	4	1000	1	5	90

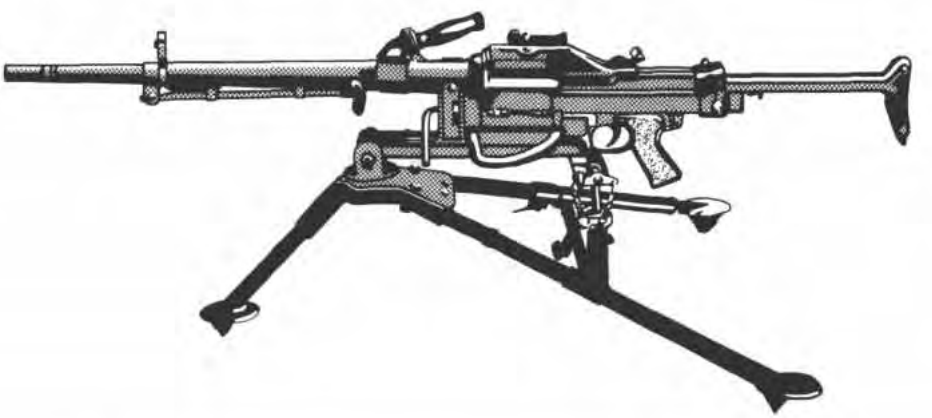


AAT-52

The standard machinegun of the French military, the AAT-52 is equipped with a bipod and can be fired from a tripod (NLT). The weapon's blowback extraction system tends to rip cartridge cases in half when extracting them, leaving a ring of brass stuck in the barrel. French troops have learned to overcome this deficiency by greasing the cartridge cases. Troops unfamiliar with the AAT-52, however, will be unaware of this precaution, and once the weapon's ready supply of ammo has been used up, there is a chance the weapon will jam (roll 1D20 every third turn the weapon is fired). A jam requires one full combat turn to clear.

Ammo: 7.5mm MAS
Wt: 11 kg
Mag: 50 belt
Price: $400 (R/R)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
AAT-52	10	4	2-3-Nil	5	50B	1	7	65
bipod	10	4	2-3-Nil	5	50B	1	4	90
tripod	10	4	2-3-Nil	5	50B	1	2	125



Conny Delshagen (order #3265201)

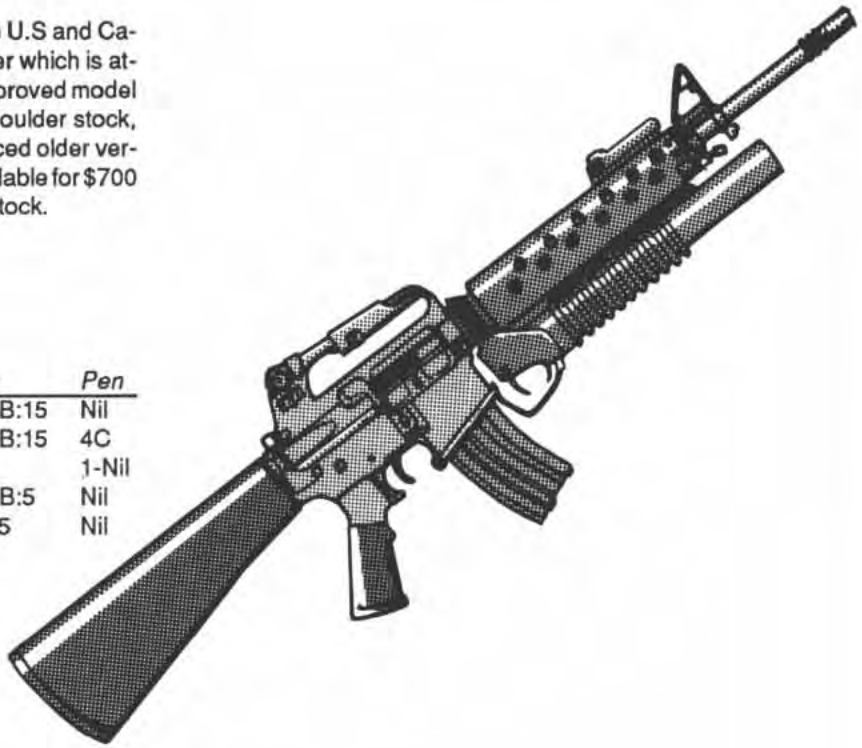
M203

The standard infantry grenade launcher of the U.S and Canadian armies, the M203 is a single-shot launcher which is attached to the bottom of an M16 rifle. A product-improved model can be detached and fired from a removable shoulder stock, but by 1995 this model had not completely replaced older versions in military inventories. The PI version is available for $700 (S/R) and weighs two kilograms with shoulder stock.

Ammo: 40mm grenades
Wt: 1.4 kg
Mag: 1 individual
Price: $500 (C/S)

Type	*ROF*	*Rng*	*IFR*	*Rnd*	*Dam*	*Pen*
M203	1	100	400	HE	C:3, B:15	Nil
		100	400	HEDP	C:3, B:15	4C
		30	—	Flechette	12*	1-Nil
		100	400	CHEM	C:1, B:5	Nil
		100	400	ILLUM	B:125	Nil

*At short range only. See Shotguns and Flechettes, page 204.



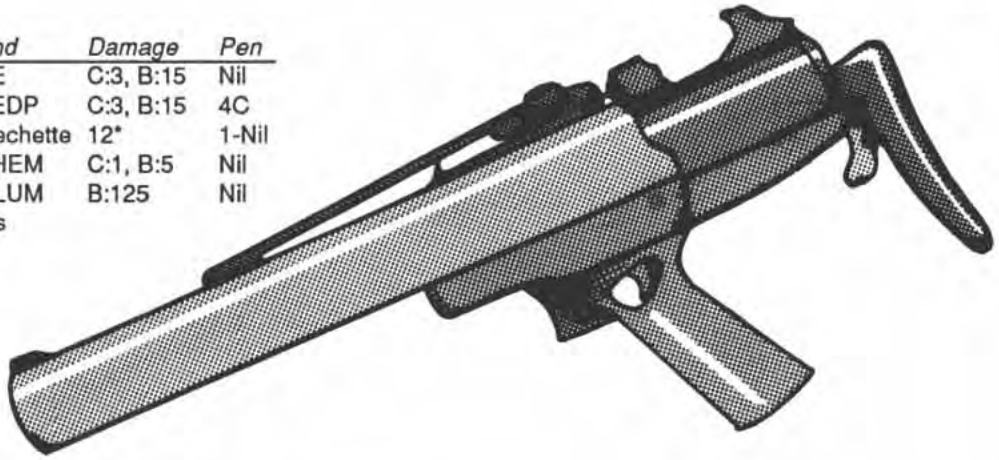
HK-69

The standard infantry grenade launcher of the German Army, it can be attached to the bottom of any assault or battle rifle, or can be used as a separate weapon.

Ammo: 40mm grenades
Wt: 2 kg
Mag: 1i
Price: $500 (S/R)

Type	*ROF*	*Rng*	*IFR*	*Rnd*	*Damage*	*Pen*
HK-69	1	100	400	HE	C:3, B:15	Nil
		100	400	HEDP	C:3, B:15	4C
		30	—	Flechette	12*	1-Nil
		100	400	CHEM	C:1, B:5	Nil
		100	400	ILLUM	B:125	Nil

*At short range only. See Shotguns and Flechettes, page 204.



Conny Delshagen (order #3265201)

BG-15

AK-47 grenade launcher, developed for Afghanistan. It can be fitted to any AK series rifle.

Ammo: 40mm grenades
Wt: 1 kg
Mag: 1 individual
Price: $700 (—/S)

Type	*ROF*	*Rng*	*IFR*	*Rnd*	*Dam*	*Pen*
BG-15	1	100	300	HE	C:3, B:15	Nil
				HEDP	C:3, B:15	4C
				CHEM	C:1, B:5	Nil
				ILLUM	B:125	Nil

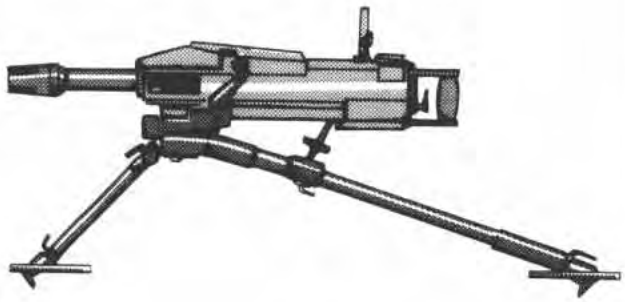


Mk-19

The standard infantry support grenade launcher in the United States Army, the Mk-19 is a tripod-mounted (NHT), belt-fed automatic weapon. It may also fire unbelted individual grenades (ROF 1). The 40mm Flechette grenade may not be fired from this weapon, because the round is too short. It may be fired only from a tripod or vehicle mount.

Ammo: 40mm grenades and 40mm high-velocity grenades
Wt: 40 kg
Mag: 50 belt or 1 individual
Price: $5000 (S/R)

Type	*ROF*	*Rng*	*IFR*	*Rnd*	*Dam*	*Pen*
Mk-19	5	200	3 km	HVHE	C:3, B:15	Nil
				HVHEDP	C:3, B:15	4C

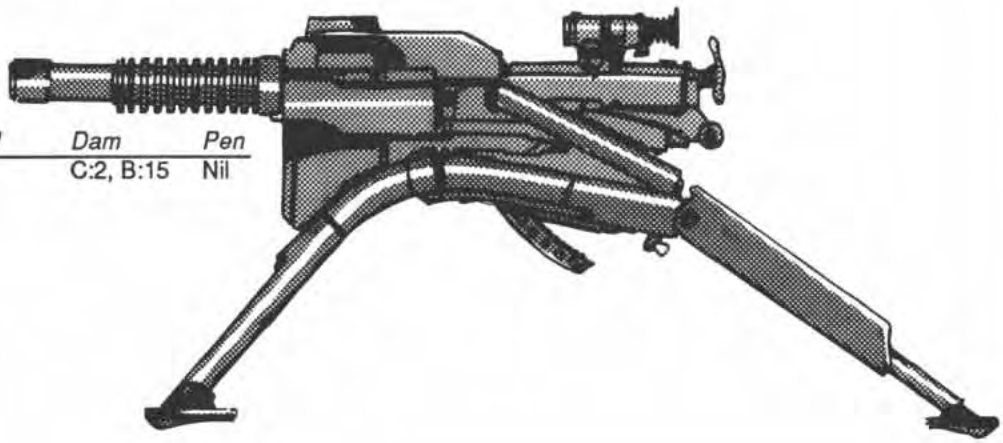


AGS-17

The standard Eastbloc infantry support grenade launcher, the AGS-17 is a tripod-mounted (PMT), drum-fed automatic grenade launcher. It may be fired only from its tripod or from a vehicle mount.

Ammo: 30mm grenades
Wt: 18 kg
Mag: 30 belt
Price: $3000 (R/S)

Type	*ROF*	*Rng*	*IFR*	*Rnd*	*Dam*	*Pen*
AGS-17	5	150	1700	HE	C:2, B:15	Nil



Conny Delshagen (order #3265201)

RPG-16

The standard Eastbloc antitank rocket launcher.
Ammo: 58.3mm HEAT rockets
Wt: 10 kg
Price: $1000 (S/C)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
RPG-16	1	2	100	HEAT	C:6, B:5	65C

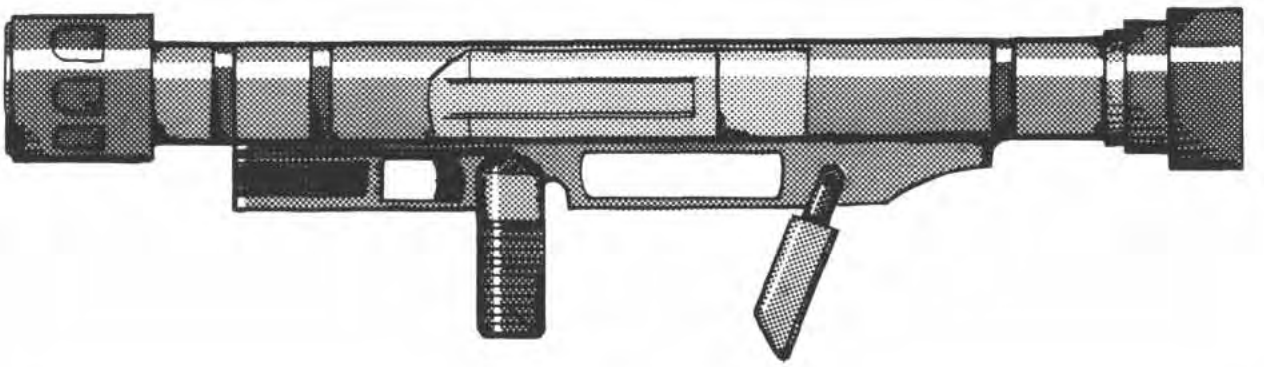


Armbrust

A single-shot, disposable antitank rocket launcher.
Wt: 6 kg
Price: $200 (S/R)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
Armbrust	1	•	75	HEAT	C:4, B:5	55C

*Single-shot disposable. Cannot be reloaded.



Conny Delshagen (order #3265201)

RPG-18

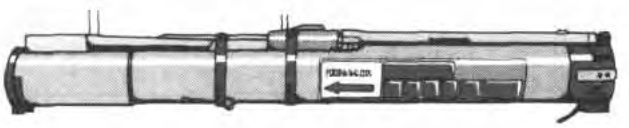
An Eastbloc disposable antitank rocket launcher, normally issued only to heliborne and airborne troops.

Wt: 10 kg

Price: $1000 (S/C)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
RPG-18	1	*	75	HEAT	C:4, B:5	60C

*Single-shot disposable. Cannot be reloaded.



RPG-75

A Czech disposable antitank rocket launcher.

Wt: 4 kg

Price: $300 (—/R)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
RPG-75	1	*	100	HEAT	C:4, B:5	55C

*Single-shot disposable. Cannot be reloaded.



LRAC F1

This rocket launcher is the standard infantry antitank weapon of the French Army. It fires an 89mm HEAT warhead rocket.

Ammo: 89mm HEAT rocket

Wt: 8 kg

Price: $4500 (R/—)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
LRAC F1	1	2	125	HEAT	C:4, B:5	70C





Conny Delshagen (order #3265201)

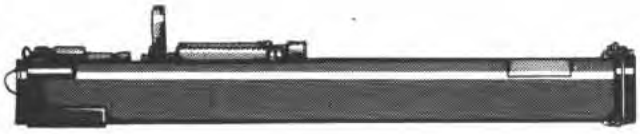
M72 LAW

The M72 Light Antitank Weapon (LAW) is a 66mm disposable antitank rocket launcher. It is the standard light antitank weapon with the United States, Germany, Canada, the Netherlands, Denmark, Greece, and Turkey.

Wt: 2 kg
Price: $180 (S/R)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
M72A1 LAW	1	*	50	HEAT	C:3, B:5	55C

*Single-shot disposable. Cannot be reloaded.



LAW 80

The replacement for the M72 LAW in British service, this is a 94mm disposable antitank rocket launcher. While it is quite a bit heavier than the M72, it has considerably improved performance.

Wt: 9.5 kg
Price: $300 (R/—)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
LAW 80	1	*	125	HEAT	C:6, B:5	110C

*Single-shot disposable. Cannot be reloaded.

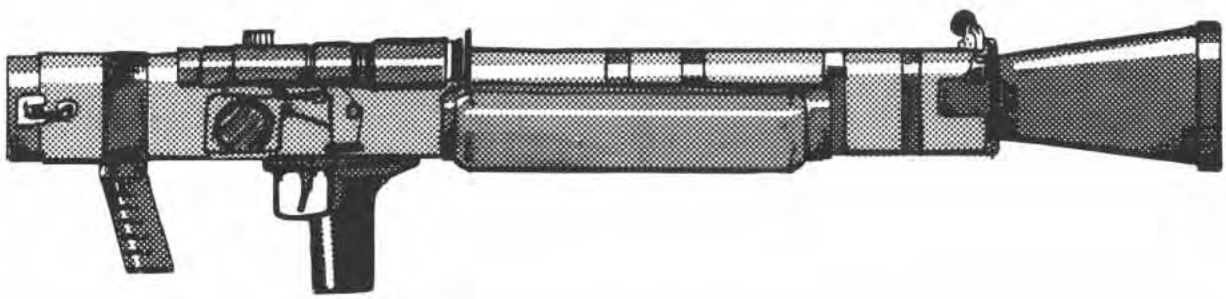


Carl Gustav

This is a shoulder-fired recoilless rifle used as the standard medium antitank and assault weapon by Germany, Britain, Canada, the Netherlands, and Denmark. It fires an 84mm HEAT round.

Ammo: 84mm HEAT
Wt: 18 kg
Price: $800 (C/S)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
Carl Gustav	1	2	150	HEAT	C:4, B:5	70C



Conny Delshagen (order #3265201)

M136

The U.S. Army's designation for this weapon is M136, but it was originally the Swedish AT-4W (with the "W" standing for "Western," and was added to distinguish it from the Soviet AT-4). The designation AT-4 was not part of any real numbering system and is said to be a play on words on the weapon's caliber (84mm). This disposable system was used in some numbers by the United States Army to supplement the M72 LAW and Armbrust.

Ammo: 84mm HEAT rocket
Wt: 6 kg
Price: $200 (C/S)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
M136	1	2	75	HEAT	C:4, B:5	70C



Folgore

This is a shoulder-fired antitank rocket launcher of outstanding performance. It is the standard medium antitank weapon of the Italian Army.

Ammo: Folgore HEAT
Wt: 17 kg
Price: $1200 (C/S)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
Folgore	1	2	100	HEAT	C:4, B:5	70C



M12 SMAW

A shoulder-fired "bunkerbuster" issued to U.S. Marine Corps troops, but never formally adopted by the U.S. Army.

Ammo: 82mm SMAW (HE or HEAT)
Wt: 3.5 kg
Price: $3000 (R/R)

Type	*ROF*	*Rld*	*Rng*	*Round*	*Damage*	*Pen*
M12 SMAW	1	2	100	HEAT	C:4, B:5	55C
			125	HE	C:12, B:15	5C



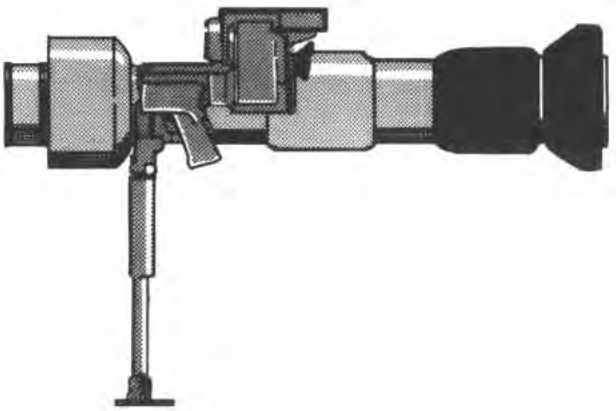
Conny Delshagen (order #3265201)

Tank Breaker

A man-portable launcher fired from an integral rest, Tank Breaker fires a homing fire-and-forget missile which can be set either to hit the target directly, or fly over it and attack from above where the armor is generally thinner. Guidance is homing.

Ammo: Tank Breaker
Wt: 10 kg
Price: $5000 (S/R)

Type	*Rld*	*Rng*	*Damage*	*Pen*
Tank Breaker	2	2000	C:6, B:5	90C



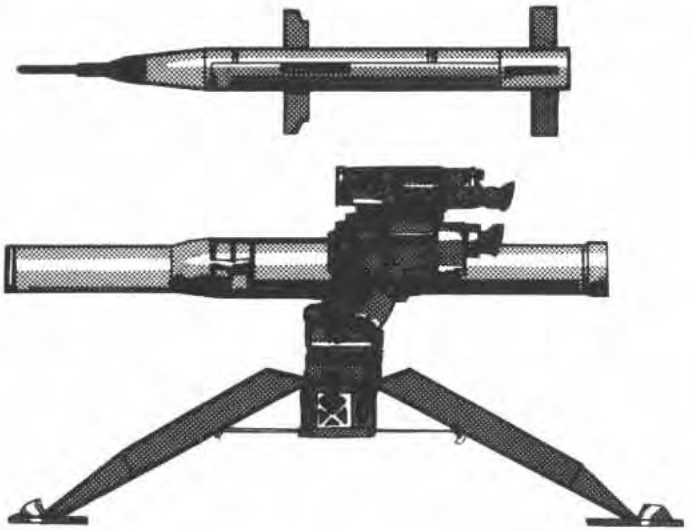
TOW 2

This AT missile launcher is the launcher for the TOW 2 missile on the M2 Bradley. The launcher may be fired only from the vehicle mount; the missile is wire guided, and the gunner must continue to aim at the target for the entire flight of the missile. The launcher cannot be reloaded from inside the vehicle (Wt and Mag are for the Bradley launcher only; tripod-mounted version data are in parentheses). This launcher accepts either the TOW 2A or 2B missile. Guidance is operator-guided. TOW 2B is a top attack missile (see "Special Cases" on page 204) which carries *two* down-firing warheads. If a hit is scored with the TOW 2B, make two attacks of 120C penetration, using the top attack rules.

Ammo: TOW 2
Wt: 30 kg (18 kg)
Mag: 2i (1i)
Price: $10,000 (S/R)

Type	*Rld*	*Rng*	*Damage*	*Pen*
TOW 2A	2	3500	C:12, B:15	220C*
TOW 2B	2	3500	C:12, B:15	120C×2

* Versus reactive armor equipped targets only. If missile hits a target without reactive armor, use 180C.



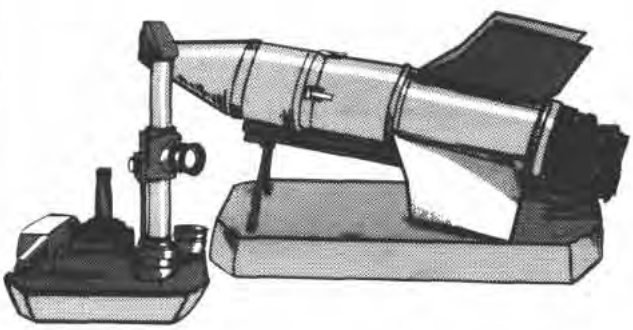
Conny Delshagen (order #3265201)

AT-3 "Sagger"

Long since displaced in Soviet service by more modern weapons, the AT-3 "Sagger" continues in service in several east European armies. The missile/launcher is connected to the guidance/control system by a 30-meter cable. Guidance is operator-guided.

Ammo: AT-3 "Sagger"
Wt: 15 kg
Price: $6000 (R/S)

Type	*Rld*	*Rng*	*Damage*	*Pen*
AT-3 "Sagger"	2	3000	C:6, B:5	70C

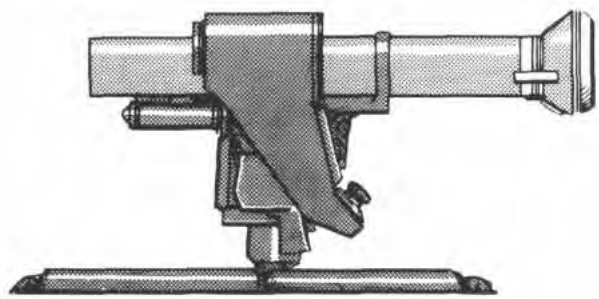


AT-5 "Spandrel"

The missile launcher on the BMP-2 armored personnel carrier. The launcher may be fired only from the vehicle mount; the missile is wire guided, and the gunner must aim at the target for the entire flight of the missile. The gunner must open the turret hatch and expose his head, arms, and chest to reload. Guidance is operator-guided.

Ammo: AT-5 "Spandrel"
Wt: 15 kg
Price: $6000 (R/S)

Type	*Rld*	*Rng*	*Damage*	*Pen*
AT-5 "Spandrel"	2	3500	C:12, B:15	140C

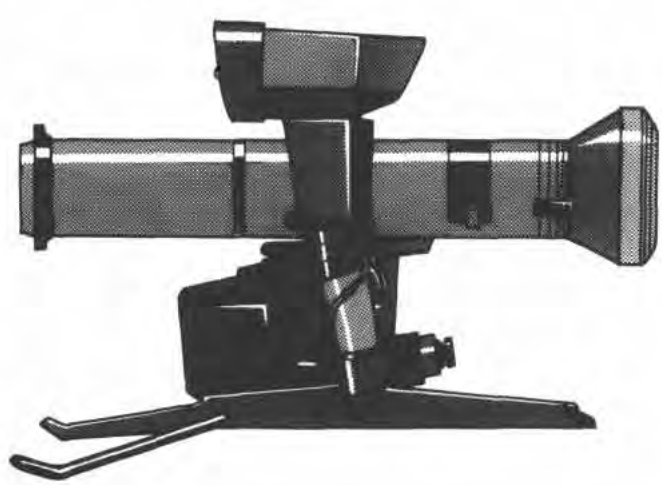


AT-4 "Spigot"

The Eastbloc man-portable missile launcher, the AT-4 is fired from an integral tripod. The missile is wire guided and the gunner must continue to aim at the target for the entire flight of the missile. Guidance is operator-guided.

Ammo: AT-4 "Spigot"
Wt: 5 kg
Price: $3000 (S/C)

Type	*Rld*	*Rng*	*Damage*	*Pen*
AT-4 "Spigot"	3	2000	C:6, B:5	90C



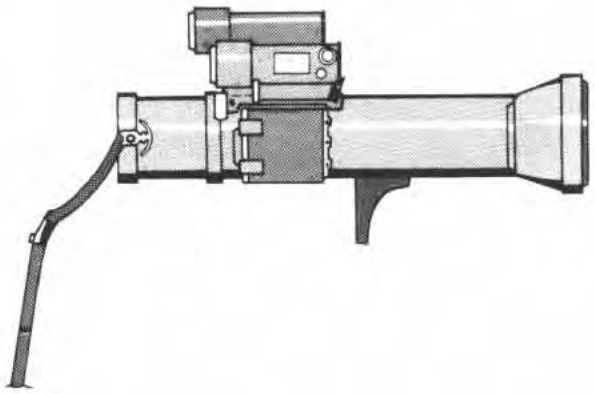
Conny Delshagen (order #3265201)

AT-7 "Saxhorn"

The AT-7 "Saxhorn" is a man-portable antitank missile designed to give the rifle squad some means of dealing with armored vehicles at medium to long range. Guidance is operator-guided.

Ammo: AT-7 "Saxhorn"
Wt: 8 kg
Price: $1200 (—/R)

Type	*Rld*	*Rng*	*Damage*	*Pen*
AT-7 "Saxhorn"	2	1000	C:12, B:15	100C

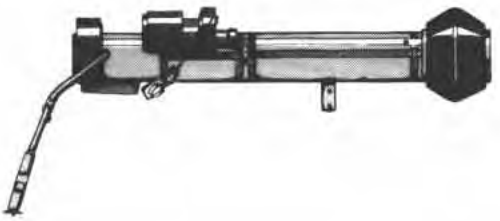


Dragon PIP

The Dragon PIP (Product Improved) is a man-portable antitank missile designed to give the rifle squad some means of dealing with armored vehicles at medium to long range. Guidance is operator-guided.

Ammo: Dragon PIP
Wt: 8 kg
Price: $1200 (R/—)

Type	*Rld*	*Rng*	*Damage*	*Pen*
Dragon PIP	2	1000	C:12, B:15	135C

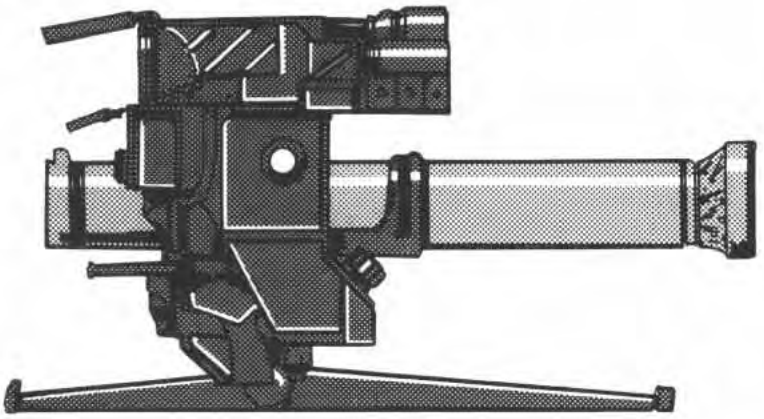


MILAN II

This missile launcher fires the MILAN II and MILAN II-T antitank missiles. The MILAN II-T is an overhead attack weapon like Tank Breaker. Guidance is operator-guided.

Ammo: MILAN II or MILAN II-T
Wt: 17 kg
Price: $6000 (R/S)

Type	*Rld*	*Rng*	*Damage*	*Pen*
MILAN II	3	2000	C:12, B:15	145C
MILAN II-T	3	2000	C:12, B:15	110C



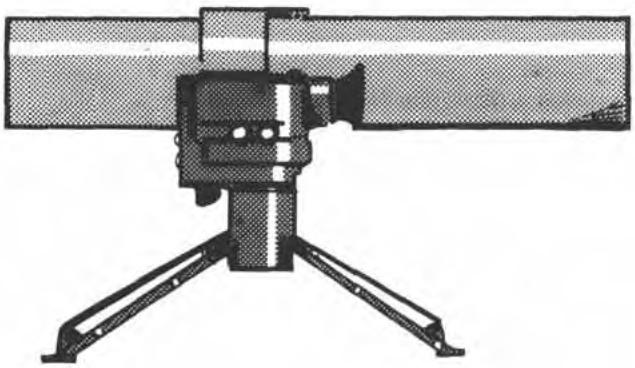
Conny Delshagen (order #3265201)

HOT

A multinational antitank missile produced by a Franco-German consortium (Euromissile). Guidance is operator-guided.

Ammo: HOT
Wt: 30 kg
Price: $4500 (S/R)

Type	*Rld*	*Rng*	*Damage*	*Pen*
HOT	2	4000	C:12, B:15	155C

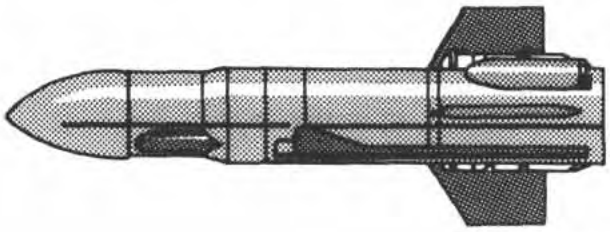


Swingfire

A British antitank missile with a HEAT warhead which is fired from ground launchers or from vehicles. Guidance is operator-guided.

Ammo: Swingfire
Wt: 20 kg
Price: $3000 (S/R)

Type	*Rld*	*Rng*	*Damage*	*Pen*
Swingfire	2	4000	C:12, B:15	140C



Conny Delshagen (order #3265201)

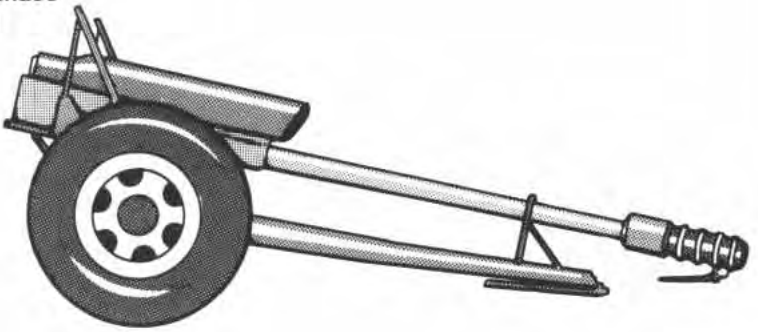
122mm

The howitzer mounted on the SAU-122 self-propelled howitzer and the D-30 towed howitzer. It is manually loaded. The D-30 has an armor value 2 gunshield which provides cover for the gunner (but not the loader) if fired at from the front. The D-30 takes six minutes to set up.

Wt (D-30): 3 tons
Price (D-30): $50,000 (S/C)

Type	*Round*	*Rng*	*Damage*	*Pen*
122mm	HE	300	C:16, B:35	1C
IFR: 15 km	HEAT	300	C:10, B:25	100C
Rld: 1	WP	300	C:3, B:45	Nil
	Chem	300	C:3, B:15	Nil
	ICM	—	B:45	Grenade*
	ILLUM	—	B:1875	Nil

*See Submunitions (ICM) rule on page 207.

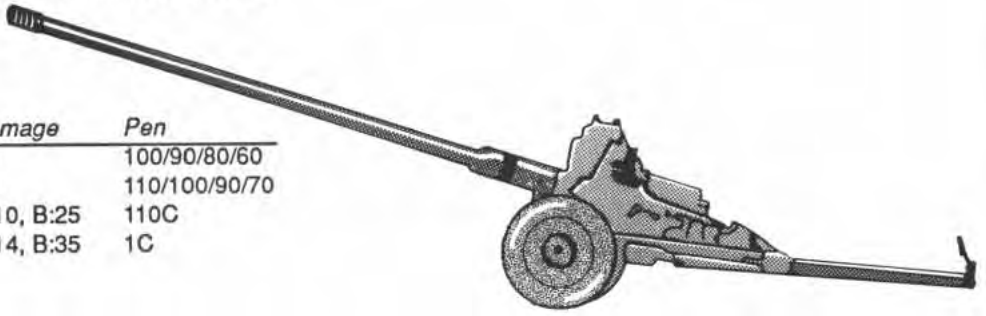


125mm Gun (Rapira-3)

A large-caliber gun mounted on the T-72, T-80, and T-90 tanks and the Rapira-3 towed antitank gun. All three tanks are equipped with autoloaders. On the Rapira-3, the gun is manually loaded. On the T-72 and T-80, the gun automatically goes to maximum elevation while the autoloader is working, so the gunner may not aim during loading. On the T-90 and the Rapira-3, the gunner may aim during loading. The Rapira-3 has an armor value 2 gunshield which provides cover for the gunner and loader if fired at from the front. The Rapira-3 takes four minutes to set up.

Wt (Rapira-3): 3.5 tons
Price (Rapira-3): $50,000 (R/S)

Type	*Round*	*Rng*	*Damage*	*Pen*
125mm	APFSDS	450	28	100/90/80/60
Rld: 2	APFSDSDU	450	28	110/100/90/70
	HEAT	400	C:10, B:25	110C
	HE	400	C:14, B:35	1C



Conny Delshagen (order #3265201)

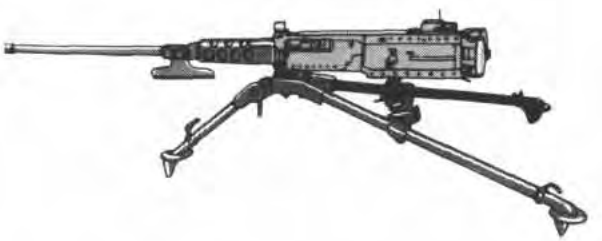
M2HB

The M2 Heavy Barrel is the standard heavy machinegun of every western European army. It accepts 105-round belts and may be fired only from a tripod (NHT) or from a vehicle mount.

Ammo: .50 BMG or SLAP
Wt: 42 kg
Mag: 105 belt
Price: $1600 (V/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M2HB	5	8	2-2-3*	8	105B	3	13	65
tripod	5	8	2-2-3*	8	105B	2	6	150

*.50 SLAP ammunition has a penetration of 1-1-2.



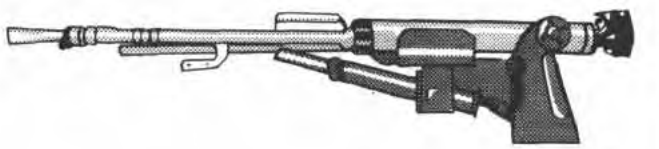
KPV

The KPV is the largest-caliber conventional machinegun in service and is virtually a small cannon. It fires a round originally developed for the Soviet RTRS-41 antitank rifle in WWII and is found mounted only on vehicles. It accepts 17-shot belts.

Ammo: 14.5mm B
Wt: 50 kg
Mag: 100 belt
Price: $3000 (S/C)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
KPV	5	12	2-2-3	10	100B	*	*	150

*The KPV is always mounted on a vehicle or field carriage, and so has negligible recoil.

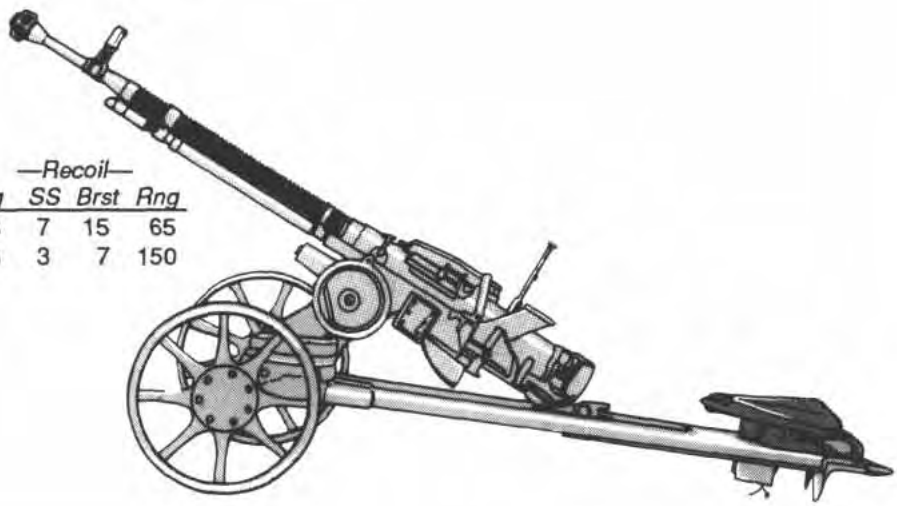


DShK

The standard heavy machinegun in use by Eastern European nations. It is usually used on a vehicle mount, but can also be used on a wheeled carriage (PHC) which is treated as a tripod mount. It accepts 50-round belts.

Ammo: 12.7 B
Wt: 40 kg
Mag: 50 belt
Price: $2000 (C/V)

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
DShK	5	9	2-2-3	8	50B	7	15	65
tripod	5	9	2-2-3	8	50B	3	7	150



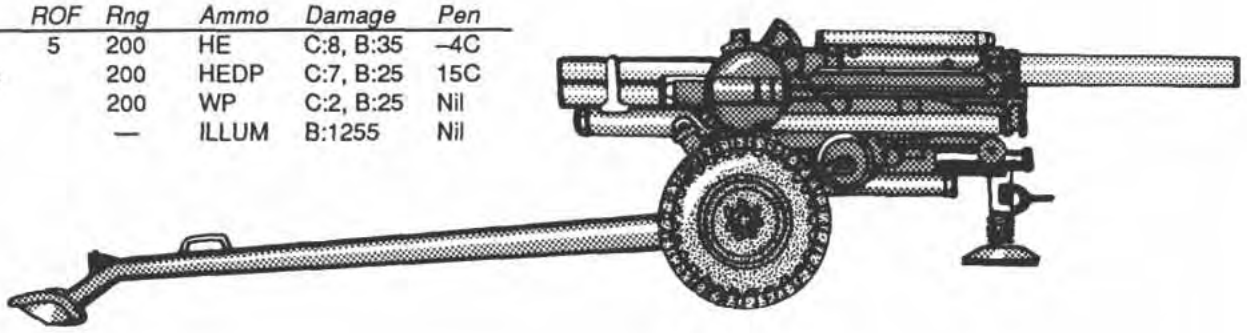
Conny Delshagen (order #3265201)

82mm Vasilek

Standard medium mortar for the Eastbloc, the Vasilek is a clip-fed automatic mortar. It is mounted on a wheeled carriage to allow it to be towed behind a vehicle. The mortar is usually fired from its carriage like a small field gun, and requires six minutes to set up. The Vasilek is listed here because it is labeled a mortar, but its characteristics have caused the designers to classify it as an autocannon for the purposes of the firing system (note that, unlike other mortars, it has direct-fire characteristics as well as indirect-fire ones).

Wt: 80 kg (carriage weighs 50 kg)
Mag: 5 box
Price: $20,000 (R/S)

Weapon	*ROF*	*Rng*	*Ammo*	*Damage*	*Pen*
82mm	5	200	HE	C:8, B:35	–4C
IFR: 3 km		200	HEDP	C:7, B:25	15C
		200	WP	C:2, B:25	Nil
		—	ILLUM	B:1255	Nil



60/81/82mm Wojo Combo

Produced by the Wojchiechowiecz armaments factory in Krakow, the Wojo combination mortar will fire either 81 or 82mm rounds and comes with a number of wooden sabots to enable it to use 60mm rounds. It is typical of a number of mortars built by small, hand-work factories in the year 2000. It requires three minutes to set up.

Wt: 40 kg
Mag: 1 individual
Price: $8000 (C/C)

Type	*Round*	*Damage*	*Pen*
60mm	HE	C:5, B:25	Nil
IFR: 4 km	WP	C:2, B:15	Nil
	ILLUM	B:505	Nil
81mm	HE	C:8, B:35	–4C
IFR: 4.5 km	WP	C:2, B:25	Nil
	ILLUM	B:1255	Nil
82mm	HE	C:8, B:35	–4C
IFR: 3 km	WP	C:2, B:25	Nil
	ILLUM	B:1255	Nil



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60mm

Standard light mortar for the U.S. Army. It can be disassembled into three loads (bipod, baseplate, tube) for easier transportation. Individual rounds are dropped down the tube by the loader. Requires one minute to set up.

Wt: 20 kg (bipod, 8 kg; baseplate, 4 kg; tube, 8 kg)
Mag: 1 individual
Price: $5000 (C/S)

Type	*Round*	*Damage*	*Pen*
60mm	HE	C:5, B:25	Nil
IFR: 4 km	WP	C:2, B:15	Nil
	ILLUM	B:505	Nil



M120 120mm

Developed in Israel as the Soltam K6, this is the standard heavy mortar for the U.S. Army, replacing the venerable M30 "Four-deuce." Normally carried on a single-axle trailer (with six ready rounds), it can be disassembled into three loads (bipod, baseplate, tube) for easier transportation. Individual rounds are dropped down the tube by the loader. Requires six minutes to set up.

Wt: 145 kg (bipod, 37 kg; baseplate, 62 kg; tube, 46 kg)
Mag: 1 individual
Price: $12,000 (C/S)

Type	*Round*	*Damage*	*Pen*
120mm	HE	C:16, B:55	0C
IFR: 7 km	WP	C:3, B:45	Nil
	ILLUM	B:1875	Nil
	ICMDP	B:45	Grenade*
	CHEM	C:3, B:15	Nil

*See Submunitions rule on page 207.



81mm

Standard medium mortar for most Western armies. It can be disassembled into three loads (bipod, baseplate, tube) for easier transportation. Individual rounds are dropped down the tube by the loader. Requires three minutes to set up.

Wt: 40 kg (bipod, 15 kg; baseplate, 10 kg; tube, 15 kg)
Mag: 1 individual
Price: $10,000 (C/S)

Type	*Round*	*Damage*	*Pen*
81mm	HE	C:8, B:35	–4C
IFR: 4.5 km	WP	C:2, B:25	Nil
	ILLUM	B:1255	Nil



120mm

Standard heavy mortar for the Eastern Bloc and most western European armies. It can be disassembled into three loads (bipod, baseplate, tube) for easier transportation. A wheeled carriage is also provided to allow the assembled weapon to be towed behind a vehicle. The mortar may not be fired from its carriage. Individual rounds are dropped down the tube by the loader. Requires six minutes to set up.

Wt: 280 kg (bipod, 70 kg; baseplate, 90 kg; tube, 120 kg; wheeled carriage, 240 kg)
Mag: 1 individual
Price: $15,000 (C/C)

Type	*Round*	*Damage*	*Pen*
120mm	HE	C:16, B:55	0C
IFR: 6 km	WP	C:3, B:45	Nil
	ILLUM	B:1875	Nil
	CHEM	C:3, B:15	Nil



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THE REFEREE

The referee is the key to a good game. Referees must play every NPC, resolve critical events, describe the world, and guarantee an interesting and exciting time.

The most important rule to remember, however, is this: *The referee is the ultimate arbiter of what happens in the game.* Like umpires in baseball, referees are not to be argued with while the game is in session. Discussions or disagreements should be saved for after the game is over—they have no place in the middle of an adventure.

Referees should strive to be reasonable and fair in running a game, but their job is a very tough one, and having to continually argue over the rules is not the best way to play a game.

What exactly does the referee do? He is the interface between his fictional creation—the game "world"—and the players' "personas"—the characters.

DESCRIBING THE WORLD

A referee is the eyes and ears of all the characters, along with their noses, their tongues, their fingers, and that "funny feeling that something is not quite right." Everything the characters know about their environment comes to them through the referee, and for this reason, the referee must make the fullest possible use of words and descriptions to inspire the players' imaginations. Referee descriptions must make the imaginary world of the game seem real enough to entertain and divert the players.

Take a moment off from reading these rules and just think about what your senses tell you about your environment. Sight is the most obvious source of information available to you, but it is supplemented by sounds as well. What do you see around you? What do you hear? Do these two senses complement each other or give you contradictory messages? Perhaps you're in a quiet room which looks tranquil and orderly, but you can hear your brother and sister arguing in the next room—contradictory messages.

What can you smell? Dinner cooking? Someone painting somewhere in the building? Garbage you've been meaning to take out getting a little rank?

How about touch? You can feel this book in your hands and the chair you're sitting on, but what else? Is it a little warm, or is it maybe a little chilly? Is the humidity fairly high, or is it pretty dry right now?

Taste may even play a role in the referee's description—not a large one, by any means, but it should never be neglected.

All of these things let you know that you aren't just watching a TV program—you are alive in the world. For your players to enjoy the game fully, the world must seem real to them. That sense of reality must come from their senses. And you are their senses. You are *all* their senses, not just their sight and hearing.

Your descriptions of the world don't have to be ageless prose, and they shouldn't be tediously detailed. They should include the most vivid impression the player receives from each of his senses. If the players want more detail, you can always provide it to them.

Here are some brief rules of thumb to remember when you are trying to describe an interesting scene to your players.

- Never make it overdetailed. Stick to impressions, and let the players ask for details if they want them. Tell them the wall is covered with graffiti; don't describe the graffiti unless they ask.
- Use all the senses. Movies and television have sight and sound. Reality has sight, sound, smell, taste, and touch. Don't just tell them they're tired; tell them what it feels like to be tired. Don't just tell them they fell in the bog; tell them what the bog tastes like when they swallow a mouthful of it.
- Start with the strongest sensory impression. The biggest change will be the first thing they notice, so start with that. That first sensory input sets the stage for all the others.
- Nothing gets players' interest like a hint of danger. In most cases there will be no immediate threat to the players, but they will seldom be in a situation where there is absolutely no hint of danger.
- Save the best (or worst) for last. Then, when the players hear about the threat, they will want more details about it, and they won't have to wait through the other descriptions to ask.

Also, saving the best for last will help keep the suspense level high during the adventure.



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STRUCTURING THE GAME

A referee has a great deal to do. Forethought and organization will help.

Campaign Planning: This includes strategic planning beforehand as well as tactical planning after each adventure session. Where is the campaign to take place? You'll need a map of the area (probably several). A general map of the country, showing rivers and major geographic features, is a must, and is usually as close as the nearest bookstore or public library. While you're there, check out the travel guides section for Fodor's guides or similar publications. These have general maps of countries, and often have detailed plans of major cities and (occasionally) floorplans of castles and estates. Take into account the interests and opinions of the players, and try to arrange things so the players are given problems that will challenge and entertain their minds. Perpetual firefights appall some and thrill others. Political intrigues will be very interesting to some people and bore others to tears. Try to balance your campaign events to the type of action the players want, and then remember to throw in enough variety to keep things from falling into a rut.

Overall Goals: One very important thing for the players to work out early on is, "What are we supposed to be doing?" The obvious, and correct, answer is, "Staying alive." It is correct, but it isn't enough. The players need a long-range goal, which gives them a reason for wanting to stay alive as well. This goal is one they will have to supply themselves to some extent, but as the referee you have a responsibility to help them along.

There is one very real pitfall involved with most long-range goals; if the players ever achieve the goal, the game is over, but if they obviously can't achieve it, the game is pointless. The best answer to this is to help them arrive at a goal which is so long-range that it will take years to achieve, but once achieved, can be replaced by other goals. If they do so on their own, don't interfere. The characters are theirs to play. If they are unable to come up with one on their own, suggest one of the following:

- *Go Home:* This one is especially applicable to a group of American soldiers stranded in eastern Europe. It may mean a march across half the world, through hostile territory and barren wilderness, and a final escape across the straits from Siberia to Alaska. It may mean a journey through the Middle East to North Africa, and then a leaky tramp steamer to the East Coast. Perhaps somewhere there are still a few planes capable of crossing the Atlantic. But somehow, somewhere, there is a way back.
- *Fight Chaos and Anarchy on a Local Level:* Exactly what this involves will depend on the skills possessed by the characters and their own judgment. Characters with Excavation skill might reopen a coal mine in order to get fuel for the power station that the characters with Electronics skill are trying to bring back on-line while the character with Farming skill tries to ensure that everyone is fed in the interim. As mentioned above, this goal should be a challenge, but should not seem impossible to achieve. Just when things get snug, throw in a challenge, such as a plague, an invading marauder army, refugees from the tyrant in the next valley, and so on.
- *Mercenaries:* If they possess only military skills, the characters might decide to become mercenaries, hiring themselves to local communities as a training cadre for militia or as an experienced strike team for a special mission.

Preparing for the Gaming Session: This doesn't just mean buying munchies. Each adventure session should be part of a larger, general plot, and should present the players with two or more choices. By the end of the session, you should be able to figure out which one they will take. While you're putting the game away and throwing out the empty pretzel bags, take a little time to figure out what happens next. You should try to stay a little bit ahead of the players. Are they moving into a less organized area? Work out some encounters in advance and plant the seeds of the next fork in the plot of the overall campaign. Will they need some building interior plans next time? Better have them ready. Will they be running into a military outpost? Diagram it out ahead of time. Assemble anything else you will need, like town maps (make them up if you need to—odds are none of your group has ever been to the place) or special locales. You will find a wealth of material in this book which can be used for many of these things, and with slight modifications the same material can be used over and over.

Save things you don't use (like camp diagrams, building interiors, town plans, NPC and encounter descriptions) to be renamed and used in the next session.

Management of the Session: Make sure everyone has something to do. Avoid sessions where you have to take one player aside and spend hours going over things with him. Players with high Stealth may want to "sneak on ahead and scout things out." That's unavoidable sometimes, but try to run these solo scouting missions quickly and with a minimum of detail so that the scout can get back to the group as quickly as possible. Make sure one or two players aren't monopolizing the decision making. Keep things moving along by discouraging conversations which are not game related—basketball games, movies, and girl/boyfriends (plenty of time for those after the session is over).

SOME ADVICE FOR NOVICES

If you have played RPGs before, but never refereed, it will take time for you to get the feel of the world you are running and to get a sense of the game's flow. Here are some ideas.

Once your players have generated their first characters, referee a firefight between them and a group of enemy soldiers. Make up a simple sketch map of the terrain, explain the situation and what they are trying to do, and go to it. Explain to them in advance that what happens here will not affect their characters in the game at all; it's just practice. This will give you a feel for the flow of a firefight much better than just reading the rules. If you encounter any problems with rules you aren't sure of, this is your chance to check them out without interrupting the actual game. Also, it will give the players a good feel for the capabilities of different weapons and may make them a little less anxious to get in a fight the first chance they get.

Next, give your players a couple of vehicles and have them do a cross-country march of, say, a week. The first thing this will do is give them an idea of how limited their range is when running on alcohol. It will also enable you to become familiar with the encounter rules and give players a chance to try hunting and foraging. These routines will be used repeatedly throughout the game, so it's a good idea to become familiar with them early.

In some ways, these exercises are a training course. The people your players' characters represent have had months, often years, of experience living off the land and fighting for their lives. They have a good idea of the capabilities of their equipment and of themselves, so your players should as well. When you and your players feel comfortable with the system, it's time to start the game.

REWARDS AND EXPERIENCE

The successful completion of an adventure by your players should be accompanied by suitable rewards. Exactly what form these rewards take will be determined by the nature of the adventure and the decisions of the referee. Paper money is almost worthless, so payment will either be in gold (rarely), information, or some form of goods. These goods can be food, machinery, weapons, ammunition, spare parts for vehicles, or other equipment.

Bear in mind that what is treasure to one

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group may be a pile of worthless junk to another. On the other hand, it's possible that the characters may be satisfied just with the feeling of a job well done (well, it is *possible*!).

Don't go overboard—the best way to ruin a game is to overreward players for minor accomplishments. Sessions that end with the characters in possession of a tank farm of refined gasoline or more vehicles than drivers are poorly run games.

Experience: Skill advancement is discussed on page 138. Other gains in experience include knowledge of a specific geographic area or information of value to the characters.

Contacts: Characters may make new contacts as a result of an adventure which may come in useful to them in later adventures. These are solid contacts, and their details will be dictated by the specifics of the adventure just completed.

SKILLS AND TASK RESOLUTION

Overview

In the course of playing **Twilight: 2000**, the players decide how their characters act, and how they attempt to accomplish missions or achieve goals. When a player announces that his or her character will attempt a certain action, the referee must have a method to decide whether the action succeeds or not. The chance for success of the action is based on how difficult the referee decides the action is, and the skills and attributes that the character might have that can be applied to the action. Obviously, characters usually only attempt actions that they have some skill in or knowledge about.

Mechanics

Most important actions in **Twilight: 2000** are resolved using the roll of one or more dice. Each such action is expressed as a specific task, and the die roll determines whether the player attempting the task was successful or unsuccessful, and if an extraordinary success or failure occurred.

Dice: To play the game you will need at least one 10-sided die (D10) or 20-sided die (D20) and several six-sided dice (D6). A D10 is read from 1 to 10 (with 0 meaning 10).

Because of the numerous uses of die rolls in **Twilight: 2000**, abbreviations will often be used. A 1 before the die notation (1D6, 1D20) means to roll one die of that type, a 2 (2D6, 2D10) means roll two of that type and add them, and so on.

Dice Equivalencies: The dice used in play can be used to generate numbers in several different numerical ranges. Although not all of these ranges will be used in these rules, many of them will be useful in adventures, etc.

A D10 can be used to generate D20 results and vice versa, if only one or the other is available. To get D20 results from a D10, roll the D10 along with a D6. If the D6 reads 1-3, read the D10 normally as 1-10. If the D6 roll is 4-6, add 10 to the D10 result for a range of 11-20.

When using a D20 to give D10 results, simply ignore the first digit so that rolls of 01 and 11 are 1, 02 and 12 are 2, and so on, up to 10 and 20 which both are read as 10.

To generate a number between 1 and 100 (called D100 or percentile), roll a D10 twice, using the first roll as the tens digit and the second roll as the ones digit, and reading a 00 result as 100. If rolling two D10s at the same time, make sure they are different colors, and announce before rolling which is the tens die.

Note that when adding dice together (as 2D6 or 2D10), the result is statistically centered, meaning that results in the center of the range (7 for 2D6 or 11 for 2D10) are much more likely than results at the very high or low end of the range. However, D100 rolls are not statistically centered, so that the 100 possibilities of the D100 are all equally likely.

If rolling between three possibilities, a D6 can be used as a D3, where 1-2 are read as 1, 3-4 are read as 2, and 5-6 are read as 6. (D3 is is the same as 1D6+2 when rounding fractions up; but when rounding down, 1D6+2 gives results of 0, 1, 1, 2, 2, and 3). In the same fashion, a D10 can be used as a D5. Any die can be used for D2 results, by rolling for odd or even results (or you could toss a coin: heads 1, tails 2).

Die Roll Modifiers: Sometimes die roll results must be modified. For example, 2D6–2 means roll two six-sided dice and add the numbers together, then subtract 2 from the total. Conversely, 3D6+2 means roll three six-sided dice, add them together, and then add 2. For example, a 3D6–1 roll that resulted in rolls of 3, 5, and 2 would total 3+5+2–1 = 9.

The abbreviation "DM" is usually used for die modifier, with plus or minus symbols showing whether the DM is added to or subtracted from the die roll. Thus DM+2 means that 2 is added to the die roll in question, and DM–3 means that 3 is subtracted from the final roll.

Sometimes a variable DM will be given. For example, the phrase, "DM– (number of characters in the group)" would mean the total number of characters in the group would be subtracted from the die roll, or "DM+ (wind velocity in kilometers per hour+10, round up)" means to take the wind velocity in kph, divide it by 10, round the result up, and add the result to the die roll.

Character Attributes and Skills

In order to understand task resolution, the following terms must be defined. Some of these concepts were handled in more detail in the "Character Generation" chapter.

Attribute: This is the numerical quantification of the character's basic physical and mental qualities, and are divided into Strength (STR), Agility (AGL), Constitution (CON), Intelligence (INT), Education (EDU), and Charisma (CHR). These numbers range between 1 and 10, with 10 being the best. See "Character Generation," page 18 for a more detailed discussion.

Skills: These represent the knowledge and expertise gained by a character in certain specific areas. A higher skill number indicates a greater familiarity and facility with the topic. For example, the skill "Navigation: 3" indicates that the character has a level 3 ability in being able to find his or her way around.

Controlling Attribute: Each skill has a controlling attribute, which is the attribute that is most directly used when exercising that skill. For example, INT is the controlling attribute for the Observation skill, signifying that Observation is based most directly on the character's raw reasoning ability. On the other hand, the controlling attribute for the Chemistry and Geology skills is EDU, meaning that Chemistry and Geology are most closely linked with factual information that the character has gained over a lifetime of learning.

Assets: An asset is the level of a skill added to the value of that skill's controlling attribute. For example, a character has INT 9 and EDU 7, and skill levels of Observation: 2, Chemistry: 3, and Geology: 5. The character's assets in these areas are therefore: Observation (9+2=): 11, Chemistry (7+3=): 10, and Geology (7+5)=12.

When recording skill levels on the **Twilight: 2000** character sheet (located on page 267), skills and assets should be separated by a slash. In the example just given, the player should write 2/11 next to Observation, 3/10 next to History, and 5/12 next to Geology.

In all cases, the value used in **Twilight: 2000** task resolution is the asset, and not the skill alone. *Unless specifically noted otherwise*, any reference to a skill name (for example, "an Easy test of Navigation") means the asset, not the skill alone. Similarly, when the rules talk about deciding on the skill that is most relevant to a task, the skill will always be used in its asset form (i.e., added to its controlling attribute).

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Tasks

The main use of skills and attributes in **Twilight: 2000** is to determine the success or failure of actions attempted by the characters. Actions depending on the use of skills and attributes are called *tasks*, or sometimes *tests* or *checks*. To resolve these tasks, the players roll dice, with the die rolls required for success depending upon the characters' assets combined with the difficulty of the task being attempted. One of the referee's main jobs is to adjudicate character attempts to accomplish these various tasks.

Some tasks can obviously not be done, no matter how skilled the characters are, such as rebuilding a destroyed M1 Abrams tank without spare parts or tools. Other tasks, such as reloading bullets into an empty ammunition clip, are so simple that it is assumed any character with basic knowledge can carry them out successfully. In between these two extremes, however, lie a multitude of tasks which the referee will be called on to adjudicate. Some tasks that are used repeatedly during the game (such as maintenance or firing a weapon) are covered in detail in the rules. Others are determined by the referee on a case-by-case basis.

When determining the success of a character's attempt to carry out a task, the referee should ask two questions: How difficult is the task, and what skills or attributes are relevant to the task?

Difficulty: While there are numerous shades of difficulty in tasks, for game purposes, all tasks are broken down into five categories: Easy, Average, Difficult, Formidable, and Impossible. (Note that the word *impossible* is used as the name of the highest difficulty level, rather than meaning that something can absolutely not be done. This means that in **Twilight: 2000**, a task which is called Impossible can actually be accomplished by an extremely talented character, or on automatic success roll—see page 133. Remember that throughout these rules, whenever the word impossible is capitalized, it is referring to a difficulty level. When it is not capitalized, it is being used in its standard meaning of "not possible.")

For example, a mechanic needs to repair a farmer's tractor (in return for shelter in the farmer's barn and a square meal). The referee first decides roughly what the tractor's problem is (this is not strictly necessary, but it helps both players and referee visualize the situation), then decides if repair is Easy, Average, Difficult, Formidable, or Impossible. If the engine needs a short length of wire cut and fitted into place, the mechanic's job is Easy. If it needs a hole in a metal tube soldered, the task would be Average. If the engine needs a new timing gear filed from a piece of sheet metal, the task would be Difficult. If it needs a new crankshaft, the task would be Impossible.

The referee may further decide to break the task into two (or even more than two) parts. Using the above example, the referee may decide that the tractor needs a part the mechanic does not have and cannot make (the crankshaft). In this case, determining the problem would be an Average task, but repair would be Difficult, and perhaps Impossible (which might lead to an adventure to locate and obtain the proper part).

"Automatic" Tasks: The referee may judge that certain of the characters' actions need not be rolled for. These would be actions of a routine nature which use a skill that the player possesses. For example, a referee will usually not wish to require a player with Ground Vehicle level 1 to roll to drive five minutes down a clear road, assuming reasonable weather conditions, etc. These might reasonably be thought of as automatic tasks, however, there is no such thing as a difficulty level of "Automatic." The referee is always the final judge of what



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actions do and do not require a roll. Players should never assume that an action is automatic, because there is no such thing, until the referee says there is.

Useful Assets and Attributes: The referee must decide which asset or attribute is important to performance of the task. In the above example, the character's Mechanic asset is obviously the important one. If the task is one which to which no skill is relevant, but an attribute is (for example, lifting a safe requires only Strength, not any particular skill), then it is an attribute-only task. If it is a task requiring skill, then the closest appropriate skill is used.

Referee's Note: Exercise care when assigning difficulty levels for attribute-only tasks. A difficulty level that is appropriate for an asset-based task (skill plus attribute) might be too difficult for a task rolled against an attribute alone. Referees should think in terms of the success probability when assigning difficulty levels. For example, a character will be making an attribute-only task roll against an attribute of 8. If the difficulty level were Difficult, the character would succeed eight times out of 20, or 40%. The referee could set the odds of success to 80% by assigning a difficulty level of Average (roll under 2×8, or 16 chances out of 20), or reduce them to 20% by assigning a level of Formidable (roll under $^1/_2$×8, or 4 chances out of 20). When the referee knows how likely the chance of success could be, it is simple to work backwards from there to find the correct difficulty level, using the Task Difficulty Levels table below.

Task Difficulty Levels

Difficulty	*Asset*
Easy	×4
Average	×2
Difficult	×1
Formidable	×$^1/_2$
Impossible	×$^1/_4$

Task Descriptions: The chance of success in a task is completely described by its difficulty level and the asset used. The many tasks described in these rules are sometimes expressed in an abbreviated form as *Difficulty: Asset*. For example, Easy: Swimming refers to an Easy task using Swimming skill as an asset (i.e., added to its controlling attribute, in this case, CON). Difficult: STR refers to a Difficult task using only the Strength attribute.

These tasks are also referred to conversationally. For example, "Opening the padlocked warehouse door is an Average test of Intrusion," or, "Avoiding detection by the guard is a Difficult check against Stealth." As always, such a statement refers to the asset, and not the skill alone, unless otherwise indicated.

Determining Success: Once difficulty and the relevant asset or attribute have been determined, the task is resolved as a D20 roll against that asset or attribute. Before rolling the die, the asset or attribute is modified by the task's difficulty level as shown on the Task Difficulty Levels table. Whenever multiplying assets by a fraction, round all fractional results down.

This number as finally modified is the *target number*. If the D20 roll result is *equal to* or *less than* the target number, the character has succeeded in the task.

For example, a character with an asset of 12 has the following target numbers, based on difficulty: Easy = 48, Average = 24, Difficult = 12, Formidable = 6, Impossible = 3.

Automatic Success or Failure: In **Twilight: 2000**, a task roll of 1 always results in success, and a task roll of 20 always results in failure, regardless of skill, asset, or difficulty level. Thus every character stands a chance to succeed, no matter how daunting the task, or a chance to screw up, no matter how seemingly routine the task. (Note that the automatic failure roll is modified to 17-20 for purposes of direct fire only—see the Combat chapter.)

Thus, returning to the mechanic in the example above, if he had a Mechanic skill level of 4 and an STR of 5 (the controlling attribute of the Mechanic skill), he would have an asset of 9, and would need to roll 9 or less on the D20 roll to succeed at a Difficult task. He would have to roll 18 or less to succeed at an Average task (9×2=18) and a 2 or less to succeed at an Impossible task (9 ×$^1/_4$=2.25, rounded down).

If the same character had to undertake an attribute-only task requiring Strength, he would be rolling against a target number of 5 (his Strength attribute alone ×1) for a Difficult test, a 10 on an Average test (2×5), or a 1 on an Impossible test (5×$^1/_4$ = 1.25 rounded down).

Unskilled Tasks: Sometimes a character may not have the skill specified to accomplish a certain task. Such a character may still attempt the task, but with an *unskilled penalty*. Because the character does not have the needed skill, he or she uses the controlling attribute for the missing skill by itself, and in addition as a penalty for not having the proper detailed knowledge, must roll the task at *one difficulty level higher* than it otherwise would have been.

For example, suppose a character wants to force open the lock on a desk drawer. The referee decides that this is an Average task using the Intrusion skill. However, the character does not have Intrusion skill, and so must treat it as a Difficult task using only the character's Agility attribute (which is the controlling attribute for Intrusion). If the character had an Agility of 6, she would have to roll a 6 or less on 1D20 to succeed.

Exceptions: Note that level 0 in a skill area allows a character to forego the unskilled penalty for that skill. The skill level 0 indicates a basic familiarity with the skill, but no real expertise. When rolling a task for a skill that is at level 0, the character's asset is the controlling attribute alone, but the additional difficulty level penalty is not assessed.

Referee's Note: Do not confuse this unskilled penalty with an attribute-only task. An attribute-only task is one for which no particular skill is useful, requiring the referee to set the difficulty level for use against an attribute alone. The unskilled penalty is used when the referee defines a task as requiring a certain skill, but the character attempting the task does not have the skill.

Although both attribute-only and unskilled penalty skill rolls are made against a character's attribute alone, in an attribute-only test, the difficulty level as set by the referee is fixed. In an unskilled-penalized skill roll, the difficulty level as originally set by the referee is increased one level when attempted by the unskilled character.

Skill levels of 0 are given in the character generation process to indicate that a character has been given some kind of familiarization training in the skill in question (enough to avoid an unskilled test), but not enough to have any facility with the skill. An example is the Autogun 0 skill given as part of the US Army's basic training package (see page 35).

More than One Asset: Sometimes more than one asset can be applied to a single task. This can be done in several ways. The four most common are referred to as combined skills, alternative skills, averaged skills, and enabling skills.

Combined Skills: In many cases, two assets are each necessary to perform a task. In this case, the lower of these two assets possessed by a character is used to determine the target number. Combined skill tasks are phrased in the format "asset and asset."

For example, the referee may decide that repairing a generator is a Difficult test of Mechanic and Electronics. In this example, we have a character with a Mechanic asset of 8 and an Electronics asset of 12. Even though she has a high Electronics ability, her ability to

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understand the generator is limited by her understanding of its mechanical functions. Thus, she would use the lower of the two: her Mechanic asset.

Alternative Skills: In this case, the task requires only one of two or more possible skills. For one of these tasks, the character uses the highest of the listed assets to compute the target number. Alternative skill tasks are phrased "asset or asset."

For example, determining if an animal is dead or alive is an Easy: Biology or Medical test. Because either skill is sufficient by itself, the character uses the higher of the two. In some cases, the referee may wish to assign differing difficulty levels for different alternative skills. Average: Construction or Difficult: Combat Engineer means the same task may be performed using either asset, but using different difficulty levels.

Averaged Skills: In some cases, the referee might rule that two skills complement and "feed off of" each other, so the two skills are averaged (add the two assets together and divide the total by 2). No more than two skills should be averaged together for any one task. If a task seems to require more than two skills averaged together, pick only the two most relevant.

The format for averaged skills is "average of asset and asset" or "asset plus asset ÷ 2."

Enabling Skills: In some cases, one particular skill enables a character to "unlock" a crucial difficulty in a problem, and thereby make the problem easier. For example, if a character wanted to determine where to place a small demolition charge in order to blow a human-sized hole in a wall, and gain access to a heavily-fortified building, Combat Engineer would be the prime skill, of course, but others might come into the picture as well. Construction would give the character a picture of where the supporting walls would be located, and enable the charge to be detonated without bringing down the whole structure. This task would be written as Difficult: Combat Engineer (Average: Construction to enable).

Unless otherwise indicated, success in an enabling skill task reduces the level of difficulty by one level, but under certain circumstances the referee might rule that difficulty is reduced by more than one difficulty level.

The referee might allow an enabling skill roll to be done by a different character who is a member of the same group.

Additional Difficulty Levels: It is also possible for the referee to describe tasks more or less difficult than the five categories used here, or intermediate in difficulty. Simply multiply or divide the character's asset by larger, smaller, or intermediate numbers. For example, a "Very Formidable" task might require dividing the asset by 3 to determine the chance of success. A task intermediate between Difficult and Average might multiply by 1.5, etc.

Opposition: In some cases, attempts to complete a task will be met with opposition from other characters. There are three types of opposition.

First, a character may be trying to succeed at a task and another trying only to prevent him. One or the other must succeed. If a character were trying to break down a door, for example, a character on the opposite side might try to keep the door in place. In this case, the asset used is the asset of the character making the attempt minus the asset of the character trying to prevent him. Obviously, if the opposing character's asset is higher, the attempt fails automatically.

Second, two or more characters may be trying to succeed at the same task in a competition in which it is not certain that anyone will succeed. For example, two characters are racing to solve a complex mathematical problem. Both characters roll, in this case Difficult: (Intelligence and Education), and the one who succeeds is the one who rolls the furthest below the roll he would need for success without opposition. (Of course, it is possible for all contestants to fail.) Roll again in case of ties. For example, suppose two characters are rolling with 3 and 5 target numbers; the first of them rolls a 2 and the second rolls a 3. Since the first character rolled only 1 less than required for success, while the second character rolled 2 less, the second character wins.

The third case is like the second, but this time one of the characters must succeed. An example would be a footrace or determining the winner of a hand of poker. Characters roll as above. If none of the characters rolls success, the winner is the character who failed by the smallest amount. Roll again in case of ties.

Outstanding Success: A character who attempts a task and beats the target number by 10 or more has achieved an Outstanding Success. If, for example, a character had a target number of 12, and rolled a 2 (12–2=10), that would be an Outstanding Success.

How the referee handles Outstanding Success is dependent upon the situation. Generally, the task is done much more quickly than would usually be the case, or some extra bonus is awarded. The character trying to break down the door might also knock the person holding it shut unconscious, or knock it off its hinges with such noise and force that the occupants of the room are forced to roll for panic (see the Combat chapter).

Sometimes simply accomplishing a simple task without mishap is sufficient, and no additional bonus is appropriate. If a character is rolling to swing on a vine across a raging jungle river, simple success is sufficient; there is no need for him to find a panel of judges on the other side awarding him a gold medal for perfect form and style. The logic and needs of the campaign and the story being told are always the most important when judging Outstanding Success.

Catastrophic Failure: This is the opposite of Outstanding Success. A character who fails in a task, and fails by at least 10, *may have* suffered a Catastrophic Failure. To find out, the character rolls again for the same task at the same difficulty level. If this roll also fails (by any margin at all, not just by a margin of 10 or more), then the character has suffered a Catastrophic Failure (if the roll succeeds, it's just a regular failure). As with the Outstanding Success, the consequences of this are up to the referee. For example, the engineer in the previous example might not only fail to repair the power plant, but would in addition break some other important part. The character trying to break down the door might hurt her shoulder in addition to not breaking down the door.

Catastrophic Failure should not be overused. As with Outstanding Success, in a great many tasks there is no obvious effect of a Catastrophic Failure, and the second roll need not be made—a geologist who fails to find an iron deposit should not also break his leg (unless such an event seems appropriate given the current storyline or surroundings). The main purpose of Catastrophic Failures is to deter characters from attempting tasks (especially dangerous ones) far beyond their abilities.

Time Required: When assigning a task, the referee should have in mind how much time the task ought to take. The time required can be modified by an Outstanding Success, but the amount of time saved must be based on common sense.

For example, a task that the referee decided would take eight hours might be reduced to only one hour on an Outstanding Success. On the other hand, some tasks can only have their required duration reduced by so much, or not at all. For example, an Outstanding Success for a character driving a vehicle at its top speed cannot possibly reduce the time required for the trip; the vehicle

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is already going as fast as it can. Similarly, if a character is using Observation skill to search a room for something that is not there, it cannot possibly take him any less time to completely search the room to satisfy himself that it is not there.

Uncertain Tasks: Some tasks will not provide immediate feedback of their success or failure to the character. For example, a geologist above might miss an iron deposit that was really there, and PCs won't always know for sure if an attempt to use Persuasion on an NPC really works until the NPC actually does what they ask without double-crossing them. Sometimes even the effectiveness of a repair attempt might be left uncertain.

In such cases, both the player and the referee should roll for the task, with the referee's roll being kept secret. There are three basic possible outcomes:

- If both rolls fail, the result is *no truth*. The player is misled about the success of the task attempt. Erroneous or misleading information is given.
- If one succeeds and one fails, the result is *some truth*. Some valid information is given, although perhaps missing some of the crucial connections that would be given under total truth. The player may fail the attempt and still get information, although he cannot know for sure, as he cannot know whether the referee's roll succeeded or failed.
- If both rolls succeed, the result is *total truth*. Totally valid information is given, although the player may still not believe it, again because he is unable to know the referee's roll.

Note that the referee may stipulate modifications to the process above. For example, the referee need not tell the player the difficulty level of the roll, so that the player will not even know if his own roll has succeeded or failed (this prevents the player from being suspicious of information he is given when he knows he has failed his own roll). Or the referee is free to make his secret roll at a different difficulty level from that of the player's, or even make a fake roll, knowing that the information the player will receive cannot be altered by any task rolls.

If the player rolls an Outstanding Success, the referee may decide to tell the player whether the referee's secret roll was a success or a failure, so that the player can correctly evaluate the forthcoming information. This is often a good idea, as it simulates the occasional ability of a character to be so in control of an action that he can accurately assess how good his attempt was ("Oops...that didn't feel right."). However, whether circumstances justify this bonus is always up to the referee.

Most all of **Twilight: 2000**'s rules build upon the basic concepts explained above. As you read through other chapters, such as Combat, you will discover specifically how the basic mechanics are applied in specific circumstances.

SKILLS AND ASSOCIATED TASKS

Not all skills and tasks are discussed here—many are described in other rules and are not repeated. Other uses are fairly obvious—most uses of attributes, for example. However, some skills require further explanation, and some common tasks are worth describing in more detail here. The following are intended as general guides only; there are too many tasks to list more than a small fraction, and difficulty may be increased or decreased by too many factors to cover in detail.

Aircraft Mechanic: Tasks using this skill are similar to normal Mechanic skill tasks, but are applied only to aircraft.

Archery: Make arrows or crossbow bolts: Difficult, or bows (including bow for crossbow, but not stock): Formidable.

Armed Martial Arts: Pick hit location of attack: Formidable. Block attack: Formidable.

Biology: Make antibiotics: Formidable. Assess condition of animal before purchase: Difficult. Detect disease in people or animals: Average.

Chemistry: This skill can be used to synthesize many useful substances; many have military uses: gunpowder (Average), dynamite (Difficult), smokeless powder (Difficult), primer (Difficult), plastic explosive (Formidable), blood agent (Difficult), blister agent (Formidable), irritant gas (Difficult), HC smoke (Average), white phosphorus (Formidable).

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(Gunpowder can be used in appropriate single-shot weapons, while smokeless powder and primer are needed to reload ammunition.) Catastrophic Failure when making these substances is truly catastrophic. Many other compounds of a less violent nature can also be synthesized, given the right equipment (or something close to it) and the proper raw materials).

Climbing: Climb steep slope or sheer rock face with good handholds: Difficult. Climb sheer, mostly smooth rock face or building wall: Formidable. These tasks assume no special equipment. If equipment is used, the difficulty levels are one lower. Rappel down: Average. (A character may also help others to climb by climbing up first and lowering a rope; difficulty for them is the same as climbing with equipment.)

Combat Engineer: Place demolition charge (with engineer demo kit): Average. Improvise detonator/fuse, etc. (in absence of engineer demo kit): Formidable. Improvise antipersonnel obstacles: Average. Improvise antivehicle obstacles: Difficult. Camouflage position: Average.

Construction: This skill is used to construct things, mostly bridges and buildings. Failure results in time and materials overruns. Catastrophic Failure may sometimes result in collapse, but generally it results in just a need for emergency repairs to forestall a collapse. Most tasks will require additional labor. Direct construction of simple bridge: Difficult. Build small shed: Average. Reinforce lightly damaged structure (bridge, house, etc.): Difficult. Direct reinforcement of heavily damaged structure (bridge, house, etc.): Difficult. Assess condition of structure: Difficult.

Disguise: The main ingredients of this skill are not greasepaint and false mustaches, but acting skill and confidence. Its most common use will be to impersonate a foreign soldier or national. In combination with Language skill, it is used to mimic an accent: Fooling a native speaker of the language is Formidable: (average of Disguise and Language); fooling a non-native is Difficult: (average of Disguise and the difference between the Language level of speaker and the Language level of listener); fooling someone who doesn't speak the language at all is Average: (Disguise or Language). Disguise can be used to gain a cursory examination for documents (Difficult); see Forgery for the importance of this.

Electronics: Make a radio receiver (Difficult) or transmitter (Formidable) if spare parts are available.

Excavation: Operate open surface mine without mishap: Average. Operate deep-shaft mine without mishap: Difficult. The skill can also be used to make tunnels in rock (Difficult but slow) or soil (Formidable but fast). Ordinary mishaps represent slight injuries. Catastrophic failure in deep-shaft mining represents a cave-in; in open surface mines, it represents a serious wound. Additional labor is required for most mining operations.

Forgery: Forge signature if an example is available: Average. Alter a document (Difficult), or create a new document (Formidable). These tasks are one level easier if the document is expected to survive only a cursory glance (see Disguise, above).

Geology: Locate workable ore and mineral deposits of coal or iron: Difficult; other metals: Formidable.

Ground Vehicle (Motorcycle): Jump a five-meter-wide ditch: Formidable. Assess condition of motorcycle before purchase: Difficult. Cross soft ground without bogging down: Difficult.

Ground Vehicle (Tracked): Cross rocky terrain without throwing track (minor suspension breakdown): Difficult. Cross soft ground without bogging down: Difficult.

Ground Vehicle (Wheeled): Cross soft ground without bogging down: Difficult. Cross rocky ground without damaging suspension: Difficult. Heavy rain makes all driving tasks one level more difficult

Gunsmith: Fit telescopic sight to rifle (includes sighting-in): Difficult. Fit starlight scope to rifle: Average. Fabricate zip gun: Difficult. Make crossbow if bow provided (Difficult). Reload cartridges, given brass, bullets, primers and powder: Difficult.

Interrogation: Interrogation involves two major factors: the state of the prisoner and the nature of the information the interrogator is seeking. Rather than try to combine the two, here are some tasks to use as guidelines. Prisoner is: demoralized and frightened (Average), fatigued, stupid, or boastful (Difficult), security-conscious (Formidable). Information sought: name of unit (Average), scraps and hints requiring player interpretation (Difficult), strength and location of unit or major secrets (Formidable).

Intrusion: Pick simple key locks (like those on desks, briefcases, and some doors) and hot-wire vehicle: Average. Pick key locks on jail cells, handcuffs, and deadbolt door locks: Difficult. Open combination and key locks on padlocks, safes, and strongboxes: Formidable. Difficulty levels assume lockpick tools are available. They become one level more difficult if lockpicking tools are not used. Improvise lockpick tool: Difficult. Locks on vaults and high-security establishments (in espionage missions particularly) require tools and are always Formidable. Electronic locks require both lockpick tools and electronics tools. Opening an ordinary electronic lock is Difficult versus the average of Intrusion and Electronics. Opening a high security electronic lock is Formidable versus the average of Intrusion and Electronics.

Language: Communicating in a given language is Difficult: (average of the speaker's Language and the listener's Language). Communicating in a language the character does not speak, using his skill in another language of the same group is Formidable: (average of speaker's Language and listener's Language). (For example, using knowledge of Polish to speak to a Czech.) Both the previous tasks become one degree easier if attempting to communicate very simple concepts ("I'm hungry"), especially if sign language is used to help ("Where are we?" while pointing at a map). Identifying languages: a language of the same group as one the character speaks (Difficult); a language of the same family (Formidable). Groups and families are shown on the Language List (pages 47 and 261).

Leadership: Inspire NPCs to obey your orders: Difficult. Recruit NPCs: Formidable.

Mechanic: Assess condition of vehicle before purchase: Average. Conceal condition of vehicle before sale: Difficult.

Medical: In addition to the tasks outlined on page 212 and 244-245, Medical (Diagnosis) and Medical (Surgery) skill can also be used to treat diseased or injured animals; add one difficulty level to all tasks.

Metallurgy: Smelt ore into metal, given smelter: Average. Make simple alloys, given forge and proper raw materials: Difficult. Forge and cast metal objects, given raw materials, forge, and tools: Difficult. Construct forge/smelter, given excavating and construction tools: Difficult. Lack of a smelter makes conversion of ore into metal impossible. Lack of a forge makes other tasks two levels more difficult.

Meteorology: Predict weather for later today: Average. Predict weather for tomorrow: Difficult. Predict weather for the day after tomorrow: Formidable.

Observation: Spot tripwire or boobytrap: Difficult.

Parachute: Land safely in most terrain is Average. Land safely in woods, cities, swamp, or water: Difficult. Land in a particular spot (a specific 10-meter square): Formidable with a parachute, Difficult with a paraglider. Rigging or checking a rig: Average. Repairing a para-

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chute: Average. Making a parachute or paraglider: Formidable.

Riding: Saddle-break unbroken horse: Formidable. Failure results in slight injury to the rider. Assess condition of horse before purchase: Difficult. Conceal condition of horse before sale: Formidable.

Scrounging: When a character attempts to scrounge for a specific object, he looks in a particular place. The referee determines difficulty based on his opinion of the likelihood of the object being in such a place. The higher a character's Scrounging skill, the more likely he is to find useful things in unlikely places.

Scuba: Avoid a mishap while using an aqua-lung or rebreather is Average. Navigate underwater is Average. Avoiding detection from watchers on the surface is Difficult with an aqua-lung or Average with a rebreather.

Small Arms: A Catastrophic Failure at firing any small arms indicates the weapon jammed (at the referee's option). Clearing a jam is Average.

Small Watercraft: Rolls to avoid mishaps are necessary only in combat (Average) or during unusual situations like overloaded boats, bad weather, or white water (Difficult). Sailboats are one level more difficult than powerboats. Operating a small boat at all requires some skill but does not require a roll under good conditions. Navigate to within 10 kilometers of landfall (per 100 kilometers sailed): Difficult. Ditto in bad weather or at night: Formidable.

Snow Skiing: Avoid mishap under normal conditions: Average. Avoid mishap at night, in bad weather, on steep slope or when burdened: Formidable.

Stealth: Approach to within one meter of a sentry in daylight: Formidable. Same thing, at night: Difficult. Approach to within 10 meters of animal: Formidable. Conceal trail (so as to make tracking one level more difficult): Difficult.

Survival: Catch fish without adequate equipment: Difficult. Catch fish with adequate equipment: Difficult. Fabricate equipment: Difficult.

Swimming: Floating is Difficult when wearing clothes and Average without clothes. A loaded character (one with other than light personal equipment) cannot float (or swim). If the task is failed, the character sinks (and will drown if he remains in the water). If successful, the character floats and may swim. Each character has a swimming endurance equal to five times his Constitution attribute. Floating without clothes uses zero endurance points; floating while wearing clothes uses one endurance point per minute. Maximum swimming speed is meters equal to Swimming skill per combat round. A character uses five endurance points per minute when swimming at full speed and one endurance point per minute at half speed. If the character is wearing clothes while swimming, double the endurance cost and halve the speed. Swim while towing another person: Difficult. Dive without aqua-lung to depths of one to five meters: Difficult. Ditto to six to 10 meters: Formidable. Avoid a mishap while using an aqua-lung or rebreather is Difficult.

Thrown Weapon: Pin target's sleeve to wall with thrown knife while barely nicking skin: Formidable.

Tracking: Follow in snow, loose soil, or sand: Average. Follow across rock: Formidable. Detect disease in animal from carcass: Difficult. Determine time since quarry passed through: Formidable. Determine number of animals or people in party: Formidable. Night increases all tasks by two levels of difficulty.

Unarmed Martial Arts: Disarm opponent with strike/kick is an opposed Formidable vs Unarmed Martial arts task.

Warhead: Arm/disarm weapons from the character's own army: Average. Arm/disarm foreign weapons is one level more difficult. Repair a faulty nuclear weapon from the character's own army: Formidable. Catastrophic Failure results in accidental detonation.

SKILL IMPROVEMENT

As a person grows older and more experienced, it is natural that he will polish his existing skills and learn new ones. In a sense, **Twilight: 2000** picks up the threads of the lives of the characters in midcourse. Thus, they already have considerable knowledge of the world, but as time passes they will learn more.

Experience: As players find themselves in situations which require the use of skills, they will gradually learn to use them better. In the game, this is represented by experience points.

Award one experience point per session unless the player really screwed up, plus a bonus point for any particularly dangerous, or particularly intensive, skill used. Referees can award an additional bonus point for a player who is particularly good at staying in character during the session or who performs a notably heroic deed. Referees should not award points for easy or mundane tasks, even if they are especially successful. The option in all cases is the referee's, but he should be guided by two simple principles. First, *the reward should fit the task.* Random and meaningless use of skills should not be rewarded by experience points. Rather, experience should be gained only when the task at hand needs doing. Second, *skills are acquired gradually*, and experience should reflect this. If players begin zooming up in skill levels, the game will soon lose its challenge.

At the same time, each player should note (perhaps with a pencil checkmark, so it can be erased before the next session) the skills used during the session. The experience points awarded can then be converted to levels in any one or more of the skills used.

Conversion: Experience points are converted to increases in skill levels during a lull in the characters' activities, perhaps during a day spent in rest and maintenance (the periods between active adventuring, in other words). When the referee thinks the time is right, the characters' accumulated experience points may be converted to increased skill levels.

To do this, the character spends experience points to buy levels in a skill. To buy a level costs points equal to its numerical value: to buy Mechanic: 5 costs five experience points (assuming the character has Mechanic: 4

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already). A character must already have achieved the level immediately below the one sought, although a character can advance more than one skill level at a time (to go from Mechanic: 3 to Mechanic: 5 would require 4+5=9 skill points, which could be expended at the same time).

If the character's experience points for the skill are not converted, they may be accumulated. Points acquired may be used to build up any skill.

For example, Monk has accumulated six experience points by the time the referee lets his party assimilate its experience, and he decides he needs to improve his Small Arms (Rifle) skill. His current skill level as a rifleman is 4. To advance to Small Arms (Rifle): 5 requires five points, leaving him one point left over for another use on another skill or to save for a later time.

Option: If the players don't mind the bookkeeping involved, referees may award points in specific skills, for use only in that skill (Mechanic experience points, for example, or Chemistry experience points).

Initiative: A separate point system exists for improving Initiative. Referees should award one point for each session in which there is a firefight, awarding an extra point for a particularly outstanding shot or a superior feat of hand-to-hand combat. Initiative points are used to buy increasing levels of Initiative just like any other skill, but Initiative experience points can only be used for Initiative.

Advance by Observation: If a player observes another player successfully accomplishing a task, the observing player gains one experience point. This observation must be a close-up examination of the task and must have the cooperation of the character actually performing the task. If the referee considers the skill sought to be a complicated one (such as Mechanic), the task should take longer than usual (perhaps substantially longer), as the character performing the task will often have to pause to explain what he is doing or to answer questions. A character may gain experience points from observation only if the observed character's skill level is at least twice as great as the skill level of the observing character.

Some skills are used for tasks which do not take specific time periods and which cannot be explained or taught except by direct example. (Observation is a good example of this.) Characters may gain experience points through observation of these tasks. For example, if a group of characters encounters a group of NPCs, the characters' Observation skill is that of the character with the highest skill, modified downward for having extra people along. If the group is successful in surprising the NPC group, characters may gain an experience point in Observation by watching an expert at his craft.

Instruction: A character may be taught a skill. Teaching a skill is Difficult: Instruction. The instructor may teach a number of students equal to his Instruction skill level and must have a skill level in the skill being taught. An instructor cannot teach a student whose skill level in the subject taught is equal to or greater than that of the instructor. The task takes one period per day for one week (seven consecutive days). Successful completion of the task (rolled for at the end of the week) results in experience points for both the students and the instructor. The instructor gains experience for accomplishing a task as explained in the experience rules. Students gain a number of experience points (in the skill being taught) based on the number of students being taught.

If the number of students is less than half of the instructor's skill level, each student gains three experience points. If the number of students is half or more of the instructor's skill level, each student gains one experience point.

New Skills: A character with no level in a particular skill (as differentiated from level 0 in a skill) may attempt to learn the skill. This may be done either through observation (in which case the level gained is 0) or through instruction (in which case the skill level gained is 1). In either case, the experience point cost will be 1.

NONPLAYER CHARACTERS

A variety of nonplayer characters (NPCs) will be encountered in the course of adventures. These are characters the referee will play, either in cooperation with or opposition to the players. Typically, NPCs are not as detailed as player characters, but on occasion a referee may choose to generate an especially significant NPC as if he were a PC.

Types of NPCs and Their Assets: For ease of play in the game, all NPCs are divided into four experience levels: Novice, Experienced, Veteran, and Elite. These experience levels dictate the NPCs' Initiative, attributes, and combat assets. The NPC Stats table lists the stats for each experience level.

Level refers to experience level, *Initiative* refers to the corresponding Initiative rating, *Attributes* indicates the average physical attribute level (STR, AGL, CON), *Asset* refers to the rating of the NPC's primary combat assets, and *Damage* indicates the number of damage points the NPC causes in an unarmed combat attack.

Physical Attributes: The value for these attributes is given separately from the skill area because they are essential for resolving combat. Strength is used to calculate recoil effects in fire combat, Constitution is used to resist unconsciousness when seriously wounded, and all three physical attributes are used to resolve unarmed melee combat. The nonphysical attributes are not covered by this number because these NPC ratings are intended to convey the character's *combat* and the other attributes are more likely to be linked to noncombat skill as discussed under "Other NPC Assets," below. The average attributes should be taken to mean that the numbers are the average attributes of a group of such NPCs, and that each and every one of them has those attribute numbers. Referees may raise and lower attributes and assets if variation is required, but if this variation will not be seen by the players, the extra effort is pointless.

Combat Assets: The combat asset is for the weapon that the NPC habitually uses in combat. This will usually be something requiring Small Arms skill.

Other NPC Assets: Many intelligent, competent, and highly skilled people are not very good fighters. The experience level of stock NPCs is relevant only to their use in combat. Several of the Novice NPCs given below have attributes in noncombat skills larger than their experience level indicates.

NPC Appearance: The appearance of an NPC is the first thing a player notices, but should be the last thing you decide about the NPC. The NPC's appearance will in many cases be a reflection of his abilities and motives.

NPC Stats

Level	*Initiative*	*Attributes*	*Asset*	*Damage*
Elite	5	8	15	5
Veteran	4	7	13	4
Experienced	3	6	11	3
Novice	1	6	9	1

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STOCK NPCS

In a number of instances in your campaign, a stock character might come in very handy, usually when the player characters encounter large numbers of nonplayer characters. The referee can work these stock characters up in advance of the game, then use them like extras from central casting—introducing them wherever and whenever they're needed.

Stock characters should have a job title, a *short* description, an experience level, and skills. NPCs have the default skills given to all characters, plus one skill most relevant to their job title at the same level as their default skills.

Referees should use these as examples for putting together their own libraries of stock NPCs.

The basic information can be jotted on a 3"x5" index card and filed away for future use. Another suggestion is to scan through old magazines for suitable pictures, cut them out, and paste them to the back of the card as a visual reference.

Frequently, good stock NPCs can be gleaned from stereotypical characters which reoccur in old war movies, WWII dramas and sitcoms, or even the recent droves of Vietnam movies. Think about the characters you remember from *The Dirty Dozen, Rat Patrol, Hogan's Heroes, M*A*S*H, Apocalypse Now, Platoon, Kelly's Heroes, Bridge Over the River Kwai, The Big Red One, Sands of Iwo Jima, Full Metal Jacket, China Beach,* and *Tour of Duty*. What makes them memorable? What tag characteristics do they possess? Combine one or two, or slightly rework the character to fit into the **Twilight** milieu. Voila! Another stock NPC.



Unenthused Militiaman

The unenthused militiaman is a youth, a mere stripling, who prefers service in the town militia over any other means of earning his meals.

The unenthused militiaman is not very good at fighting, and he is well aware of it, which makes him "rather windy," as the British would say.

Level: Novice
Assets: Unarmed Martial Arts: 9, Survival: 6, Small Arms (Rifle): 9
Initiative: 1



Marauder Chieftain

The marauder chieftain turned to a life of brigandage after things fell apart for reasons he keeps to himself.

Whatever the reasons, he is now totally heartless.

The world belongs to the strong, the marauder chieftain believes, and therefore the weak deserve to lose what they have if they can't hold onto it.

Level: Veteran
Assets: Unarmed Martial Arts: 13, Survival: 9, Leadership: 7
Initiative: 4



Honest Villager

The honest villager is a craftsman—a metalworker. He now uses the skills he learned in his prewar metalworking hobby to earn a living.

The villager is not very good at his chosen craft, but he's the only metalworker the village has. On that basis, he continues to stay in business.

Level: Novice
Assets: Unarmed Martial Arts: 6, Survival: 6, Metallurgy: 12
Initiative: 1



Harmless Hermit

The harmless hermit is one of those unfortunates who has been driven mad by the war.

He lives a solitary life on the edge of a deserted city suburb, snaring small animals for food.

He keeps himself occupied by absent-mindedly talking to the ghosts he sees everywhere.

Level: Experienced
Assets: Unarmed Martial Arts: 11, Survival: 6, Computer: 6
Initiative: 3

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Rag-Picking Refugee

The rag-picking refugee was once a prosperous blue-collar worker, but the war destroyed his factory, and forced him and his family from their home. Marauders have stolen most of the family's possessions, and the only way he has managed to survive is to learn to fight a little (the only problem is that a lot of people are better at that than he is). His only goal in life is to find someplace where he can be safe. Safety, however, is even rarer than good coffee these days.

Level: Novice
Skills: Unarmed Martial Arts: 6, Survival: 6, Mechanic: 10
Initiative: 1



Yeoman Farmer

The yeoman farmer is old before his time. He probably hasn't bathed or shaven in a while—after all, soap is an expensive luxury to him.

He works hard and can be found during every waking hour performing some activity which is vital to survival of the farm.

This farmer has seen altogether too much misery and has learned the hard way that few strangers can be trusted—so is it any wonder that he fingers the machete in his belt as you approach him?

Level: Experienced
Skills: Armed Martial Arts: 11, Survival: 6, Farming: 14
Initiative: 3



Tired Soldier

The tired soldier is not physically tired, but he is mentally exhausted from the violent life which he has been forced to lead in order to survive.

Formerly a highly trained member of an elite fighting force, the tired soldier became disgusted with killing and ran away.

Now, tormented by nightmares of his past deeds, his mind is right on the edge of cracking, and it probably wouldn't take much to send him over the edge into a dangerous psychosis—or total catatonia.

Level: Elite
Skills: Unarmed Martial Arts: 15, Survival: 12, Small Arms (Rifle): 15
Initiative: 5



Thieving Marauder

The thieving marauder was once a petty knee-buster and extortionist for a shakedown gang on the waterfront, and the only thing the war has changed is the locale where he practices his chosen craft.

He is basically a coward and prefers to strike from ambush, which is why he will seldom be found in a stand-up fight (at least not voluntarily).

Given a chance, he'll take anything he can pry loose and will crush your skull with his rifle butt if you turn your back.

Level: Experienced
Skills: Unarmed Martial Arts: 11, Survival: 6, Small Arms (Rifle): 11
Initiative: 3

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Likewise, appearances will shape the opinions of your player characters; often they will be all a player has to go on when making a decision. Appearance includes physical description and clothing, speech, posture, and so forth. As with a scenic description, emphasize the things that deviate from the norm and will catch the player's eye. Also, make an attempt to use colorful adjectives when describing NPCs. If you were a player, which of the following NPC descriptions would you prefer?

"As you ride down the road you see a farmer standing in his field."

or

"As you ride down the road, you come to a grizzled, old farmer in dusty work clothes leaning against the sagging rail fence that surrounds his field."

The second NPC description gives a much more vivid picture of the farmer. Now apply some of the other advice concerning scenic description. Provide other sensory information, throw in a hint of danger, and save the best for last. You may end up with a description like this:

"As you ride down the road, you come to a grizzled, old farmer in dusty work clothes leaning against the sagging rail fence that surrounds his field. He must be resting after hard work, because he gives off the strong smell of sweat. He shows no sign of interest or welcome as you approach. As you get closer, you see the left side of his face is puckered by a long, jagged scar. You recognize it from experience to be a recently healed bullet graze."

This second description is much more useful to the players and will inspire a number of questions.

Is he not reacting to our approach because he's too tired to care, because he's sick, or because he's hostile? Who shot him, and why? Where does he live, and what does he know about the surrounding territory?

Usually you will want to make up the appearance of NPCs yourself with some specific image or mood in mind. Also, the appearance of some NPCs will be dictated by their occupation.

Refugees will look ragged, starvation-thin, and dirty. Merchants will be well fed and cleaner. Experienced soldiers may be grimy, but their weapons will be clean, while rusty or poorly cared-for weapons may be the sign of an inexperienced group. Put some thought and "character" into your NPC descriptions, and your gaming sessions will be richer for it.

SAMPLE CONTACTS

Contacts are kind of halfway between stock NPCs and the detailed NPCs discussed below.

These two solid contact examples show how a referee can develop a generic contact into a solid one. They do not (and cannot) demonstrate the full variety of such characters.

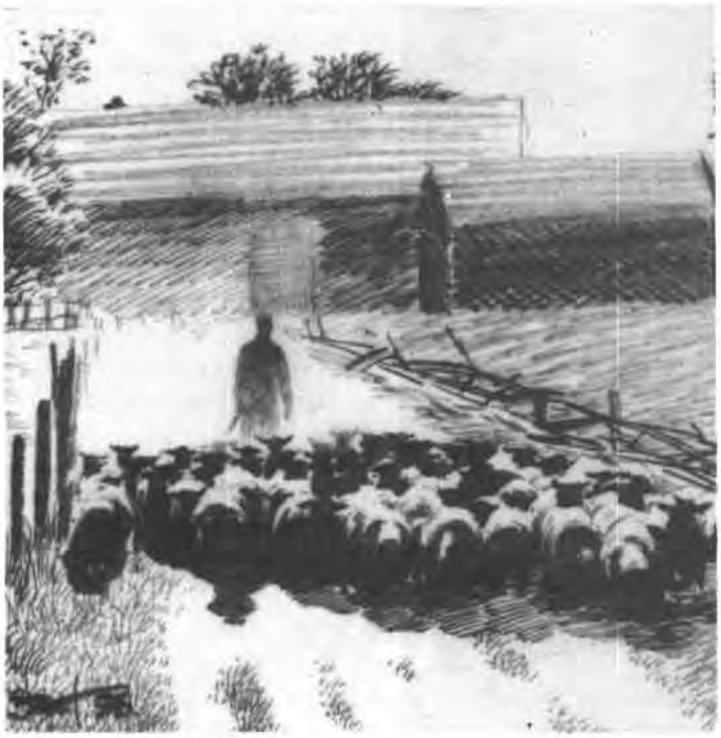
Colin FitzHugh, Foreign Military

A player's character spent a term in the US Army's Armor arm, during which time he acquired a foreign contact. Since he probably spent the four years of the term in the armor arm at the US Army Armor Center at Ft. Knox, and the contact is military, the character was either attending one of the courses offered at the armor center, teaching one of the courses there, or associated with one of the military liaison offices.

The character was a Spec 4 at the time, and not so gifted a soldier as to attract the attention of an officer instructor, he probably made the acquaintance of an NCO associated with one of the liaison offices. For no particular reason, we have chosen to make John's contact a British NCO who was stationed at Knox at the time.

We pick a typical British name such as Colin FitzHugh (pulled out of the air—it could just as easily have been Margaret Armstrong). The character's gender can either be chosen, as in this case, or diced for, as in the next example.

There are a variety of ways John and Colin could have met, but we will decide (again, for no particular reason) that they met because of





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John's rock climbing hobby, and parted company after a couple of years when either John or Colin was transferred to another station.

Colin will be roughly John's age, or slightly older, making him 33-37 when 2000 rolls around, and we may assume him to have been a tanker NCO during an earlier part of his career. He is probably still serving with an armored unit when the war comes, perhaps as a platoon sergeant.

Maybe Sgt. FitzHugh was with one of the British units that were involved in the last offensive in 2000.

Gary McGuire, Academic

During a character's matriculation at her undergraduate college, she acquired an academic contact. To convert this into a solid contact, we toss a die to choose the sex of the contact randomly, and we get male. Again picking a random name out of the air, we choose Gary McGuire. The character was involved in theater at the time, but we decide that she met Gary in one of her classes, where they shared a study group. We pick a chemistry major for Gary, and send him into chemical engineering (he ends up in the manager career after completing a master's degree). He's drafted when the war comes and is put into a support arm unit.

Gary could be slightly younger or older than our character (who is 33 in 2000), making him 29-37. He is an American soldier, probably commissioned, and is most likely a captain. At the referee's option, he may even have been assigned to the same division as our character during the war. (Divisions are big places; they could serve for years without ever hearing of each other.)

Yagoda—what can I tell you about Yagoda. That's not his real name. We just hung that one on him because that was the village where we first ran into him and his band of cutthroats. He and a couple of similar scum were in the process of relieving the villagers of some foodstuffs when we arrived and put a stop to it. He's despised us ever since, and whatever we try to accomplish around here, whatever good we try to do, Yagoda turns up like a bad penny. He's a short, barrel of a cossack, perpetually bow-legged from riding a horse, and ugly as sin. Somebody broke his nose once, and it looks like he's got a small, flesh-colored potato glued to his face.

Detailed NPCs

On rare occasions, a nonplayer character should be created as if he were a player character. Most NPCs are "spear-carriers." They hang around and provide local color as long as they are needed, and then they vanish forever. They are generally slow of wit, weak of limb, and quick to perish. Well, not everyone can be the hero of this story, and if the NPCs were as capable as your players, life would be much more difficult for them and, more importantly, impossible for you, the referee.

Imagine every person your players run into with detailed skills and attributes, and three or four cunning plans up their sleeve. The paperwork alone would choke your game. So, for a variety of excellent reasons, most NPCs are just the bare bones of a character, a cardboard cutout to which you give the illusion of reality with elaborate descriptions and a couple of motivations, randomly chosen from the deck.

Most NPCs. But not all of them.

Because of the lengthy procedures involved in generating a character, referees should use detailed NPCs sparingly, and only where they will advance the plot of the adventure.

Detailed NPC motivations are not random—they are determined with care and thought. Because of this, detailed NPCs should return again and again to dog the characters' footsteps, like a villain in an old-time melodrama.

Not every character the players run into should be a detailed NPC. But a few well placed ones can add much to a campaign.

The most useful tool the referee has in running detailed NPCs is the motivation system.

NPC MOTIVATION

In many cases, the motivations of NPCs are either obvious or unimportant. An enemy soldier, a merchant in a bazaar, a common field hand—the general range of background characters do not require the referee to determine motivation. Usually motivation is only determined for the leader of a group of NPCs or a solitary NPC with which the players will have important or extended dealings.

To determine the motivation of an NPC, draw two cards from a standard deck of playing cards. The highest value card is the NPC's primary motivation; the other is his secondary motivation. The particular motive is determined by the suit of the card and its face value, as indicated on the NPC Motivation Table below.

Violence: The NPC has a greater likelihood of reacting with violence than most people. A "somewhat violent" NPC is not frightened or intimidated by threats of violence and will not hesitate to use violence if the situation seems to warrant it. A "moderately violent" NPC is aggressive and inclined to view violence as the preferred means of resolving disputes. A "very violent" NPC loves a good fight and either is or wants to be a warrior.

Even a high violence rating does not, however, necessarily indicate that the nonplayer character is brutal or a bully. For example, a "very violent" NPC who was also "very sociable" could be described as friendly, good-natured, and loyal, but also a good man to have with you in a fight.

NPC Motivation

Clubs

Card	*Motivation*
Ace	War leader
King	Brutal
Queen	Stubborn
Jack	Murderous
8-10	Very violent
5-7	Moderately violent
2-4	Somewhat violent

Diamond

Card	*Motivation*
Ace	Generous
King	Selfish
Queen	Lustful
Jack	Coward
8-10	Very greedy
5-7	Moderately greedy
2-4	Somewhat greedy

Hearts

Card	*Motivation*
Ace	Just
King	Honorable
Queen	Loving
Jack	Wise
8-10	Very sociable
5-7	Moderately sociable
2-4	Somewhat sociable

Spades

Card	*Motivation*
Ace	Charismatic
King	Deceitful
Queen	Ruthless
Jack	Pompous
8-10	Very ambitious
5-7	Moderately ambitious
2-4	Somewhat ambitious

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Greed: The NPC wants to be rich. A "somewhat greedy" NPC will generally sell items for gold, even if alone in the wilderness. A "moderately greedy" NPC will probably only accept gold or will strike very hard bargains in barter. This sort of character is very easy to bribe. A "very greedy" NPC can be expected to accept bribes, deal only in gold, and perhaps attempt treachery if he believes the players have considerable wealth and he can get his hands on it.

Sociability: The NPC is highly influenced by his love of people. He tends to be friendly, loyal, and just. A "somewhat sociable" NPC will be amiable, talkative, and cooperative with most people he meets. A "moderately sociable" NPC will have a strong sense of duty and loyalty to the group he belongs to. A "very sociable" NPC will have a strong commitment to justice and the welfare of everyone he meets. He will look for the good qualities in anyone he comes in contact with but will react with anger to injustice and brutality.

Ambition: The NPC seeks personal power and influence. A "somewhat ambitious" NPC will be inclined towards boastfulness and a desire to impress his peers. A "moderately ambitious" NPC will wish to be in a position of real responsibility in an organization. A "very ambitious" NPC will be overwhelmed by a desire to manipulate and control the people around him, to become a ruler of men.

Special Cards: Aces and face cards are special cards, each with its own special meaning. If a special card is drawn, it is automatically the primary motivation or most prominent characteristic of the NPC. If two special cards are drawn, the NPC has two competing primary motivations or dominant characteristics. The meaning of each special card is given below.

War Leader: The NPC is an unusually good leader in combat situations. He has an instinctive grasp of tactics and a good eye for terrain, and never panics in a fight. In game terms, treat the character as having an Initiative of 6. In addition, the referee should assume that the NPC can anticipate many situations in combat and will make the best allowances for them possible.

Brutal: The NPC is a sadistic brute who enjoys inflicting physical injury on others. He is likely to use torture whether or not there is anything to be gained from it.

Stubborn: The NPC is stubborn and pigheaded, and will be extremely difficult to persuade once he has made up his mind. He is set in his ways and resists change of any sort.

Murderous: The NPC either has committed murder or is planning a murder. Murder in this sense does not mean a simple killing, but rather means the secret and intentional killing of an acquaintance for reasons of personal gain. Although the world is a very violent place in the year 2000, murder is still rare.

Just: The NPC sees justice as the greatest virtue in a person and the only important consideration in deciding on a course of action. He will display great justice in his dealings with others, will have no respect for cheats, and will wholeheartedly assist any attempt to right an injustice.

Honorable: The NPC is scrupulously honest in his dealings with everyone, and his word of honor is his absolute bond. If he believes that he is honor-bound to do something, either because he has promised or because his position carries an obligation to do so, he will attempt to carry out the task even if it means his own death. He has utter contempt for liars or people who break their word.

Loving: The NPC loves a person so completely that he would willingly sacrifice himself for that person. This could be a spouse, parent, child, or friend.

Wise: The NPC is very wise, and always exhibits good judgment and offers sound advice.

Generous: The character is generous to a fault and will gladly give away anything he has to someone in need, even if this leaves him with nothing. In less extreme cases, he will be inclined to make very generous trades and will always refuse payment for help with a task other than one directly related to his normal livelihood.

For example, a generous farmer would give the adventurers all the food they needed and accept in return whatever he felt they could easily afford to trade or pay. If they needed help repairing a vehicle, he would help them and refuse to accept payment for it.

Selfish: The opposite of a generous person, a selfish NPC will never help without demanding payment and will never give away anything. He will also demand higher payment than he is due and will jealously guard his possessions.

Lustful: The NPC is driven by lust for the opposite sex. This may be lust for members of the opposite sex in general or may be an obsession for a particular member of that sex.

Coward: The NPC is a total coward and will run from danger at every opportunity. If escape is impossible, he will cower and refuse to fight.

Charismatic: The NPC is a charismatic leader who others are naturally drawn to and want to follow. He is likely to have a large and extremely loyal following.

Deceitful: The NPC is a liar and may be a traitor if the situation presents itself.

Ruthless: The NPC will let nothing stand in his way in achieving any goal and feels total disregard for the needs of others. The NPC can appear to be considerate, generous, loyal, or anything else which serves his purpose, but he actually feels nothing.

Pompous: The NPC is arrogant, conceited, and pompous in his dealings with others. He considers himself clearly superior to everyone around him.



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GETTING STARTED

So now you know how to referee a game, but where do you start? Where does the campaign begin and how do you get your players going? The environment chapter provides sufficient background and tables for an enterprising referee to set an adventure campaign in any inhabited part of the world. You should start by carefully reading the chronology again and then reading through the description of the continent or country you have chosen. The players should have the same access to this information.

Once you have a good general feel for the area, you can elaborate on it as much or as little as you want. Start by getting a good map of the area. These can be found in libraries, and many school bookstores offer inexpensive atlases with excellent region maps. (A useful map of Poland is provided with the game). You will want to make a rough overlay of the area and outline the different encounter regions. The rules give you some general guidance, but feel free to change this to suit your own tastes and the tastes of your group. Also, remember that you can always randomly generate encounter regions using a D6 or D8.

Next, determine how your players came to be here. It's important that you not only have a reason for characters of their nationality to be in the area, but that you also have a plausible explanation for them being on their own. A good reason, but certainly not the only one, is that their parent unit has been overrun and scattered, and this is the reason used in the sample campaign start given below.

Finally, give your players a briefing. What has happened to them in the last several days and what do they know about the countryside? This information should cover as little as possible because much of the sense of danger and adventure in the game comes from exploring the unknown. Therefore, it is a good idea to start with the PCs having just entered a previously unfamiliar area. It also makes sense to have some factor preventing them from retracing their steps. Usually this will be a hostile military unit, but it could also be a plague or even a final nuclear strike.

We have included a sample briefing for a campaign set in Poland. Your briefing can be oral instead of written and need not be as extensive as this. However, the more flavor you put into the initial situation, the more interested your players will be from the start.

Player Briefing

In the spring of the year 2000, the German 3rd Army launched its final offensive against Poland. It was postponed due to late rains—the soldiers were delayed in getting their fields planted.

The objective of the offensive was to clear the Baltic coast of Polish and Soviet forces, thus gaining control of the plentiful Baltic fishing resources and the Vistula River barge traffic.

When the offensive finally got under way it was spearheaded by the U.S. 11th Corps because the U.S. troops were less tied to their cantonments than were the Germans. You are members of the United States 5th Infantry Division (Mechanized), one of the component units of the 11th Corps.

The initial drives were successful, with two U.S. divisions breaking loose and conducting deep-penetration raids into the enemy rear area.

While the 8th Division (Mechanized) headed for the port of Kaliningrad and a linkup with the Free Latvian Army, the 5th Division (Mechanized) headed southeast toward Lodz. Then everything started to come apart.

The last battle-worthy remnants of the Polish Army counterattacked, and battered themselves to pieces against the forward German and U.S. divisions. When the dust had settled, the last heavy equipment of 11th Corps' main body was burning junk. The remnants of four Soviet armies went on the offensive against the cantonments of the 3rd German Army, and German troops began drifting westward to bolster the defense of their homes.

Finally, two additional Soviet armies, the 4th Guards Tank and 22nd Cavalry, rolled across the Polish frontier from Byelorussia and hit the U.S. 5th Division. With a combined strength of 21,000 men and almost 100 modern tanks, the two Soviet armies plowed 5th Division under near the Polish city of Kalisz, 200 kilometers southwest of the ruins of Warsaw.

As division headquarters was being overrun, the CO's last radio message to you was, "You're on your own. Good luck."

Small, scattered bands of men were all that escaped that final night of fire and death. There followed several weeks of furtive flight, as you travelled by night and hid by day, making your way through a countryside seemingly swarming with enemy patrols. The air waves were at first full of radio messages as isolated groups attempted to link up. Soon most radio broadcasts were frantic calls for help from units surrounded and being overrun. Eventually the radios grew silent except for enemy traffic.

But now you have gone several days without seeing a hostile patrol and appear to be well clear of the enemy area of operations. There do not appear to be any friendly groups anywhere near you, though, and you have not had time to carefully explore the surrounding countryside. You have made camp in a small clearing in a wooded area well away from the main roads. Your vehicles are well camouflaged, and you've all gotten your first good night's sleep in several days. As the sun comes up, you face the decision as to your next course of action.

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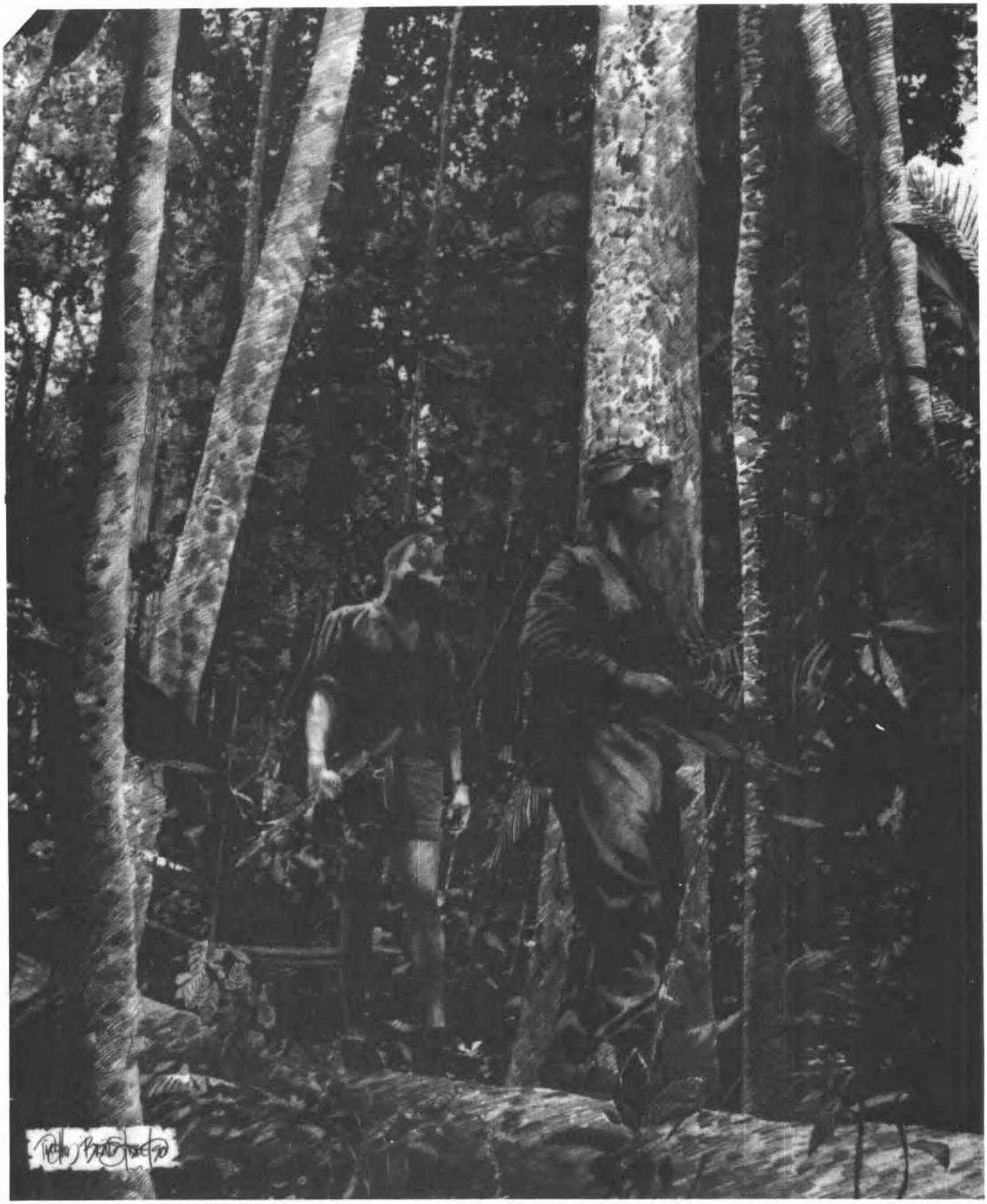

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TIME AND TRAVEL

A typical firefight can be over in seconds, while an encounter can last several minutes. An adventure may take days or weeks. A campaign lasts months, perhaps years. Obviously, activities cannot all be played at the same rate of time—thus, a variety of time scales are used.

GAME DAY

The longest measure of time regularly used is the game day. Game days are used to gauge travel over long distances or progress toward completion of a major task. Referees and players will want to keep general track of weeks and months, as well, to keep a broader perspective on the passage of time.

The game day is broken down into six four-hour periods, used to schedule activities during a day. When moving cross-country, it is seldom necessary to plan each day separately; instead, players should settle on a routine—such as eight hours on the road, four hours foraging and hunting, four hours of camp duties and maintenance, and eight hours of sleep. Likewise, a day in town might consist of eight hours each of work, recreation, and sleep. Players would then merely specify to the referee their task. Special situations, such as a forced march, will require alteration in the routine. A generalized routine, however, will greatly speed play of the game.

The use of four-hour periods is for the convenience of the referee and players to make scheduling of daily activities easy. It is not meant to unduly restrict players' activities. Thus, for example, if a group of players wants to move a certain distance that is half the distance its vehicles can move in a four-hour period, the referee should feel free to let the group do so and only charge them half the normal fuel cost for a one-period move.

ENCOUNTERS

The referee will usually roll for an encounter once every four-hour period (or fraction thereof) spent moving and once per day spent stationary. The encounter rules (beginning on page 154) explain the procedures followed to determine what sort of encounters result.

Encounters with people are resolved at the time scale the referee feels is appropriate. Usually, this will consist of roleplaying the encounter, with the referee playing the part of the nonplayer characters encountered and periodically informing the players of the passage of time. For example, after an exchange of conversation, the referee may say, "You've been talking to the farmer for half an hour."

If the encounter is violent, the referee will use combat turns (see the combat rules, beginning on page 194).

Boats: Boat encounters are rolled for as described above, but they use the River column of the Encounters table (see page 155) instead. The River column contains an additional type of encounter result: navigation hazard.

TRAVEL

Daily travel distances can vary greatly based on terrain, loads carried, mechanical breakdowns, and a variety of other factors. The Travel Movement Table below (an abbreviated version of the one on page 273) gives rough values, in kilometers traveled per period. The first number (to the left of the slash) is used if travelling on a road, the second (to the right of the slash) if travelling off the road.

The referee should feel free to vary this as he or she sees fit. Remember that players should never feel that their interaction with the world around them is purely mechanical or a function of reading numbers off a chart.

Complications to this are explained below. Terrain is covered in the next section.

People: People march half the listed human distance if burdened. They are also subject to fatigue (see below).

Boats: As the traditional arteries of travel deteriorate, rivers become increasingly important avenues of travel and commerce. Travel on water is by way of boat. Boats follow many of the same rules as land vehicles. These rules cover only inland vessels designed to navigate rivers and lakes. Inland vessels can be divided into three broad categories which correspond to their means of propulsion: motor, wind, and muscle.

Travel movement by boat is accomplished in the same manner as travel by foot or vehicle, but using the travel movement rates for individual vessels given on the relevant vessel's card.

Animals: Horses, elephants, and oxen should not be made to travel more than two periods per day; mules and camels should not be made to travel more than three periods per day. They can travel more than that, but they suffer an increased chance of going lame (see below). Horses and mules may be force-marched. If force marched, a horse's travel distance is multiplied by 2, and a mule's by 1½. However, this also increases the animal's chance of going lame. Elephants and camels may not be force-marched (they refuse to move when too tired).

Any animal except camels and elephants may be burdened (carrying up to twice its load). Unlike a human, the animal's travel distance is not reduced, but burdening increases the animal's chance of going lame. A burdened animal may not be force-marched. Camels and elephants refuse to move when overloaded. Animals pulling wagons or carts may not be force-marched or burdened, but may be forced to travel more than their usual number of periods. Camels and elephants are not usually used to pull carts or wagons, and no harness has been developed for them to do so.

Travel Movement (Abbreviated)

Unit	*Move*	*Fuel*	*Maint.*
Human	20/20	—	—
Horse	20/20	—	—
Mule	20/20	—	—
Camel	15/15	—	—
Elephant	10/5	—	—
Wagon/Horse	20/5	—	1
Wagon/Ox	10/5	—	1
Cart/Horse	20/5	—	1
Cart/Ox	10/5	—	1
Bicycle	65/15	—	1
Civilian Car	215/35	80/20	2
HMMWV	215/85	90/30	2
UAZ-469	215/45	60/20	2
Motorcycle	195/85	16/8	2

Move: On-road/off-road (cross-country)
Fuel: Capacity/consumption per period

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TERRAIN AND TRAVEL

Travel on a good road is largely unaffected by the terrain through which the road passes, but good roads are becoming scarce. Furthermore, the roads are still fairly well settled, and are often infested with military patrols and convoys. Most characters will spend much of their time on back roads and travelling cross-country. When travel on a good road is practical, it is done at the road movement rate. A poor road (breaking up, partially washed out, or just hasn't seen a road crew in three or four years) allows travel at the full cross-country rate for vehicles regardless of terrain. Likewise, travel down a river (in a boat or amphibious vehicle) is largely independent of the surrounding terrain.

Aside from roads and rivers, the main terrain types encountered in the countryside are woods, swamp, hills, and open terrain.

Woods: Woods are forested areas of considerable extent. Most wooded areas in Europe have frequent clearings and open areas, and are crossed by numerous dirt roads, paths, and firebreaks. While a man can walk through virgin forest, it is an impractical means of travel for vehicles or for a party of men for any distance. Thus, all travel through wooded areas is assumed to be along paths and roads and through clearings whenever possible. Movement on foot or by animals through woods is at the full off-road movement rate. Vehicles travel through woods at half their off-road movement rate unless following a particularly well travelled old dirt road, in which case they move at their full off-road movement rate. Bicycles may not be ridden through woods except along such roads.

Swamp: Swamps are difficult to traverse. A person on foot can move at his or her full movement rate. Animals and all vehicles move at half their off-road movement rate. Bicycles may not be ridden in a swamp. In addition, non-amphibious vehicles must check each four-hour period to avoid becoming mired, using the relevant Ground Vehicle cascade. Referees should bear in mind that even amphibious vehicles can become mired in areas where there is not enough water for them to float, and require a task roll for them in some situations.

Hovercraft treat swamps as woods or open depending on the type of vegetation in the swamp.

Extracting a mired vehicle takes one additional period and requires the use of one or more vehicles whose combined weight equals or exceeds that of the mired vehicle.

Hills: Hills are relatively steep, but regular, rolling ground. All movement is reduced by half in hills. Hills may be wooded. If so, determine the movement rate for woods first and then apply the hill terrain reductions to the result.

Open: Open terrain is generally flat or gently rolling grasslands and for the most part consists of former cultivated lands which have reverted to the wild but are not yet wooded. Open terrain also includes cultivated ground in the area of settlements. All movement through open terrain is at the full off-road movement rate.

Water: Except for bridges, ferries, or fords, linear water barriers (rivers, streams, canals, etc.) can only be crossed by swimming or by amphibious vehicles. Depending upon the steepness of the banks, hovercraft may or may not be able to cross. Open water (ponds, lakes, etc.) can only be traversed by amphibious vehicles, boats, and swimmers. Hovercraft may cross open water, but the steepness of the banks or shoreline may present obstacles to entering or leaving.

UPKEEP

This section is concerned with the day-to-day realities of the characters' lives. Even while they are having adventures, they must still eat, find fuel for their vehicles, and take care of their vehicles and animals.

Food Requirements

Each character must eat at least three kilograms of food every day to remain healthy. Most of this must be found in the wild. "Civilized" food—domesticated animals, cultivated grains and vegetables, canned or packaged food, etc.—counts as 1.5 times its weight. Thus, a man could survive on two kilograms of such food a day.

Specially fortified and prepackaged military rations count double, and a character could survive on 1.5 kilograms of these a day. The US Army version of such rations is the MRE (meal, ready to eat), although other armies have their own variants. Over the years, prepackaged rations of this type have become rare and are highly prized for their light weight, ease of preparation (they are precooked), and long storage life. Food consumption requirements for humans and some animals are summarized on the Food Consumption Table on page 273.

Effects of Starvation: If a character eats less than his daily requirement, but at least half the requirement, he suffers one level of fatigue (see below). This fatigue remains (but gets no worse) until he eats his full requirement for as many days as he was underfed (or 10 days at most). A character gains one level of fatigue for each day in which he eats less than half the requirement, until his Strength, Agility, Constitution, and Intelligence are all reduced to 1; they do not fall below 1.

One level of fatigue is recovered for each consecutive day of full rations.

Eventually, a character on less than half rations will starve. This takes about a month of no food or several months of half rations.

Foraging

Characters may find food in the wild by foraging. It takes one four-hour period to forage a one-kilometer-square area. An area may be foraged only once per month. For simplicity's sake, it is best to consider an area foraged out after one forage attempt.

Only one foraging party may forage an area. The number of people in the foraging party reduces the time it takes to forage an area but does not affect the quantity of food found. If two people forage an area, for example, they can search it in half a period. (A party can break up into several smaller foraging parties, provided they spread out and forage different areas.)

Foraging is a task (Difficult: Survival) performed by the character in the party with the highest Survival skill. Failure means that no food is found.

The Foraging Table at left lists the amount of food, in kilograms, found by a successful forage attempt in each of the four seasons

Foraging Table

Area	Winter	Spring	Summer	Fall
Wood/Scrub	1	3	6	6
Meadow/Swamp	0	1	2	2
Field	0	0	25	50
Fishing (1D6×)	½	2	1	1

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and in each of the major terrain types. If the character achieves an Outstanding Success, double the amount of food found.

Fields: Players do not forage, *per se*, in fields, and no die roll is necessary. In the winter and spring, there is no food to be found in fields. In the summer and fall, there will generally be standing crops, and characters can gather virtually as much food as they can carry. In one period, this will generally amount to 200 kilograms per person, and counts as hard work. (Presumably, the owner or owners of the fields have already been dealt with by this point.)

An additional period is required to separate the edible parts of the crop from the chaff. Out of the 200 kilograms mentioned above, this will yield a total of 50 kilograms of edible food in the summer or 100 kilograms of edible food in the fall. If a PC is in a hurry, the separation of edible food from chaff can be delayed until later, but the full 200 kilograms of weight must be carried until that time. The edible portion can also be used in the distillation of ethanol. The remainder of the material may be used in the distillation of methanol (see below).

Alternatively, a period can be divided into two hours of harvesting and two hours of separation, resulting in 25 kilograms of edible food in the summer and 50 kilograms of edible food in the fall (this is what is represented on the table on page 148).

In both cases, the resulting food is considered "wild," and thus only counts as one kilogram of nutrition per kilogram of bulk.

Fishing

Fish can be caught from any open water: a swamp, stream, river, pond, lake, or ocean. Fishing is a task (Difficult: Survival) requiring line and hooks, a net, or a fish trap. Fishing without adequate equipment is Formidable: Survival. Fishing equipment can be fabricated from available materials (line unravelled from clothing, a net woven from cord, a trap built out of long twigs, etc.). Fabricating fishing equipment is a Difficult: Survival task.

If the fishing task succeeds, a character can catch fish in one period equal to the amount given on the Foraging Table (expressed in kilograms of edible meat). Double the total for Outstanding Success.

These totals are for line fishing from a shore or boat, or net fishing from a shore. Double the totals for net fishing from a boat in large open waters (large lakes or the ocean).

Grenade Fishing: Any klutz can throw a grenade or other explosive charge in a pond and kill fish. No skill is needed. When a character announces his intent to try grenade fishing, the referee secretly rolls 2D6×10. This is the total quantity of fish (in kilograms of meat) available to be caught.

Each grenade will bring (1D6–1)×4 kilograms of meat to the surface. A character can keep throwing in grenades as long as he wishes. After the allowed number of kilograms of fish have floated to the surface, the referee should announce, after each additional grenade, that no more fish float up.

Note that it is possible to have a grenade fail to turn up any fish before the fish population is exhausted. Grenade fishing cannot be used in swiftly flowing water (since the dead fish float away).

Hunting

Many encounters will be with animals. Briefly, players will often be able to surprise and kill animals and, if so, eat them. The animal data charts on pages 162-163 list the size of animals. Roughly 30% of an animal's body weight will consist of edible meat (in actual fact this varies tremendously from animal to animal, but the rule of thumb given here is good enough for game purposes).

FATIGUE

There are four general types of activity that a character can undertake in a four-hour period: sleep, rest, hard work, and easy work.



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Sleep: No other activity is possible while sleeping.

Each character must have one period of sleep per day or two periods of sleep if he or she has performed three or more periods of hard work. For every sleep period deficiency, the character suffers one level of fatigue. A fatigued character will recover one fatigue level for every period spent in sleep.

Rest: Rest is a poor substitute for sleep, but can help combat its lack. A character riding in a vehicle and not serving as a driver or lookout can rest. While rest does not count toward a character's sleep requirement, a fatigued character recovers one level of fatigue for each period spent resting.

Easy Work: Hunting and foraging, routine maintenance, guard duty, setting up and tearing down camp, preparing meals, driving a vehicle on a road, and simple first aid are all examples of easy work. Easy work neither increases nor decreases a character's fatigue level.

Hard Work: Hard work constitutes tasks which are extremely fatiguing. These are marching, riding an animal or bicycle, driving a vehicle cross-country, fighting, and actual physical labor (including, but not limited to, farming, building bridges and buildings, digging ditches or entrenchments, carrying out major repairs on heavy machinery, etc.). Some referee discretion is required when deciding which tasks constitute hard work. Changing a flat tire, for example, is not particularly heavy labor; changing an axle is. A few minutes of hard work in a period do not make it a period of hard work; it takes a substantial quantity to do so, with one exception: Any combat whatsoever in a period, however brief, makes it a period of hard work.

An already fatigued character may still do hard work, but suffers one additional level of fatigue per period of hard work, regardless of how many periods are spent sleeping.

Effects of Fatigue: All of a character's effective attributes are reduced by 1 for each level of fatigue. If any attribute is reduced to 0, the character becomes unconscious and will sleep for one complete period (thus raising the attribute back to 1).

Fatigue Effects on Fire

Range	*Addition to Die Roll per Fatigue Level*
Short	3
Medium	2
Long	1
Extreme	1

Direct fire is made more difficult by fatigue. When rolling for a direct fire task, after all adjustments are made for range, recoil, etc., the die roll is increased according to the character's fatigue level. For each level of fatigue, the die roll is increased 3 points at short range, 2 points at medium range, and 1 point at long range or longer.

Load is reduced by 10% per level of fatigue. Throw range is reduced by 10 meters per level of fatigue.

Unarmed combat damage is reduced by one per level of fatigue.

Example: Monk and Carson are moving overland on a several-day march. They are carrying plenty of food with them, so they don't have to spend time foraging. Their routine is:

Midnight to 8 a.m.: Monk sleeps; Carson stands guard.

8 a.m. to 4 p.m.: Both march.

4 p.m. to Midnight: Carson sleeps; Monk stands guard.

Both Monk and Carson have two periods of hard work (marching), two periods of sleep, and two periods of easy work (standing guard) each day, and thus neither of them becomes fatigued.

On the second day out, a party of intruders stumbles into their camp at 10 p.m. Monk wakes up Carson, and in a firefight they chase the intruders off. Starting the next morning, Carson has a fatigue level of one (three periods of hard work marching or fighting and only one period of sleep) while Monk is not fatigued (also three periods of hard work, but two periods of sleep).

At the end of the day's march, Carson's fatigue level has risen to 3, since once fatigued he suffers an additional fatigue level per period of hard work. That night he goes to bed and sleeps for two periods. When Monk wakes him up at midnight, he has a fatigue level of 1, having then recovered two levels.

When Monk finally wakes up at 8 the next morning, they decide not to march that day and let Carson rest. Both spend the day in routine maintenance and foraging, and at 4 p.m. Carson turns in. When he awakes at 8 p.m., he is refreshed and recovered from his fatigue.

As should be clear from this example, it is difficult for two people to make good time cross-country, keep constant guard, and not rapidly wear themselves out.

The game referee should not bother about minor sleep period deficiencies except in instances where fatigue and endurance can both clearly become important to a group's activities. That is, if a group is moving at a fairly leisurely pace with plenty of time to catch up on sleep and rest, an interrupted night's sleep period is of no great concern, and should not be allowed to slow up the game by causing a flurry of paperwork and calculations on the part of either the referee or the players.

Vehicles

PCs usually begin the game with one or more vehicles, and may come into the possession of others as time passes. This section covers caring for and using vehicles.

TRAVEL

Travel movement by vehicle is accomplished in the same manner as travel by foot, but using the travel movement rates for individual vehicles consolidated in the Travel Movement Table on page 273.

Special Note—Bicycles

A bicycle has no load of its own; a character riding a bicycle can carry his personal load. He travels at half speed if burdened. If unable to ride (see the four terrain descriptions above) a character may walk his bicycle at his off-road walking speed; its weight does not count against his load limit.

Vehicle Cards

For the convenience of the referee, we have put together data cards for each vehicle rated in this game on pages 64-92.

The referee should photocopy the card or cards for each relevant type of vehicle in the characters' possession and lay them out as indicated in the accompanying diagram, slowest movement on top. This will display the travel time and fuel consumption rate for each vehicle in the players' convoy, and will enable the referee to quickly and easily find the convoy speed (that of the slowest vehicle represented by the cards) and the convoy's fuel consumption (by totaling the rates of the individual vehicles).

FUEL

After years of war and a breakdown in the world transportation system, Europe is starved for petrochemicals, and most machinery is grinding to a halt. Isolated wells and small oil fields are still pumping, but the need for lubricants is so great that virtually no one can

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afford the luxury of actually burning the oil. As a result, the most common fuel in use is alcohol. A few vehicles were originally equipped with multifuel engines that could, in a pinch, burn alcohol. Over the last several years, virtually all remaining vehicles have been converted to alcohol burners.

The advantage of alcohol is that corn husks and waste vegetable products can be distilled into alcohol, and these resources are both plentiful and renewable. In addition, most units have made stills they carry on trailers or trucks which enable them to live off the land in respect to fuel as well as food.

The disadvantage of using alcohol for fuel is that alcohol has less than half the energy value per liter of gasoline (in most engines, anyway). Thus, alcohol burners tend to have a much higher fuel consumption to get the same performance. Also, since an engine has to be modified to burn alcohol, it would have to be modified back before it could again burn gasoline or diesel fuel. Finally, certain high-performance engines cannot be modified to burn alcohol. Aircraft designed to fly on aviation gas cannot get off the ground on alcohol. Thus, air power is mostly a thing of the past (to the secret relief of many infantrymen).

Consumption: Each vehicle card gives the vehicle's fuel consumption rate (liters consumed per period spent travelling or in combat) and fuel capacity (in liters). These values are repeated on the Travel Movement Table on page 273. Additional fuel, of course, can be carried in supply vehicles or strapped to the outside of the vehicle, but this can be dangerous in combat. The card also states all the types of fuel the vehicle can be modified to burn.

All vehicles initially should be set up to burn either ethanol (grain alcohol) or methanol (wood alcohol), whichever the players prefer. The fuel consumption of a vehicle assumes gasoline or diesel fuel. Fuels with lower energy properties are consumed at a higher rate. The Fuel Energy Table lists fuel consumption multipliers for each type of fuel. To determine a vehicle's actual fuel consumption, multiply its listed fuel consumption by the consumption multiplier of the fuel being used. For example, the M2A2 Bradley tank has a fuel consumption rate of 220. Thus, it would consume 220 liters of gasoline per period, or 660 liters of ethanol (220×3), or 770 (550×3.5) liters of methanol.

The fuel burned by a vehicle may be altered from its current choice to any of the other choices given on the vehicle card. This task is Average: Mechanic and takes four hours.

Vehicles which are listed as burning all types of fuels (gasoline, aviation gas, diesel, and alcohol) have multifuel engines and do not need to be adjusted.

Distilling Alcohol: Characters with stills can distill alcohol for fuel. The equipment list contains a variety of stills and their prices. The list and the Alcohol Output Table on page 273 give the two values controlling distillation: kilograms of vegetable matter required (input) and liters of fuel produced per day (output).

These figures are the same whether the still is to be used to produce ethanol or methanol.

Distilling alcohol takes three days from start to finish. The first day is spent gathering material for the still, pulverizing it, and combining it with water to make a "mash." For the next 24 hours, the mash is cooked over a constant low heat. It is during this time that fermentation and other chemical processes create alcohol.

On the third day, the mash is distilled to separate the alcohol from the rest of the mixture.

The still needs to be stationary for the distillation step and while the group is gathering material for the mash, but the group can move while the mash is fermenting. Alcohol-making can be a continuous process, with all three steps going on at once.

Gathering Material: Material gathered anywhere can be used to distill methanol. One person can gather, pulverize, and turn into mash 100 kilograms of material per period, on the average. This is halved in winter and in non-wooded hills. If both conditions are present, the amount gathered is quartered. Only cultivated grain (or other edible plant matter containing carbohydrates or sugars) may be used to distill ethanol. Material gathered for ethanol consists of the edible food weight foraged from a field in summer or fall. (Thus the above figures on material gathered apply only to methanol.) Alternatively, grain can be purchased or bartered for.

Fuel Energy Table

Fuel Type	*Consumption Multiplier*
Gas	1
Avgas	1
Diesel	1
Ethanol	3
Methanol	3.5
Wood	5
Coal	2

While the above rules go into some detail, considerably less detail is necessary in actually administering the process.

Since the material for methanol is plentiful everywhere and easy to gather, the referee should normally allow players to run a methanol still full-time without bothering to require an exact accounting of time and material.

Fuel—Boats: Motor-powered vessels consume fuel just as do land vehicles. Each vessel's entry on the vehicle card gives its fuel consumption rate (liters consumed per period spent travelling or in combat) and fuel capacity (in liters).

Some vessels are designed to burn solid fuel, and in this case their capacity and consumption are given in kilograms of fuel. Solid fuel consists of coal and wood. Solid fuel vessels require no mechanical conversion work to switch from one fuel to the other.

Gathering Wood: Solid fuel vessels will almost invariably burn wood, due to its greater availability. One person can gather and cut to size 50 kilograms of wood per work period, on the average. This is halved in winter and in non-wooded hills. If both conditions are present, the amount gathered is quartered.

VEHICLE MAINTENANCE

A vehicle requires nearly constant maintenance to keep it running, even in the best of times—and these are not the best of times. People used to driving civilian cars on good roads are seldom aware of how much more punishment a military vehicle takes, even something as mundane as a cargo truck. In the world of **Twilight: 2000**, a good mechanic is worth his weight in gold, and is indispensable if the PCs have vehicles they want to keep running.

A good mechanic, for all his worth, will sometimes be considered a pest by the rest of the group. He will want to spend as much of his time as possible with the vehicles, going over them and conducting minor repairs and preventive maintenance.

He will be constantly searching for more spare parts, whether they are needed now or not. (Someday they'll be needed and might

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not be available then, so "get them now" is his philosophy.)

Routine Maintenance: Very few vehicles are left in perfect condition. Most have been repeatedly repaired and rebuilt, sometimes with home-made parts, and all are generally worn-out. Every vehicle has a base maintenance number indicated on its vehicle card. This is the number of hours per week that should be spent in routine preventive maintenance to keep it in good working shape, assuming it is in mint condition. The actual time spent in maintenance is up to the players, but should be influenced by the actual condition of the vehicle.

Vehicle Condition: Whenever characters acquire a vehicle during the game, including during character generation, the referee should determine its wear value by rolling 1D10. The higher the wear value, the more worn-out the vehicle. Whenever characters are in a position to buy or sell a vehicle, its true value is determined by dividing its base price by its wear number. Thus, a vehicle which would normally cost $20,000 but has a wear value of 8 would only be worth $2500.

Potential Breakdowns: Each vehicle has the potential to break down every eight hours (two four-hour periods) it spends in either movement or combat. The D10 roll for a potential breakdown is equal to the vehicle's wear value.

Roll that number or less for a potential breakdown.

A potential breakdown does not mean the vehicle has actually suffered a serious malfunction. Avoiding an actual breakdown is a task (Difficult: Mechanic) performed by the character who did the last maintenance on the vehicle.

If the vehicle has not been maintained for the recommended number of routine preventative maintenance hours in the last week, the potential breakdown automatically results in an actual breakdown.

If a potential breakdown does not result in an actual breakdown, the characters may continue moving without interruption. The occurrence of a potential breakdown is obvious to the characters, and the referee should tell the players that they hear ominous grinding noises in the engine, smell something overheating, see smoke in the exhaust, etc. This is a warning to the characters, and allows them to shut down and perform some maintenance before something actually malfunctions.

Once a potential breakdown has occurred, there will be an additional automatic potential breakdown every eight hours of use (travel or combat) thereafter until the vehicle receives at least its recommended number of routine preventative maintenance hours. Avoiding an actual breakdown is a task (Difficult: Mechanic) performed by any character during intermittent short halts.

Preventative Maintenance: Extra preventative maintenance can help prevent breakdowns. Spending twice the recommended number of hours will reduce the chance of a breakdown by two; spending three times the amount reduces the chance by three, etc.

Spending eight hours per week maintaining a vehicle with a wear value of 6 will mean that the roll for a potential breakdown is 4 or less, not 6 or less.

Increasing Wear: After a vehicle has suffered 10 actual breakdowns, its wear value is increased by 1. A vehicle with a wear value of 10 which suffers its tenth breakdown at that value is no longer repairable, and is good only for salvaging parts.

Once the players and the referee are very familiar with the game mechanics, they may wish to keep separate track of the wear value of the components of a vehicle. That is, a vehicle which suffers repeated engine breakdowns would end up having a very worn-out engine but a sound suspension. In this case, the tenth engine breakdown at wear value 10 would mean the characters need to find a new engine, not a whole new vehicle. This rule is not suggested for beginning use; players and the referee have enough to keep track of as it is.

If this rule is used, however, the wear value 10 vehicle need not be scrapped upon its tenth breakdown, as it will undoubtedly fail only in one or two key systems (engine or suspension, perhaps). If a vehicle can be found with a working engine, it could be transferred to the worn-out vehicle and given a new lease on life.

REPAIRS

In the course of the game, PCs will be called upon to repair vehicles and other equipment which either has broken down or has suffered damage. The combat rules list the procedures used for determining battle damage to vehicle components. Breakdowns are discussed below.

Tools: If a character has the needed parts to make repairs, the PC must then have the tools to do so. Given the correct tools, the repairs take the standard time and are Difficult tasks. If a PC has the wrong type of tools, the job will take twice as long and become a Formidable task. Damage to an engine or fuel system requires either tracked vehicle or wheeled vehicle tools. (Either type will suffice for any vehicle.) Suspension damage requires vehicle tools of the correct type. Damage to radios, missile launchers and other electronic devices requires electronic repair tools. Machinegun damage (the gunner's and commander's machinegun) requires small arms tools. Main armament damage requires heavy ordnance tools.

Breakdowns: The current wear value of the vehicle is the D10 roll for the chance of a major breakdown. For example, a vehicle with a wear value of 8 must roll 8 or less for a breakdown to be major. A breakdown can strike any system in the vehicle, and the affected system should be determined by the referee (it will usually be either engine or suspension). It is possible that a breakdown may not affect the mobility of a vehicle, but may instead be a weapons or radio malfunction. If a breakdown is not a major breakdown, it is automatically a minor one.

Minor Breakdowns: A minor breakdown results in minor damage to the component. The wear value of the vehicle is the D10 roll for the chance that replacement parts are needed to repair the component (roll less than the wear value for parts to be required). Otherwise, repairs can be made without new parts.

Major Breakdowns: A major breakdown results in major damage to a randomly determined system (referee's choice, usually engine or suspension), and will always require parts to repair.

Parts: Except where noted differently below, roll 1D10 for the number of parts needed (where they are required), halving the number (round up) for a minor breakdown. (This is in addition to those parts which the character is assumed to be able to reassemble from the damaged component.) While parts may occasionally be found for sale, the most common sources for parts are cannibalization and fabrication. Parts can usually be cannibalized from an identical vehicle.

If the component to be cannibalized is undamaged, the required parts may automatically be taken from it. If the component has sustained minor damage, roll 4 or more on 1D10 for the part required to be salvage-

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able. If several parts are required from a damaged component, the die roll is made separately for each part.

Characters may only fabricate parts if they have access to a machine shop. Each part requires 1D10 hours in the shop. Parts for electronic systems (including radios, missile launchers, and range finders) may not be fabricated; they can only be cannibalized.

Fabrication is Difficult: Mechanic for non-weapon parts and Difficult: Gunsmith for weapons parts. The roll is made after the part has been fabricated, and failure means the part cannot be used. The referee may decide that fabrication of some parts is Formidable or Impossible, if desired. For example, if a component is so damaged as to require half a dozen (or so) parts, the referee may decide that one of the parts is Formidable, and the rest Difficult to fabricate.

Battle Damage: The vehicle combat system (beginning on page 213) reads out in certain specified systems and damage severities. How these are repaired is discussed according to component.

Sight/Vision: The referee randomly determined which item(s) in this category have been damaged (gun sight, range finder, night vision equipment), per the required damage result. If a component is damaged twice, it is irreparably destroyed. Repairing any of the three components in this category is a task (Formidable: Electronics).

Traverse: Repairing a jammed turret traverse is a task (Difficult: Mechanic) requiring half an hour to accomplish.

Secondary: If more than one secondary weapon is on a vehicle, determine which is damaged randomly. A weapon damaged more than once is irreparably destroyed. Repairing damaged weapons is a task (Difficult: Gunsmith).

Loader: Repairing damage to vehicular autoloaders is a task (Difficult: Mechanic). 1D10 parts are required.

Radio: Radios taking damage are always destroyed and must be replaced.

Armament: Repairing damage to weapons 20mm or more in caliber is a task (Difficult: Mechanic). Other weapons are Difficult: Gunsmith. Parts (1D10 as noted above) are required for weapons 20mm or more in caliber. No parts are needed for other weapons.

Engine: Repairing damage to an engine is a task (Difficult: Mechanic).

Suspension: Repairing damage to vehicular suspension is a task (Difficult: Mechanic). 1D10 parts are required for tracked suspensions and 1D6+2 parts for wheeled suspensions.

Fire/Explosions: A vehicle that has exploded or caught fire is irreparable. Referees should allow very few salvageable parts from such vehicles (tires, gaskets, seals, wiring, and electronic components are completely destroyed, for example).

MAINTENANCE AND REPAIRS—BOATS

Vessels are maintained, break down, are repaired, and wear out in the same way as any other vehicle. The only difference is that there are several types of damage unique to vessels which are explained below.

Waterline: Each separate waterline hit on a vessel's hull which penetrates causes a hole. Waterline hull damage can be permanently repaired or given a temporary patch. A temporary patch is Average: Mechanic, takes six combat turns (30 seconds) to complete for each level of damage, and will hold for four hours. A permanent repair is Difficult: Mechanic, takes one hour for a minor damage level repair and four hours for a major damage level repair, and requires either construction tools or a welding torch (arc welder), depending on what the hull is made of. The repair may also require additional wood or sheet metal, at the referee's option and depending on the size of the hole.

Flooding: Waterline hull damage causes flooding of the vessel, which can eventually sink it. Repairing the waterline hull damage stops any further flooding, but does not remove any existing water. A person who spends six consecutive turns bailing can bail 1 point of water (i.e., negating 1 floatation hit—see page 219).

Some vessels have automatic bilge pumps. These will automatically pump out one or more flotation hits worth of water each combat turn. The pumping rate for the bilge pump, if one is present, is listed on the vehicle card.

Rudder/Screw: The rudder and screws are generally located together at the stern of a vessel. Repairing the rudder or screw is Difficult vs. the average of Mechanic+Swimming and takes 1D6 hours.

MAINTENANCE—ANIMALS

Animals, like vehicles, require "maintenance" if they are to perform properly.

Feeding: All draft animals need to graze for two four-hour periods per day. Horses and mules also require grain if they do any work that day (including being ridden). The amount of grain required is given on the Food Consumption Table on page 273. If they do no work, they need not be fed grain, but must spend all day grazing to make up for it.

Each day in which an animal does not receive enough to eat, it receives a hunger level increase of one. If it is also forced to work, it receives a hunger level increase of two. All animals start at a hunger level of 0. If an animal's hunger level reaches 20, it dies. The animal's hunger level also increases its chance of going lame (see below). For every day in which the animal gets all the food it needs and is not required to do any work, it receives a hunger level decrease of one.

Care: Animal "maintenance" is a task (Average: Riding) and takes 20 minutes per animal after its work is completed each day. Failure to conduct animal maintenance (or a failed roll) causes the animal to suffer a hunger level increase of one, but this addition does not occur more than once per week. (The animal is not really hungry, but the effects and remedies of inadequate care are the same as for hunger. For simplicity, they are treated the same.)

Going Lame: Each day in which an animal travels, it may go lame. A 1D10 roll of 1 indicates a potential injury. For each potentially injured animal, roll another D10 for 1 or less. Subtract one from the die roll for the following: each hunger level, each forced march, each period burdened, and each period travelled that day in addition to the normal allowed number. If the PC rolls less than –3 on the second die roll, the horse has either broken a leg or collapsed from exhaustion and, in either case, must be put out of its misery. Any other result on the second die roll indicates that the animal has gone lame, but can recover if treated properly An animal carrying no load at all has no chance of going lame.

Recovery: An animal can recover from going lame. In order to recover, it must not carry any load and may not be force-marched (although it can move at the normal travel speed). It must receive its full care and be well fed. If so, it will recover in two weeks automatically. There is a chance it will recover in one week if the character caring for the animal does his job well (Difficult: Riding). If any of the above requirements for recovery are not met, the animal is permanently lame and is of no further use (except for food or sale to the gullible).

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ENCOUNTERS

Much of the excitement players experience as they travel across the landscape of **Twilight: 2000** is due to the thrill of the unknown. That feeling of anticipation mixed with dread is heightened by a good mix of encounters. The encounters in a game have to be carefully balanced. If there are nothing but random encounters generated from tables, the countryside will eventually take on a rather repetitive, mathematical feel. On the other hand, requiring the referee to make up every encounter will soon overtax his imagination.

What we have tried to do with this encounter system is to chart a middle course. We provide a considerable number of tables that cover a wide variety of environments and situations. They are intended to be complete as presented, and thus require no additional input on the part of the referee. However, the referee is strongly encouraged to use these tables as a starting point, not a finished product.

RANDOM ENCOUNTERS

As the characters travel, they will encounter a variety of people, animals, settlements, and other features of the land. While many of these encounters will be mandated by the referee (pursuers overtaking them, a partisan band the referee wishes them to meet, a town or city printed on the map which they travel to) many others will be random encounters. A random encounter is one generated using die rolls and the encounter tables presented with the game.

Frequency of Encounters: The referee should roll once on the Encounters Table every four-hour period in which the characters travel and once per day in which they do not. If the group itself is not moving but breaks up into hunting parties, foraging parties, scrounging parties, etc., the referee rolls once per period per party for an encounter. In addition, he will roll once per day for an encounter at the party camp.

Territory: There are a variety of territories in which encounters may take place. These are discussed on pages 156-157. The referee may either roll for the territory type or may have already determined it prior to the adventure session. Some territories have a die roll modifier which is added to or subtracted from the roll on the Encounters Table.

Types of Encounters: The Encounters Table lists a variety of environments (road, wood, swamp, etc.), each of which has a variety of outcomes based on the D6 die roll. These outcomes are groups, animals, items, hazard, and no encounter (None). If None is rolled, there is no encounter this period. If any other result is rolled, roll again on the appropriate table. Note that some territories provide a modification to the encounter roll which changes the frequency and type of encounters (see page 152).

Group and item encounters each have a separate table showing the various territories across the top and specific encounters down the side. Find the column corresponding to the territory in which the players are travelling, roll 1D10, and locate the row of the number rolled. By tracing the row to the left side of the chart you can determine the exact encounter type. Animal encounters have separate charts which have the terrain along the top and the result of a D6 roll on the left. Roll the die and read the result from the tables. Separate animal encounters tables are given for broad areas of the globe. These charts are given on pages 162-163 along with the corresponding Animal Data charts.

Range of Encounter: The range of the encounter describes the distance between the players and what they have encountered when they first become aware of it. The range depends on the type of terrain in which the encounter takes place. The referee rolls 1D10 and consults the Encounter Range Table (on page 269). The die roll is multiplied by the value listed on the table to determine the range, in meters, at which one or both groups may see each other. The die roll in general is an easy way of determining how open the terrain is in that particular area. For example, if the referee rolled a 5 on an open terrain encounter, this is an encounter range of 1500 meters and means that the local terrain was such that the first opportunity for the two groups to see each other occurs at a distance of 1500 meters.



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Spotting and Surprise: When a group of characters encounters a group of NPCs, each group has a chance of spotting the other (Difficult: Observation). Spotting a group moving in vehicles is Average: Observation. Spotting a stationary and camouflaged group is Difficult: Observation. The roll is made only once per group, using the highest Observation in the group. The asset level used is reduced by one for each character in the group and by five for each vehicle in the group. It is increased by a like amount for numbers of characters and vehicles in the group encountered. However, the Observation asset used may never be more than halved or doubled by these modifications.

If neither group spots the other, the referee notes which group came closest to doing so. That group will spot the other, but not until some additional time has passed. The referee rolls 1D10, the result being the number of combat turns that pass before the spot is made. When the spot does take place the range of the encounter has been reduced by the distance travelled by the two groups since the original spotting opportunity.

If the two groups close to the minimum possible encounter range (the base range multiplier shown on the chart: 10 meters in woods, 30 meters in swamp, 100 meters in hills, etc.) both groups automatically spot each other.

If both groups spot each other at the same time, both groups are surprised (and both roll for panic). If one group spots the other without being spotted in return, that group is not surprised. Once a group has spotted another group and has not been spotted in return, it may either wait (allowing the other group to approach closer), attempt to evade (move away from the spotted group), or attack.

If the group attacks, the other group is surprised. This counts as an ambush (see the Combat Rules chapter, page 195).

If the group waits, the other group continues to have one opportunity per combat turn to spot it. If it succeeds before being attacked, it is not surprised.

If the group attempts to evade, the other group has one opportunity to spot each combat turn until the referee decides the group has moved far enough away from the other group to be safe. This distance will vary, but will usually involve moving beyond the original encounter range rolled.

Thus, in the example given above where the encounter range was 1500 meters, once the group had moved to a safe distance of greater than 1500 meters without having been detected, it would have successfully evaded contact.

Encounters

	Terrain					
Die	*Road*	*Wood*	*Swamp*	*Hill*	*Clear*	*River*
0	Group	Group	Group	Group	Group	Group
1	Group	Group	Group	Group	Group	Group
2	Group	Animal	Item	Animal	Item	Item
3	Group	Group	Group	Item	Animal	Hazard
4	Item	Animal	Animal	Group	Group	Hazard
5	Item	Item	None	Animal	Item	None
6+	None	None	None	None	None	None

Group Encounters

Group	*Org.*	*Ind.*	*Ins.*	*Ter.*	*An.*	*Dev.*	*Dsp.*	*Cnt.*
Marauders	1	1	1,2	1,2	1,2	1,2	1	—
Patrol	2,3	2	—	—	3	3	2,3	1,2
Mil. convoy	4,5	—	—	—	—	4,5	4,5	3,4
Merchant convoy	6	3,4	3	—	—	—	—	5
Refugees	—	—	—	3,4	4,5	—	6,7	—
Slavers	—	5	4	5	6	6	—	—
Hunters	7	6,7	5,6	6	7	7	—	6
Primitives	—	—	7	7	8	8,9	—	—
Smugglers	8	8	8	8	9	—	—	7
Large unit	9	9	9	9	—	—	8,9	8,9
Stragglers	10	10	10	10	10	10	10	10

Item Encounters

Item	*Org.*	*Ind.*	*Ins.*	*Ter.*	*An.*	*Dev.*	*Dsp.*	*Cnt.*
Village	1,2	1,2	1,2	1,2	1	—	1	1
Ruined village	—	—	—	3	2	1,2	2	—
Farm	3,4	3,4	3	4	3	—	3	2
Ruined farm	—	5	4	5,6	4	3,4	4	3
Roadblock/ camp	5,6	6,7	—	7	—	—	5	4
Supply dump	7	—	—	—	—	—	6	5
Abandoned supply dump	—	—	5	—	5	5	—	6
Repair yard	8	—	—	—	—	—	7	7
Abandoned repair yard	—	—	6	—	6	6	—	8
Field hospital	9	8	—	—	—	—	8	9
Abandoned field hospital	—	—	7	—	7	7	—	10
Crater	10	9	8	8	8	8	—	—
Derelict vehicle	—	10	9	9	9	9	9	—
Derelict convoy	—	—	10	10	10	10	10	—

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Rather it was come to this: that a dead man was then of no more account than a dead goat would be today.

Boccaccio, *The Decameron*

TERRITORY TYPES

The type of territory through which the players are travelling shapes the nature of the encounters they experience. The world has been dramatically changed by the Twilight War, and this is reflected by varied types of territories available.

A table is provided for the referee to use to randomly generate territories. However, he should feel free to actually assign territories in his game to shape the campaign along lines of his own design.

In particular, disputed territories and cantonment territories should be assigned at the beginning of the game based on the actual position of military units and location of active battle zones as described in the game background.

Note that since the table is set up for a D6 roll, disputed territories and cantonments cannot normally be generated randomly; they will only occur where you mandate them. However, as your campaign progresses you may wish to begin adding one and later two to the die roll, thus making the location of conflicts and military cantonments increasingly frequent and random. (This will also gradually eliminate the Organized and Independent territories as well, and so should be done sparingly.)

Alternatively, the referee may wish to obtain a D8 from the local hobby shop and use that to determine territory. That will add random cantonments and disputed territories while keeping organized and independent territories in the game.

One thing to remember, however, is that there are no well marked boundaries around the various territories described here.

When player characters move into a different territory, they should become aware of it gradually by the nature of the encounters they experience, not simply because the referee says, "You are now moving into devastated territory."

Territories

Die	*Territory*	*Encounter DM*
1	Organized	–1
2	Independent	0
3	Insular	0
4	Terrorized	0
5	Anarchy	+1
6	Devastated	+2
7	Disputed	–1
8	Cantonment	–1

Organized: The region is nominally controlled by the prewar government, a postwar replacement faction, or forces claiming to represent one or the other. There is a regular system of commerce, defense, public welfare, and taxation of a sort, although only taxation seems to be up and running on a reliable basis. Each settlement has one or more appointed officials of the government and a detachment of armed government troops which it is responsible for feeding and supporting. There are regular patrols on the roads, and both trade and travel are regulated by the need for travel permits and various licenses, but if you have these then the roads are reasonably safe. Life may or may not be good for the inhabitants, depending on the intentions and talents of the government. In most cases it is tolerable, but only barely.

The countryside in an organized territory looks normal, and the precise description will depend upon the season of the year. Roads will not be in perfect repair, but there will have been obvious attempts to fix potholes, paint road signs, shore up sagging bridges, etc. Fences along the roads will be in good repair, and the fields by the road will contain crops (probably with laborers) or grazing animals (under the watchful eye of a herdsman, whose job is to give the alarm if his charges are attacked). It will not be possible for potentially dangerous parties to travel very far without attracting attention.

Villages and towns will not be completely occupied, but they will have a systematic settlement pattern, in addition to guards, patrols, and so on. There is little difference between these communities and those of the independent territory, described below; the main difference between the two regions is what happens between communities.

Independent: The settlements in the region are not controlled by any one faction or group, but are independent and attempting to recover. Trade and commerce are beginning again, and many settlements regularly cooperate in rebuilding by exchanging material and expertise. The welfare of the inhabitants of the settlements is largely dependent on their local government.



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Roads are less well maintained in this area; in fact, only near settlements or along heavily travelled routes will repairs be made on any consistent basis. Farms and rural settlements will be more distrustful of strangers, but armed parties will not be attacked on sight.

Communities are the main unit of government, and each town will have its own independent defense force, mercantile establishment, etc. Contiguous communities will have begun cooperating to maintain roads and to initiate commerce, but trade will be in its infancy, and the armed patrols will be particularly interested in keeping the roads safe for travellers.

Insular: The settlements in the region have been raided several times by various factions and stripped of most things of value. The survivors are extremely suspicious of strangers. They are defensive, hostile, and disinclined to let travellers in. Some trade takes place, but only by well armed merchant convoys lead by men who are well-known in the region. Gaining the trust of a merchant is one of the few ways to gain entry into many of the settlements.

Roads are not maintained at all, but are not in bad shape since there is so little traffic on them these days. There is little trade, but what there is arms itself well. Farms and rural folk are distrustful of strangers, especially armed ones, and must usually be convinced of a party's good faith.

Settlements are often fortified, and any patrols are antimarauder strike forces seeking a specific target, not making general sweeps. Bands of marauders present in this region are transitory, as conditions are too hostile for them to remain long, but more always seem to be on the way.

Terrorized: The territory is overrun by armed bands of deserters and marauders, who are wantonly attacking farmsteads and villages, taking whatever they want, and often putting the torch to the rest. Those settlements still intact are badly frightened, suspicious of strangers, and defensive.

The roads are in poor shape, and it is rare to see rural folk (since they usually hide upon the approach of strangers). Inhabited farms and fields tend to be back from the main roads and hidden; those easily seen from the main roads are deserted. Most settlements in the territory have already been looted and ruined. Very few people are left outside of the larger fortified towns, and no form of organized rule exists in the countryside. Marauder gangs and individual families are the most common social units. Trade within the territory does not exist, and travel is very hazardous.

Government outside of occasional small fortified communities is nonexistent, and in those communities it tends to be repressive, reflecting the harsh life of these regions.

Anarchy: Most settlements in the territory have already been looted and ruined. Very few people are left outside of the larger fortified towns, and no form of organized rule exists in the countryside. Marauder gangs and individual families are the most common social units. Trade does not exist within the territory, and travel is very hazardous.

Devastated: The countryside is stripped. No intact farms or settlements are left, and very few people or even animals remain. Everywhere there is evidence of destruction and unrepaired damage. Fences are broken and scattered; fields are barren and obviously uncultivated.

What animals there are tend to be scraggly and obviously feral (formerly domesticated, but now wild). Individuals or small groups are the most common form of people encountered.

Disputed: This territory is an active battle zone. Major military forces (by the reduced standards of the day) are actively contesting the ownership of the towns and villages in the area. The nationality of these forces is up to the referee, but there is very little chance that either side is particularly friendly to the players. The sides could consist of a large coalition of marauder bands fighting a Polish Army unit, or a local warlord fighting a Soviet force passing through.

The area is extremely dangerous for travel and is crowded with large, well armed bodies of hostile troops. There is also considerable destruction and disruption of the local population, and the best chance for passage through is to take advantage of the confusion, of which there is a great deal.

Cantonment: A large military unit has its cantonment in the area and has garrisons in most outlying towns and villages. The whole region is under martial law and all (even small) settlements serve as quarters for bodies of troops. As the troops requisition whatever they need, most civilians are overworked and very poor. Those who have found employment working for the troops, however, are often quite well off, and the army patrols the road well enough that marauders are seldom a problem.

This area is very similar to the insular region, described above, except that military patrols are more common and marauder bands less so. Farms are relatively well protected, and rural people will be suspicious of strangers, but not frightened of them.

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GROUP ENCOUNTERS

A group encounter is a shorthand notation for an encounter with a group of human NPCs. They are called group encounters to differentiate them from animal and item encounters, even though in some cases it is possible for the "group" to be a single NPC.

The Group Encounters Table on page 155 specifies the exact type of group encountered. The Encounter Statistics Table (page 159) then provides a more detailed look at the makeup of the group. A few additional die rolls on the table will flesh out the group's statistics.

Number: This column indicates the number of characters in the encounter. Usually the referee will have to roll a die and either multiply it by a number or add it to a number. If the die roll is multiplied by a number, the number listed is the number of men in a subunit, and the die roll is the number of subunits present.

Observation: This column gives the Observation value for the group. Not every character in the group will be this good; instead, it represents the best Observation available or the Observation asset of the point man.

Type: This indicates the NPC type of the unit, either V (Veteran), X (Experienced), or N (Novice). Usually two values are presented, and the referee is free to choose between them or roll a die. For ease of play it is recommended that most characters in a unit be of the same type, although this is not strictly necessary. It is a good idea, however, to have one character (usually the leader) in each group rated one experience level higher. If more than one subgroup is present, each should be made up of troops of the same type. But different subunits can be of different types and, again, each subunit may have a leader one level better.

Weapons: These are listed merely as "military," "civilian," or "poor."

Military weapons include submachineguns, assault rifles, and battle rifles. Every group or subunit will probably have an automatic rifle as well. The men are also likely to have one or two grenades each.

Civilian weapons include sporting rifles and shotguns (but not the HK CAW). There may be a single submachinegun in the group or the occasional military weapon, but these would be rare. Ammunition will not be as plentiful as in a military unit, and there will be few or no grenades with the unit.

Poor weapons include few if any firearms at all, and these would consist of perhaps a sporting rifle or a pistol or two with only a few cartridges. There might also be a few bows and knives, with the rest of the group armed, if at all, with clubs.

Heavy Weapons: This column indicates the number or numbers that must be rolled on a D6 for the group to have a heavy weapon. If one is present, roll again and consult the Heavy Weapons column of the Encounter Equipment Table. This will indicate the general type of weapon present (such as machinegun or antitank missile), and the referee should select one of these from the equipment list.

Some listings include the notation "each." This means that the referee should roll separately for each subunit. Large military units have the notation "Yes, each," meaning that each subunit always has a heavy weapon.

Transport: This column indicates the form of transport, if any, that the group has. Roll 1D6 and compare the number rolled to the listing in this column. If it corresponds to a number shown, that type of transport is present. If not, the group is on foot. This die roll is made only once for the entire group, with the exception of large military units (in which case it is made separately for each subunit). The types of transport listed are horses, motor vehicles, wagons, armored vehicles, and artillery.

If *horses* are rolled, the entire group (or subunit, if part of a large military unit) is mounted on horses, and one or two pack horses will probably be present as well.

If *motor vehicles* are rolled, roll again on the Encounter Equipment Table and consult the Motor Vehicles column. Make one roll for each subunit present, each roll producing one vehicle of the type listed.

If *armored vehicles* are rolled, roll again on the Encounter Equipment Table and consult the Armored Vehicles column. Make two rolls for each subunit so equipped, each roll producing one vehicle of the type listed. If the number of men in the group or subunit is in excess of the vehicle crew, the excess are infantry riding in the passenger compartment or on the top of the vehicle.

Tank: Any tank in the equipment lists.

Light AFV: Any light combat vehicle in the equipment lists.

APC: Any armored personnel carrier in the equipment list except those listed under IFV.

IFV: Infantry fighting vehicle (infantry carriers equipped with autocannons and sometimes antitank missiles).

If *artillery* is rolled, roll again on the Encounter Equipment Table and consult the Artillery column. Make one roll for each subunit present, each roll producing one artillery piece of the type listed.

SPA: Any self-propelled howitzer or air defense gun.

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Encounter Statistics

Group	*Number*	*Observation*	*Type*	*Weapons*	*Heavy Weapons*	*Transport*
Marauders	1D6×1D6	80	X/N	Military	1-3	1-2: H, 3-4: V
Patrol	1D6+6	80	V/X	Military	1-4	1-2: H, 3: V, 4: A
Military convoy	1D6×6	60	X/N	Military	1-2 each	1-2: W, 3-6: V
Merchants	1D6×4	80	V/X	Civilian	1 each	1-4: W, 5-6: V
Refugees	1D6×5	40	N	Poor	None	None
Slavers	1D6+4	80	V/X	Military	1-2	1-4: H
Hunters	1D6	60	X/N	Civilian	None	1-2: H
Primitives	2D6	60	X/N	Poor	None	None
Smugglers	2D6	60	X/N	Civilian	None	1-2: H, 3-4: W, 5-6: V
Large unit	1D10×10	80	V/X	Military	Yes, each	1: A, 2: H, 3: V, 4: Arty
Stragglers	1D6	60	X/N	Military	None	1: H

Transport Abbreviations: *H:* Horse *V:* Motor vehicle *W:* Wagon *A:* Armored vehicles *Arty:* Artillery.

Encounter Equipment

Die	*Heavy Weapons*	*Artillery*	*Motor Vehicles*	*Armored Vehicles*	*Military Cargo*	*Merchant Cargo*
1	AT missile	Rapira-3	5-ton	Tank	Ammo	Scrap metal
2	AT rocket	Mortar	5-ton	Light AFV	Parts	Machinery
3	Grenade launcher	Mortar	2½-ton	Light AFV	Medical	Food
4	Machinegun	Howitzer	2½-ton still	APC	Food	Wool
5	Machinegun	Howitzer	¾-ton	APC	Fuel	Clothing
6	Machinegun	SPA	UAZ-469	IFV	Weapons	Furnishings



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Group Encounter Descriptions

The various groups encountered by player characters are described in more detail below.



Marauders: Marauders are the scourge of Europe. These are groups of bandits, deserters, and criminals who live by plunder, and for whom murder and pillage have become a way of life. Often made up of psychologically unstable men whom the war has pushed over the brink, marauders will be almost universally hostile to other bands, such as the player characters.

Marauders regularly attack both military and merchant convoys, and any parties travelling alone are fair game as well. Larger bands of marauders have actually taken over small villages, while others exact "tribute" from isolated farms and settlements in return for not looting them right away. In some circumstances, a marauder band may be friendly (wanting to trade, acquire information, gain recruits, or form a temporary alliance), but marauders are notorious for their betrayals.

Typical marauder bands average about a dozen men, but can be several times that size. Although most marauders are quite experienced, their lack of discipline reduces their effectiveness as a military unit (which accounts for their relatively low type rating). Marauders are well equipped with small arms, but seldom have much in the way of heavier weapons as they prefer to travel light and avoid fights with better equipped units.



Patrol: This is a patrol of an organized and at least partially disciplined armed force. The nature of it will depend largely on the territory in which it is encountered. In a cantonment area or a controlled area it will certainly be from the controlling army or government. In a disputed territory it will be from one of the two combatants. In the other territories it could be from any number of organizations, and could even be there because it is lost.

The patrol will probably be searching for stragglers or marauders, be on a routine sweep of the area, or be under orders to march to a particular location for one reason or another. Under most circumstances it will be hostile to the characters and will attempt to attack or capture them.

Patrols are almost always made up of a dozen men or less. They are well equipped with small arms, often have heavier weapons, and even occasionally have a few armored vehicles.



Military Convoy: Each subunit of a military convoy is a wagon or motor vehicle carrying cargo and half a dozen men consisting of guards and drivers. When the convoy is created, the referee should roll once per subunit on the Military Cargo column of the Encounter Equipment Table on page 159 to determine the wagon or vehicle's cargo.

If *medical* is rolled for cargo, the truck or wagon has, in addition to medical supplies, one doctor with Medical (Surgery): 13, one nurse with Medical (Diagnosis): 10, two medics each with Medical (Trauma Aid): 8, and two soldiers. The medics and soldiers are armed with assault rifles, while the doctor and nurse are armed with pistols.



Merchants: Each subunit of a merchant group is a wagon or motor vehicle laden with trade goods. The four merchants are drivers and guards. The referee should determine the cargo by rolling on the Encounter Equipment Table, and may do so once per subunit or once for the whole group, at his discretion.

Players who think of merchants as fat, soft, easy targets for robbery or extortion should give the matter further thought. It takes a very special sort of man or woman to travel the lawless roads between towns and villages while braving marauder bands and hostile military units. While merchants would rather avoid a fight if at all possible, they are prepared to defend themselves.



Refugees: Displaced persons, homeless wanderers, or victims of some man-made or natural disaster, refugees will be hungry, tired, and forlorn. They are poorly armed and unused to combat, so they pose no real threat to a band. They are a potential source of information and possible adventure. They may attempt to enlist the aid of the players in righting some wrong, avenging an outrage, or regaining their homes and possessions. In any case, PCs will soon learn that refugees are a sure sign that danger is near.



Slavers: With machinery all but gone or idled by lack of power/spare parts/trained operators, human labor has become the principal means of tilling fields and rebuilding shattered cities. Slavery has appeared in parts of Europe for the first time in centuries, and is especially in demand in some warlord-controlled cities to clear rubble and cultivate fields. Bands of slavers comb the countryside looking for potential captives. Usually they find unarmed civilians alone and kidnap them, but they also occasionally

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attack farmsteads and carry off entire families or even small hunting parties.

When slavers are found, they will have up to 40 slaves with them (at the referee's discretion). Slavers will usually give a well armed party a wide berth, but might consider trying to capture the adventurers if the opportunity presented itself. They are well armed and tend to be disciplined and experienced, which makes them a dangerous enemy.



Hunters: This is a small band of local civilians out hunting for meat for their families. They are armed with rifles and shotguns, but do not have much ammunition—certainly not enough for a prolonged firefight. If attacked, they will put up as stiff a fight as they can, but they would rather avoid trouble and certainly will not pick a fight with a well armed group.

Hunters may be a good source of information if they are willing to talk, but usually they would rather be left alone. If their confidence can be gained, they will invite the group to visit their farm or community, which might otherwise refuse the PCs entrance.



Primitives: A great many people have become mentally unbalanced by the trauma of the war, and the few of them who survive have reverted to a primitive existence of foraging, scavenging, and theft. Primitives are not useful sources of information, as communication with them is difficult and they cannot be relied upon to completely understand their surroundings, let alone accurately report on them.

Primitives are extremely reclusive, living in small bands in forests, caves, and ruins. They are poorly armed, and their principal defense is stealth combined with the fact that they generally have nothing worth stealing.

They are not a significant threat. But they often attempt to steal supplies or equipment from encampments at night, and they may attack if they have the advantage of numbers and surprise.



Smugglers: Wherever there is government, no matter how tattered or threadbare, some commodity is either illegal or rigidly controlled. And then there are smugglers. Smuggler is a broad label for extralegal merchants. They may deal in armaments, drinking alcohol, forged travel papers, radios, drugs—anything which the government prohibits its citizens from owning.

Smugglers move their goods by wagon, vehicle, or pack horses; they are never found on foot. They are lightly armed and not particularly experienced at fighting. They will never start a fight and, if they are convinced the PCs are not thieves or government soldiers, may offer to travel with them for mutual security. Although they may be unsavory, smugglers are excellent sources of information.



Large Unit: This is a large military unit with up to 100 men. It is extremely well equipped, with a number of heavy weapons, and may include armored vehicles and artillery. There is a good chance that the unit will be hostile toward the players, but capturing stragglers is not the unit's primary mission. If the characters are captured, it is possible that they may buy their freedom by assisting the unit in some way, either with intelligence about their enemy or the benefit of the PCs' knowledge of local geography and conditions. In this case much will depend on the NPC motivation of the unit commander.



Stragglers: This is a small party of soldiers who have become separated from their unit. They will claim that this was accidental or deliberate, depending on their own nationality and that of the players. (That is, NATO soldiers will claim it was accidental, and Warsaw Pact soldiers will claim to be deserters.) They have no heavy weapons or vehicles, and are probably on foot. They will be short of ammunition and in no condition to put up a prolonged fight. They will not attack unless they feel that their numbers and surprise will give them a significant edge over the players. The referee should remember that a large group of stragglers will probably be indistinguishable from the lead element of a patrol at first.

Elite Groups

Several groups of elite troops are encountered so seldom that it would be unreasonable to put them on the encounter charts. Referees, however, should occasionally consider inserting these. For the U.S., there are special forces teams operating behind enemy lines. The Soviets have roving Spetsnaz teams on special missions as well, while scattered remnants of the Polish 6th Pomeranian Air Assault Division and the Czech 1st Air Assault Brigade, and of course the British SAS, may occasionally be encountered.

Examination of the character generation rules will provide inspiration for elite units from other countries.

The situation being as confused as it is, it should never be a forgone conclusion that the PCs will necessarily be aligned with, or opposed to, any one of these groups. The one thing these groups have in common is that they will resemble a small patrol in configuration and be made up exclusively of well armed Elite NPCs.

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Animal Data Charts

Charts are presented by region, which corresponds roughly to continent.

Europe: The area north of the Mediterranean Sea and west of the Ural Mountains, except Scandinavia.

Boreal: Siberia, Alaska, the northern two-thirds of Canada, and Scandinavia.

Asia: The continent of Asia except for Siberia, including most of Indonesia excluding the islands north and west of Australia.

Polynesia: Pacific islands except Melanesia and Australia (including Tasmania and New Zealand).

Australia: Australia, Tasmania, New Guinea, the Solomons, and New Zealand.

North America: The southern third of Canada and everything north of Columbia.

South America: The continent south of Panama.

Africa: All of Africa.

Animal Data Chart Explanation

 # App: The number of animals encountered. Sometimes a die roll is called for.

Size: The animal's weight in kilograms.

To Hit: The D20 roll or less for the animal's attack to be successful.

Dam: The damage done by a successful hit.

Pen: The penetration value of the animal's attack.

Rng: The range of the animal's attack, similar to a melee weapon's range.

Hits: The number of hit boxes in the top row of the animal's record form, or half the number of hits needed to kill the animal.

Atk: The melee attack type used by the animal, either A: armed melee attack, or DB: diving blow. Where more than one is listed (A+A, etc.), it is explained under "Animals in Combat," pages 199-200.

Init: The animal's Initiative attribute.

Arm: The armor value of the animal's hide.

Behavior: The animal's reaction upon being encountered, noted as a D20 roll to attack (A) or flee (F). Other codes represent special actions: **Am:** Attack if animal outnumbers party. **As:** Attack if animal achieves surprise. **Fs:** Flee if animal is surprised.

Speed: This is the animal's speed, listed as Walk/Trot/Run.

European Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Boar	Boar	Game
2	Fowl	Fowl	Fowl	Fowl
3	Game	Game	Game	Game
4	Grazer	Grazer	Grazer	Wild Cattle
5	Dogs	Dogs	Dogs	Dogs
6	Bear	Game	Bear	Dogs

European Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Bear	1	400	12	5	Nil	L	40	A+A	5		A7/F7	10/20/40
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Dog	3D6	25	4	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*
Wild Cattle	1D10	800	2	4	Nil	S	50	DB	5	—	F11/A7	10/20/40

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

Boreal Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Fowl	Fowl	Game
2	Fowl	Fowl	Fowl	Fowl
3	Game	Game	Fowl	Game
4	Grazer	Grazer	Grazer	Wild Cattle
5	Wolf	Wolf	Wolf	Wolf
6	Bear	Game	Game	Bear

Boreal Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Wolf	2D6	50	4	4	Nil	S	10	A	6	—	Am/F7	15/30/60
Bear	1	400	12	5	Nil	L	40	A+A	5	—	A7/F7	10/20/40
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*
Wild Cattle	1D10	800	2	4	Nil	S	50	DB	5	—	F11/A7	10/20/40

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

Asian Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Fowl	Boar	Game
2	Fowl	Fowl	Fowl	Fowl
3	Game	Game	Fowl	Game
4	Grazer	Grazer	Grazer	Wild Cattle
5	Tiger	Dogs	Tiger	Dogs
6	Elephant	Game	Game	Dogs

Asian Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Tiger	1	200	5	5	Nil	S	30	A	6	—	As/Fs	10/20/40
Elephant	1D6	3200	8	12	Nil	S	70	DB	4	—	F11/A7	10/20/30
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Dog	3D6	25	10	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

Polynesian Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Fowl	Boar	Fowl
2	Fowl	Fowl	Fowl	Fowl
3	Fowl	Fowl	Fowl	Fowl
4	Fowl	Fowl	Fowl	Fowl
5	Fowl	Fowl	Dogs	Dogs
6	Dogs	Game	Dogs	Dogs

Polynesian Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Dog	3D6	25	10	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

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North American Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Bear	1	400	12	5	Nil	L	40	A+A	5	—	A7/F7	10/20/40
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Dog	3D6	25	4	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Large Cat	1D6+3	100	5	3	Nil	S	20	(DB)+A	6	—	As/Fs	15/30/60
Wolf	2D6	50	4	4	Nil	S	10	A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*
Bison	1D10	800	12	4	Nil	S	50	DB	5	—	F11/A7	10/20/40
Wild Cattle	1D10	800	2	4	Nil	S	50	DB	5	—	F11/A7	10/20/40

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

North American Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Fowl	Boar	Fowl
2	Fowl	Fowl	Fowl	Fowl
3	Game	Game	Game	Game
4	Grazer	Grazer	Grazer	Bison
5	Dogs*	Dogs	Dogs	Dogs
6	Bear**	Game	Dogs	Dogs

*Dogs in this terrain type can be wolves at the referee's option.

**Bears in this terrain type can be large cats at the referee's option.

South American Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Large Cat	1D6+3	100	5	3	Nil	S	20	(DB)+A	6	—	As/Fs	15/30/60
Boar	1	100	2	2	Nil	S	20	A	6	—	F12/A7	6/10/30
Dog	3D6	25	4	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*
Wild Cattle	1D10	800	2	4	Nil	S	50	DB	5	—	F11/A7	10/20/40

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

South American Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Boar	Boar	Boar	Game
2	Fowl	Fowl	Fowl	Fowl
3	Game	Game	Game	Game
4	Grazer	Grazer	Grazer	Wild Cattle
5	Dogs	Dogs	Dogs	Dogs
6	Lg. cat	Game	Lg. cat	Dogs

African Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Dog	3D6	25	4	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*
Rhino	1	1600	1	9	2	L	60	A	4	—	F11/A7	6/15/30
Elephant	1D6	6000	8	16	Nil	S	80	DB	4	—	F11/A7	10/20/30
Large Cat	1D6+3	100	5	3	Nil	S	20	(DB)+A	6	—	As/Fs	15/30/60
Wild Cattle	1D10	800	2	4	Nil	S	50	DB	5	—	F11/A7	10/20/40

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

African Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Dogs	Fowl	Dogs	Dogs
2	Game	Game	Grazer	Wild Cattle
3	Fowl	Game	Game	Game
4	Game	Game	Game	Lg Cat
5	Game	Grazer	Fowl	Rhino
6	Grazer	Elephant	Lg. cat	Elephant

Australian Animal Data

Animal	# App	Size	To Hit	Dam	Pen	Rng	Hits	Atk	Init	Arm	Behavior	Speed
Grazer	2D6	100	2	2	Nil	S	20	A	6	—	F15/A7	10/20/60
Dog	3D6	25	4	4	Nil	S	6	DB+A	6	—	Am/F7	15/30/60
Game	2D6	50	2	2	Nil	S	6	A	6	—	F18/A2	10/20/40
Fowl	2D10	1	8	½	Nil	S	1	A	7	—	F16/A2	6/20/80*

*The speeds listed here are Walk/Trot/Fly rather than Walk/Trot/Run.

Australian Animal Encounters (1D6)

	Terrain			
Die	Wood	Swamp	Hill	Clear
1	Fowl	Fowl	Fowl	Fowl
2	Fowl	Fowl	Grazer	Grazer
3	Fowl	Fowl	Grazer	Grazer
4	Grazer	Grazer	Grazer	Grazer
5	Grazer	Grazer	Grazer	Dogs
6	Dogs	Grazer	Grazer	Dogs

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ANIMAL ENCOUNTERS

If the group encounters animals, the referee only rolls once (Difficult: Observation) to see if the group spots the animals before the animals spot the group. This task becomes one level more difficult for groups containing more than five people, and two levels more difficult for groups containing more than 10 people. The asset of the character with the highest Observation skill level makes the roll. If spotting is successful, the group surprises the animals; if it is unsuccessful, the animals surprise the group. If the characters are in camp or near vehicles, they will never surprise animals, and all animal encounters become no encounter. (The referee may occasionally throw in a comment such as, "While your vehicles were moving through the woods, you flushed a flock of birds, but they were too far away to get a shot at.").

Encounter range is determined according to the standard Encounter Range table on page 269.

The number of animals encountered is then determined by consulting the "#App" column, which will either give a number or a die roll.

If the group achieves surprise, they may take whatever action they wish—attacking, moving on, etc.

If the animals achieve surprise, the Behavior column of the animal data table determines what happens next. This column gives the animal's reaction to the group, noted as a D20 roll to attack (A) or flee (F). F11, for example, means that the animal will flee if an 11 or less is rolled. Other codes represent special actions: **Am:** Attack if animal outnumbers party. **As:** Attack if animal achieves surprise. **Fs:** Flee if animal achieves surprise. The rolls are made in the order they are listed, and the second roll is made only if the first roll fails. If both rolls fail (the animal neither attacks nor flees), the animal's reaction will be to stand and await action by the group. If the group moves away or does nothing, the animals will move away at a walk. If the group attacks, the animals will take whatever action is listed first (**Attack** or **Flee**) in the Behavior column (this means that a group surprising a tiger and not attacking will result in the tiger fleeing, but a group surprising a tiger and attacking it will guarantee an attack in return).

If the animals flee, the characters may pursue. If the animals attack, proceed to the combat section.

Example: A group of three characters in a European woods has an animal encounter, and achieves surprise at 30 meters. The referee rolls a 3 on the European Animal Encounters table, indicating Game. The #App column for Game says 2D6 animals will be encountered, and the referee rolls a 7. The group, having a full larder, decides to allow the animals to go on their way.

The group's next encounter is with a bear, which surprises them. The Behavior column says A7/F7, and the referee rolls a D20 to see if the bear attacks. A 9 is rolled, so the referee rolls to see if the bear flees. A 14 is rolled, and the bear stays put. The group elects to fall back, and the bear also moves away at a walk. Had the group elected to open fire, the bear would have attacked in turn, as A precedes F in its Behavior entry.

NAVIGATIONAL HAZARDS

If a navigational hazard is rolled, the character steering the vessel attempts to avoid the hazard by making a Difficult: Small Watercraft task roll. If he fails the roll, the referee rolls again on the Navigational Hazards Table and implements the indicated result.

For group encounters, the group may be in a vessel of its own or on the riverbank, at the referee's option. Items encountered are always on the riverbank.

ITEM ENCOUNTERS

The term *item* covers a variety of fixed or semifixed features of the landscape. Items are rolled for in the same manner as are group encounters. The Item Information Table provides additional data in four areas: people, type, weapons, and goods.

People: This column indicates the number of people present. In the case of a roadblock or camp, it refers the referee to the appropriate group manning the roadblock or camp.

Type: Type indicates the NPC quality type present. Again, two values are generally given, and the referee should choose between them for the specific encounter generated.

Weapons: This column shows the sort of arms used by the people present. They are either civilian or military, and they have the same meaning as in the Group Encounters section (see page 158).

Goods: This column indicates the type of specific material the players may find present. If there are numbers preceding the material, one of these numbers must be rolled on 1D6 for the material to be present.

Item Encounter Descriptions

The specific items on the encounter chart are described in detail below.

Village: This is a fortified village of from 50 to 500 inhabitants. Its inhabitants are armed, although usually not very well. If actually attacked, the citizens would be able to defend themselves only with some difficulty. Villages are described in greater detail in the separate settlements section on pages 166-167.

Ruined Village: Although Europe is studded with ruins of one sort or another, this village was destroyed fairly recently. Some of the timber may still be smoldering. Although the village has been thoroughly looted, there will still be caches of food or merchant goods which the looters either did not discover or couldn't carry off.

There are no permanent inhabitants of a ruined village, but the referee is encouraged to add a group encounter to at least some of his ruined villages. This could be a group of refugees seeking shelter (perhaps the original inhabitants), a band of primitives scavenging in the ruins, a patrol making camp, a group of slavers with prisoners, or even the marauders responsible for the destruction (putting some finishing touches on the job).

Farm: This is a small fortified farmstead inhabited by one or two families and perhaps a few hired men. The inhabitants are armed with an assortment of civilian weapons and are prepared to defend themselves against attack, although they are mostly not experienced fighters. The farm is well stocked with food, and if the characters can gain the farmers' trust, the farmers will trade with the PCs

Navigation Hazards

D6	*Result*
1	Boat aground. 10 miles travel lost pulling it off.
2	Boat aground. One full travel period lost pulling it off.
3	Screw or rudder damaged. Speed halved until repaired.
4	Hull damaged. 1D6+3 flotation hits.
5	Hull damaged. 1D6+2 flotation hits.
6	Hull crushed. Vessel is grounded to avoid sinking. Cannot be refloated unless a large work crew and vessel are brought to the site.

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and serve as a good source of information.

Ruined Farm: Similar to the above, but recently attacked and burned out. The PCs may find some small stores of food in the ruins.

Roadblock/Camp: In organized, disputed, and cantonment territory, this is a military roadblock and traffic control point. It is manned by a regular army patrol generated from the Encounter Statistics and Encounter Equipment tables on page 159 but is never equipped with armored vehicles. In independent or terrorized territory, this is a marauder encampment inhabited by two marauder bands, both generated from the group encounter tables. In neither case will anything valuable be in the roadblock or camp aside from the weapons and ammunition of the group manning it.

Supply Dump: This is a small military installation with 50 to 100 tons of military cargo stored and guarded by the soldiers manning the installation. Roll on the Military Cargo column of the Encounter Equipment Table on page 159 to determine the nature of the cargo, but reroll any Medical or Parts results. The troops guarding the dump are not front-line combat troops and are not as formidable opponents as a regular unit. However, if a supply dump is present, other regular units are certainly nearby in a position to come to the dump's assistance.

Abandoned Supply Dump: This is a recently abandoned supply facility as described above. On a 1-2 on 1D6, a few supplies have been left behind. If so, roll on the Encounter Equipment Table on page 159 to determine their nature.

Repair Yard: This is the encampment of an ordnance repair unit, complete with several large trucks, a mobile machine shop, a large supply of spare parts, and 1D6 disabled vehicles currently under repair. About half of the unit is composed of qualified mechanics. All of the men are armed, but the mechanics generally do not have their weapons with them while working.

Abandoned Repair Yard: This is a recently abandoned version of the above facility. It has at least one derelict vehicle remaining, and on a 1-4 on 1D6, a small number of usable parts are left behind.

Field Hospital: This is an active field hospital treating a large number of wounded soldiers. The personnel present include two doctors (Medical asset 13—Medical skill 8+INT 5), four nurses (Medical asset 10—Medical skill 5+INT 5), with the rest of the personnel divided between medics (Medical asset 8—Medical skill 3+INT 5) and nonmedical personnel. Several light vehicles will be present, either horse-drawn wagons or ambulance versions of the ¾-ton truck, as well as medical supplies. The nonmedical personnel are armed with assault rifles, but the medical personnel do not generally carry weapons while working.

Abandoned Field Hospital: This is a recently abandoned facility as described above. On a 1-3 on 1D6, a small quantity of medical supplies is left behind.

Crater: The group will automatically spot a crater at the encounter range; no die roll is necessary. The encounter range is the distance from the edge of the apparent crater to the group. For an explanation of the effects of nuclear craters, see the section on radiation on pages 242-243.

Derelict Vehicle: If a derelict vehicle is encountered, the encounter range is the distance at which the group automatically spots the vehicle. It is unoccupied. When characters encounter a vehicle, the referee must decide what type of vehicle it is. He decides if it is an armored vehicle or motor vehicle, then rolls on the appropriate column of the Encounter Equipment Table on page 159 to determine the general type. He then picks a vehicle from the Equipment List which fits this type.

The referee then determines the condition of the vehicle. The referee must decide (or randomly determine) whether the vehicle was damaged in battle or simply abandoned because it had broken down. Derelict vehicles are not intended to represent those that have been completely destroyed; there are plenty of burnt-out wrecks in Europe, and finding one of them does not constitute a meaningful encounter.

First, roll 1D6 for the number of damaged components. The referee then decides which specific components are damaged. He can decide this himself or roll on the major or minor vehicle damage tables on pages 260-261 the appropriate number of times.

Next determine the wear value of the vehicle by rolling 1D10. This will be important should the players decide to repair the vehicle themselves.

Finally, the vehicle will have already been stripped of its most important nondamaged components. Specifically, any machineguns, radios, range finders, missile launchers, cargo, fuel, and surviving ammunition will probably have been taken from the vehicle. In very rare cases, the vehicle will not have been stripped. This will never be the case on a road or in open terrain, but on a 1 on 1D10 in hill terrain and 1-2 on 1D10 in woods and swamp the vehicle has been abandoned and never stripped.

Derelict Convoy: This consists of 1D6 derelict motor vehicles, all damaged and stripped, apparently the victims of an ambush. On a 1-2 on 1D6 military goods are present; mercantile goods will be there on a 3-4, and no goods will remain on a 5-6. If military or merchant cargoes are present, roll on the appropriate column of the Encounter Equipment Table

Item Information

Item	*People*	*Type*	*Weapons*	*Goods*
Village	See pages 167-168.			
Ruined village	None	—	—	1-2: Food, 3-4: Mrcht
Farm	2D6	X/N	Civilian	Food
Ruined farm	None	—	—	1-2: Food
Roadblock/camp	Patrol/marauder band (see Encounter Statistics Table on page 159).			
Supply dump	3D6	X/N	Military	Military
Abandoned supply dump	None	—	—	1-2: Military
Repair yard	3D6	X/N	Military	Parts, vehicles
Abandoned repair yard	None	—	—	Derelict, 1-4: Parts
Field hospital	3D6	X/N	Military	Medical
Abandoned field hospital	None	—	—	1-3: Medical
Crater	None	—	—	—
Derelict vehicle	None	—	—	—
Derelict convoy	None	—	—	1-2: Mil, 3-4: Mrcht

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Settlement Size (1D10)

Die	*Village*	*Town*	*City*	*Major City*
1	50	1000	10,000	30,000
2	100	1500	12,000	40,000
3	150	2000	14,000	50,000
4	200	2500	16,000	60,000
5	250	3000	18,000	70,000
6	300	3500	20,000	80,000
7	350	4000	22,000	90,000
8	400	4500	24,000	100,000
9	450	5000	26,000	110,000
10	500	5500	28,000	120,000
Armed	20%	10%	5%	5%

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SETTLEMENTS

The four sizes of settlements in the game are villages, towns, cities, and major cities.

Of these, only towns, cities, and major cities are shown on the map of Poland on pages 232-233.

Villages are found due to a village result on the Item Encounters Table located on page 159.

Players and referees should make a note of the locations of villages encountered for future reference.

Settlements usually have three to four times the number of buildings as are required to house the inhabitants, and the excess vacant buildings are in very poor repair. Many have fallen down, especially any of wood construction, and most of the rest are infested with rats or other small animals. The inhabitants will usually live in one part of the settlement, although cities and major cities will have subdivided into several smaller communities separated by belts of rubble and abandoned buildings. These smaller communities may or may not share a common municipal government.

In the cities and major cities, urban life tends to be brutal and unpleasant. While some merchants and small factory owners are very wealthy—living in comparative luxury surrounded by hired guards and servants—starvation, crime, and disease are often rampant, particularly in cities without cohesive municipal governments. Only the very brave and well armed venture out on the streets at night.

While most cities will pay lip service to loyalty to the central government, the fact is that for the most part there *is* no central government.

When army units pass through, the cities usually cooperate grudgingly, although communities are increasingly fighting back against forced requisition of supplies by setting up autonomous areas and looking to their own protection.

Charts and tables are provided which allow the referee to generate a variety of information about settlements. This information includes population, defenses, attitude, government, and crisis.

Population and Defenses: The Settlement Size Table on the previous page is used to determine the population and defenses of a settlement.

Cross-index the roll of 1D10 with the appropriate settlement type to determine the total population.

The armed population of the settlement is a percentage of the total, as listed at the bottom of the table.

In cities and major cities, the armed contingent is usually organized along military lines with a mix of military and civilian arms and a smattering of heavy weapons. It is usually built around the core of prewar police force, local militias, or military units which have settled in the area.

Both towns and villages are not nearly as well equipped as the larger urban militias, and their weapons are almost exclusively sporting rifles, shotguns, and even bows and pistols. Heavy weapons are virtually unknown, and ammunition shortages usually limit the utility of whatever heavy weapons may be present.

All settlement militias are a mix of Experienced and Novice troops, with only the occasional Veteran or Elite member.

Usually no more than 10% of the armed strength of the settlement is under arms and ready to repel an attack at any given time, and this would drop to 5% at night. The rest can be called to arms given advanced warning, but assembling them would take from an hour in a village to as much as several days in a major city.

Attitude: The reception that U.S. soldiers can expect to receive is varied. Some settlements will welcome them as liberators. Some will consider them fellow victims of the war and will help them. Some will hate them for what the "enemy" has done to them. Some will fear that cooperation with them will bring reprisals from the Warsaw Pact armies. Some will view them as just another group of soldiers, the color of the uniform and the spoken accent having lost all meaning. And some will fight them out of duty and patriotism.

Settlement Attitudes (1D6)

Die	Attitude
1	Friendly and curious
2	Friendly and curious
3	Open to contact
4	Neutral
5	Neutral
6	Suspicious
7	Frightened
8	Defensive
9	Hostile

Territory Die Roll Modifiers: +1, organized, devastated; +2, anarchy, disputed, cantonment; +3, insular, terrorized.

To determine the reception the group receives, roll 1D6 and consult the Settlement Attitudes Table.

Note that the territory type provides a modification to the die roll.

The seven possible results on the Settlement Attitudes Table are described in detail below.

Friendly and Curious: The inhabitants will welcome the group and assist them if they are in trouble. They will actively hide the group from the group's enemies, provide the group with food, information, and medical care, and will be happy to trade goods with it.

Open to Contact: The people are not fearful of the group, and they are willing to allow the group to enter the settlement to trade, obtain information, or even stay for awhile.

Neutral: While the people may allow the group into the settlement, they may require some convincing.

The people are not overly friendly and will not be inclined to take any risks on behalf of the players.

Suspicious: The people are not willing to let the group into the settlement and do not want to have anything to do with them. Only by making friends with someone the settlement trusts or doing the citizens some great service will the player characters be able to bring down the barrier of suspicion the villagers have erected.

Frightened: The inhabitants are terrified of the many armed bands that roam the countryside.

They are likely to open fire our of fear, and will insist that the group go away and leave them alone. It will be nearly impossible to gain their trust, but if the group should somehow help the settlement through a crisis, the inhabitants will be very grateful.

Defensive: The settlement has been attacked more than once and is in no mood to risk a repetition. The guards are vigilant and are unwilling to let any group of armed men enter their defenses.

Although the people could use the help of a party of trained and well armed soldiers, their experiences have been bad enough in the past that they are unwilling to take another chance on a group of strangers.

Hostile: The people will be actively hostile to the group. They will open fire on it and, if the opportunity presents itself, will inform local military units of its presence.

The group cannot expect any help from this settlement.

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Government: If the players should gain entry and even acceptance to a settlement, the type of government will become important. To determine the government type, roll 1D6 and consult the Urban Government Table.

Urban Government (1D6)

Die	Type
1	Federated
2	Federated
3	Popular council
4	Corrupt council
5	Popular council
6	Dictator
7	Warlord
8	Captive
9	Anarchy
10	Captive
11	Anarchy

Territory Die Roll Modifiers: +2, independent; +3, insular, disputed; +4, terrorized; +5, anarchy.

Notice again that a number of die roll modifications are based on the type of territory the settlement is in. There are seven possible results.

Federated: The settlement is part of a larger governmental unit. This is usually, but not always, a government claiming the right to rule the entire nation. Practically, however, no single government rules more than a handful of settlements. There are a few larger regional federations as well. A federated government will usually have a group of appointed officials in charge who have been sent by the central ruling authority. A number of regular army soldiers are present as well as the local militia.

Popular Council: A local civic council, usually popularly elected, handles the business of governing the settlement.

While the council may be hampered by lack of resources and qualified personnel, it is doing everything in its power to help its citizens survive the war's devastation and rebuild their lives.

Corrupt Council: A local civic council holds power, either by force of arms or through rigged elections.

Despite an outward display of democracy and concern for the people, the councilmembers are growing rich while the situation of the common man remains wretched. There will be a corresponding high rate of corruption throughout the municipal government. Virtually any activity will require a bribe to someone.

Dictator: The settlement is ruled by a powerful and charismatic dictator. He has come to power through legitimate means, but has since gradually discarded the democratic structure of the municipal government and now rules directly by decree. He has absolute power, and the direction this has taken him and the settlement will be determined by the results of his NPC motivation cards.

Warlord: A strong military leader, who has a very loyal group of soldiers, has taken control of the settlement.

Often he was the former commander of the militia or perhaps the commander of a passing military unit. He will often have come to power peacefully, as the settlement considered him the lesser of two evils. Whether his tastes now turn to self-enrichment, banditry, empire-building, or perhaps even civic improvement will depend on the results of his NPC motivation cards.

Captive: The settlement has recently been captured following a battle. It is now held by a military unit or large band of marauders (referee's option). In either case there has been considerable damage and loss of life, and the new conquerors are subjecting the inhabitants to brutal treatment.

Anarchy: There is no effective form of government in the settlement. Strong individuals look out for their own families, gangs have staked out their "turf," and community groups band together to form vigilante units to protect themselves.

Crisis: Finally, no settlement is complete without a problem. Ten typical problems are presented on the Settlement Crisis Table, but referees should feel free to improvise. If starved for a good idea, roll 1D10 and read the result from the table. All of these are self-explanatory, but will require simple elaboration on the part of the referee.

Settlement Crisis (1D10)

Die	Crisis
1	Food shortage
2	Engineer needed
3	Ammunition shortage
4	Impending attack
5	Internal unrest
6	Rampant corruption
7	Citizens kidnapped
8	Mechanic needed
9	Epidemic, doctor needed
10	Disease, medicine needed

URBAN ENCOUNTERS

Once player characters have gained entry to a settlement, they will face a whole new range of encounters. These new types are explained in detail below for the referee's information. A good rule of thumb to use for encounters is to roll once for an encounter each time the group goes from one part of the city to another.

Roll 1D6 and consult the Urban Encounters Table below.

Note that there are two result columns on the Urban Encounters Table. The first column is for daylight encounters, and the second is for those occurring at night.

The table presented below also includes a wide variety of die roll modifications which are based on government type and settlement size.

Urban Encounters (1D6)

Die	Day	Night
1	None	None
2	None	None
3	None	None
4	Patrol	None
5	Patrol	Scavenger
6	Work gang	Thugs
7	Refugee	Gang
8	Scavenger	Primitives
9	Primitives	Dogs
10	Mob	Gang
11	Gang	Dogs

Government Type Modifiers: +1, corrupt council; +2, captive, anarchy.

Settlement Size Modifiers: +1, town; +2, city; +3, major city.

The following encounter results are possible.

Patrol: A four-person patrol of militia or vigilantes. They are Experienced and are armed with a mix of military and civilian arms.

This patrol is not a particularly threatening encounter unless the players are trying to avoid the law.

Work Gang: A group of 20 or more laborers working to clear rubble or repair a structure.

The individuals in the work gang will be prisoners or, in less enlightened settlements, slaves at forced labor under the watchful eye of two armed guards.

In either case they are not well off and will

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be alert to the opportunity to attack and overpower their guards and perhaps start a riot. If this happens in the presence of the player characters, then they may wish to help the guards or the prisoners, depending on both the current political situation in the settlement and the player characters' personal inclinations.

Refugee: This is identical to the normal refugee encounter detailed on pages 159 and 160.

Scavenger: One or more people (1D6) searching unoccupied buildings for salvageable material, which will be exchanged for food.

Scavengers will be armed only with knives and clubs. They may attack, flee, or stop to chat with the players, depending on the general attitude toward the player characters in the town.

Primitives: This is identical to the primitives encounter described on pages 159 and 161.

Mob: A large mob composed of as many as 100 slaves, scavengers, and refugees pours through the street, attacking the citizens and looting the area. The mob will attack the PCs as well, trying to kill them or beat them senseless and steal their possessions.

Gang: Certain areas of settlements are informally ruled by gangs. Some of these were originally criminal bands existing before the war, while others are bands of refugees which laid claim to a particular area as a "turf" to be scavenged. Many later moved into the "protection" racket, extorting money from both businesses and residents, or running small vice operations.

Gangs come out mostly at night; only in an extremely chaotic situation will gang violence be a significant daylight problem.

Gangs, when confronted, will have 3D6 gang members, half Experienced and half Novice, armed with clubs, knives, and a few pistols.

Thugs: 1D6 brigands who are intent on waylaying and robbing the player characters of their possessions.

Thugs usually ambush their victims, but they often first create a diversion in order to separate their intended victims from their vehicles.

Thugs will run away if they are outnumbered.

Thugs are Experienced NPCs armed with knives and clubs. There are perhaps one or two firearms (pistols or shotguns) in the group of thugs.

Dogs: A pack of dogs, the same as encountered in the wild detailed on pages 200 and 162-163.

EXPANDED ENCOUNTERS

How does the referee expand upon these encounter tables? He can do so in three main ways—through the use of altered encounters, mandated encounters, and unusual encounters.

Altered Encounters: Altered encounters are modifications of those shown on the tables. Perhaps the characters let slip that they were carrying a large and valuable cargo of antibiotics at the last village, so when they encounter a band of marauders, the marauders are actively looking for them and perhaps have laid an ambush.

Or perhaps the local warlord is out on a hunting expedition. You might roll encounters normally, but if the player characters encounter hunters, the NPCs would include the warlord, would be better armed than most hunting parties, and might have a few soldiers along as guards.

There are also situations in which the frequency of encounters needs to be altered. Suppose the player characters are fleeing through the woods and pursued by dozens of search parties. One roll every four minutes might be more appropriate than every four hours.

Altered encounters have several very genuine advantages. First, they are extremely easy to come up with, and that's a virtue that cannot be overemphasized.

If you are like most referees in science-fiction roleplaying games, then you have a limited amount of time and energy to spend getting ready for a gaming session. That means every easy encounter you come up with will give you that much more time to spend on making the rest of the adventure even more interesting.

A second advantage of altered encounters is that they can take the routine out of routine encounters.

Here's a Polish Army patrol, just like every other patrol of the Polish Army you've run into.

Or are they actually down to just one magazine per man?

Or is it actually a German commando unit in Polish uniforms?

Or are they an Elite Polish unit armed to the teeth?

Ideally, your players should never be absolutely certain.

Mandated Encounters: Mandated encounters are taken right off of the encounter tables, although sometimes you may want to alter them a bit as well.

However, instead of rolling (or, better yet, after rolling but regardless of what you roll) you announce the encounter.

This type of encounter can occur as a deliberate plot device by you or, more commonly, in response to the actions of your characters.

Plot devices should be used sparingly, but they should definitely be used. Always remember that your players want to experience the excitement of danger and adventure, so giving them some is certainly acceptable. Just remember that they also want to chart their own course.

If you want them to check out the beautiful ruined village you've spent all week preparing, provide them with a rumor of a convoy of machinery or gold left there and never recovered, or of friendly POWs held there. That's your job.

But if they decide to go marauder bashing instead, do not have them jumped in an alley, tied up, thrown in the back of a truck, and then dumped in the village, so there!

The actions of your players should often cause you to mandate encounters. Did they shoot their mouths off in Krakow about having pulled a pile of codebooks off of a Russian general? Time for the Spetsnaz to show up. If the player characters are going out on a river to look for pirates, don't stall the adventure for an hour just because you don't seem to be able to roll a 6 (or whatever) on the correct table.

This flexibility is the very heart of roleplaying. It teaches the players that wisdom is rewarded with success and foolishness with setback.

Most importantly, it teaches them that their actions in the game world produce appropriate reactions, and *that* above all else will make the world real for them.

Unusual Encounters: Unusual encounters will happen every adventure session, in all likelihood, and you won't have to spend much time figuring them out.

Are they looking for the lost CIA station chief for Lublin? That's odd—no "wandering CIA spook" on the encounter table. Are they searching for the sunken hulk of a river barge carrying a load of ICM shells to Soviet troops in western Poland? Hmm. No sunken boat with artillery shells, either.

These are usually obvious sorts of things, and all you will have to do is determine whether you will mandate the encounter or make it semirandom.

Looking for the station chief, for example, would probably be treated as a task using Observation asset, while you might specifically place the sunken barge on a map, and the player characters would have to enter the locale by river and somehow search the river bottom in order to find it.

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Sample Encounters

The following are examples of common encounter types for the referee to use as prototypes.

Downtown, Waiting for You Tonight

Many cities are "governed" by quasimilitary gangs of hoodlums.

BACKGROUND

In this scenario, the characters find themselves in an urban setting, squeezed between a rock and a hard place. In some of the cities of the year 2000, street gangs are in an almost constant state of conflict, battling over the dwindling resources of their particular neighborhoods. This conflict is usually limited to small altercations between less than a dozen people total.

Occasionally, the urban equivalent of all-out war erupts, however. One gang might be anxious to reclaim territory recently lost to another, or a newly discovered resource might have upset the balance of power. A recent assassination might be blamed on another gang; a famine might make one gang so desperate it is willing to go to war to avoid starvation; or pressure from a third force might be forcing one gang to shift its boundaries. Perhaps the war has no rational reason. Whatever the cause, the characters find themselves between the two sides by mischance, and neither gang is particularly fussy about targets.

APPROACH

The characters will often find themselves in an urban setting, for a variety of reasons. They may be scavenging the ruins looking for spare parts, trying to contact a merchant known to be in the city, or looking for a job. Usually, there is no effective city government above the neighborhood level, and sometimes an area has no government at all.

MAP DESCRIPTION

The map shows a section of typical urban landscape. Some of the buildings are inhabited and in fair shape; others are piles of burnt-out rubble. The streets are filled with the debris of years of neglect and are pockmarked with pot-holes (or shellholes). In most places, anything worth taking has been hauled off the streets (if it isn't too heavy), and the population level is severely depleted. The only inhabited buildings are those which can be fortified and which were not too badly damaged by the war or the civil dislocations which followed.

The map shows one main street (which is relatively clear), along with a number of side streets (which are rather less readily traversable). Several buildings have been reduced to rubble, but some of them are occupied. Some buildings are closed off and cannot be entered. These are colored black on the diagram. Other buildings can be entered, and are labeled according to the plans presented later in this book. The inhabitants of occupied buildings will discourage characters from entering them by various means.

REFEREEING THE SCENARIO

The characters will begin the scenario in the middle of the main street, with both sides approaching from two different directions in such a way as to trap the characters between them. Characters have a chance of detecting the approach of both hostile groups (Formidable: Observation). Failure means they detect only one and are surprised by the other. Catastrophic Failure means that both take them by surprise.



Since each gang is expecting to encounter the other any minute, they have both sent their advance scouting parties ahead of their respective main bodies. If the characters detect both groups, the action begins when the scouting parties enter the map (at the locations marked S). Upon spotting the characters, the scouting parties will take cover and send one of their members off to report. If the characters spot only one of the scouting parties, the referee should inform the players only of the actions of the spotted scouts (Observation asset of both scout parties is 13; the remainder of both gangs have Observation: 10).

Three minutes (36 combat turns) after the scouting parties arrive, the main body of both gangs will enter the area, and hostilities will commence (if they haven't already). This is where the action will start if the characters failed to spot both scouting parties. Both gangs will assume that the characters are ringers brought in by their rivals, and each will be incensed at the temerity of the other in bringing in outsiders.

NPCS

Each gang will consist of a scouting party (three Experienced NPCs—one with a pistol, all of them with knives and clubs), and a main body (consisting of 22 gang members, half Experienced and half Novice, armed with clubs, knives, and a few pistols). In addition, each gang will have a special "shock unit" of seven Experienced fighters with two assault rifles per three fighters (the rest have pistols or shotguns).

This unit represents the gang's "war leader" and a special team of the most experienced fighters in the gang which does not normally participate in street fighting and has come out only because of the importance of the battle. If desired, the referee may generate a single Veteran character for each gang, representing the gang's "war leader."

Additional NPCs may be added at the referee's discretion (perhaps the inhabitants of a fortified building, whose only aim is to lay low until the battle is over, but who are also determined to keep their home).

ALTERNATIVES AND VARIANTS

- As an alternative to a straight-up encounter, the characters might have taken residence in an abandoned building that just happens to be in dispute between two gangs.
- Instead of a battle between two rival street gangs, the characters could find themselves in the middle of a battle between a city dictator's thugs and a rioting mob of famished slave laborers. In this case, one side will be a small party of 10 relatively well armed soldiers (half Experienced and half Novice, with a mixture of shotguns, civilian hunting rifles, and assault rifles), and the other will be a large, disorganized mob (36 Novices, armed with clubs, rocks, knives, and a starvation-driven fanaticism).

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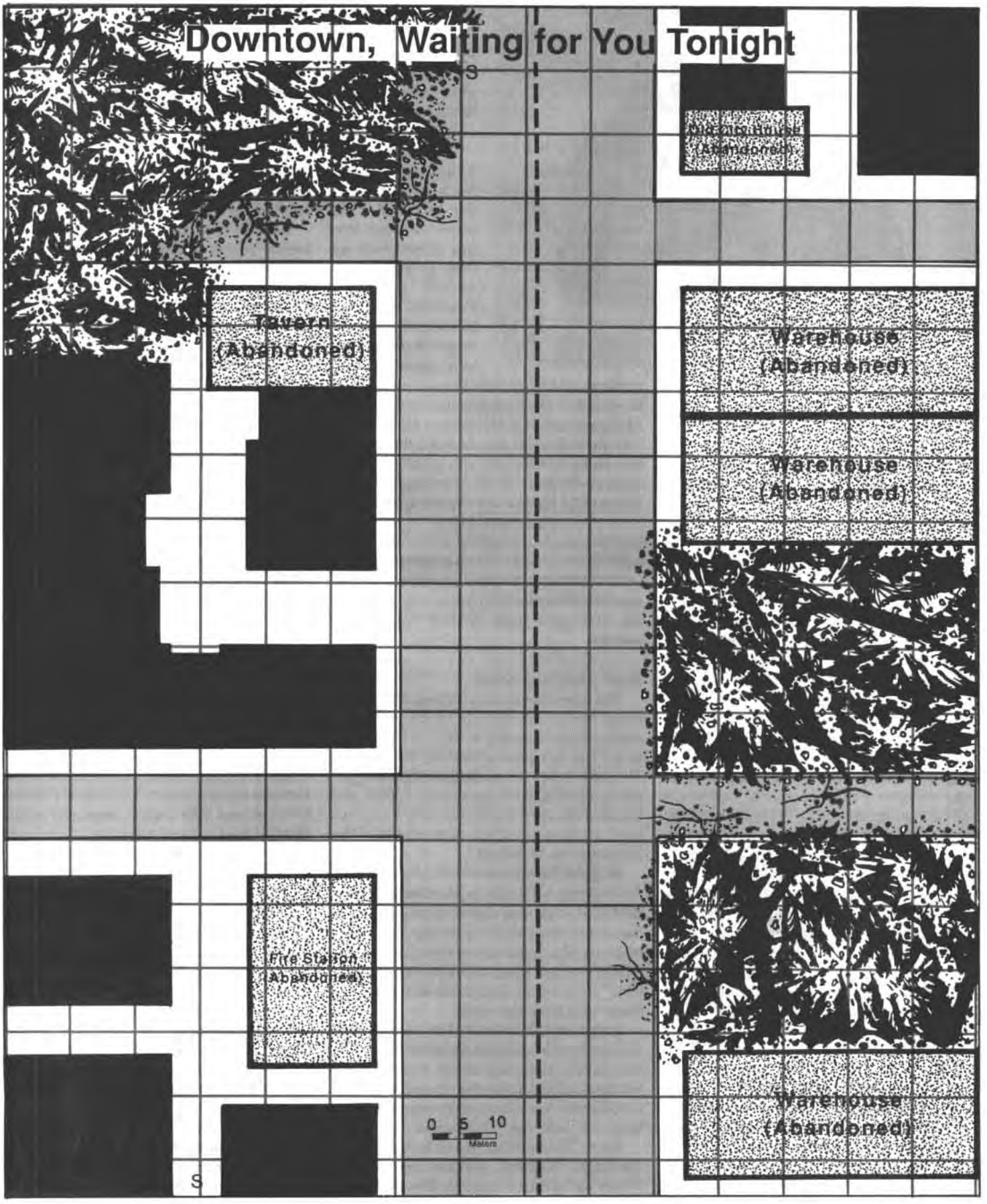

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Stout Yeomanry

This encounter is not a violent one per se, but it involves one of the more common features of the **Twilight: 2000** landscape—farms.

BACKGROUND

Farmsteads will be common encounters wherever the PCs go. Farmstead is just a fancy way of saying farm, but it includes the land, the buildings, the animals, everything. Farmhouses and their associated buildings are usually fortified—these are where the farm families, their workers, their animals, and the stored food take shelter from marauders and sundry ne'er-do-wells.

Farm inhabitants are seldom well armed, and usually have little military training, but the land is their livelihood, and they will usually defend it with fanatical fervor. After harvest they will have a small surplus of food which they are willing to trade for the few things they cannot make for themselves—mostly firearms, vehicle spare parts, and ammunition. Once the PCs have gained their trust, they can be a good source of food and alternative transportation (animals). Most important, they are excellent sources of information, since farmers must intimately know their immediate environment—water, soil, predators (two- and four-legged), weather, and a hundred other things—in order to survive.

APPROACH

Farms are everywhere. They are more common in stable areas, but they can be found everywhere except in totally devastated regions. Depending on the fertility of the soil, local marauders, and other conditions, a farm will consist of from 20 to 40 hectares of cultivated land. How much of this land has a crop on it will depend on the time of year and whether the farmers are rotating fields (in accordance with pre-fertilizer soil conservation techniques).

Travelling adventurers will find the fields before they find the farm, and will most likely run into the inhabitants as they go about their normal business. Precisely what this business consists of depends on the season: planting, harvesting, cultivating, watching (crops need to be guarded from predators, animals need herdsmen, etc.). For this reason, it is assumed that the encounter occurs when the characters come across the farm buildings themselves—the heart of the farmstead. The reaction of the farmers will depend upon the actions of the characters during the approach. Farmers are naturally distrustful of strangers, but their continued survival also depends to a small extent upon trade with outsiders, so their reaction will be one of guarded suspicion until the strangers have proven themselves friendly.

MAP DESCRIPTION

The map shows the buildings of a typical small farm in a region in which marauder depredations are only a slight problem, but which has not been completely devastated. The farm buildings are largely prewar in origin, but fortifications have been added, and the buildings are being inhabited by more than their designed number of occupants. The buildings are as follows:

Original Farmhouse: Built before the war, this building is still occupied, although now it contains two families instead of one. The place has a root cellar and a wood-burning stove, and has little need for artificial illumination ("When it's dark, you sleep; when it's light, you work" is an old rule that dates as far back as there have been farmers).

Laborers' Quarters: The farm hands share this small outbuilding (which was originally a vehicle storage shed). A crude stove has been added for warmth in winter, and the outside wall has been reinforced with sandbags and loopholed for defense.

Barn: This building, like all barns, houses the farm's livestock, and the stockpiles of fodder and silage it requires. The roof of the silo, as the highest point of the farmstead, has been converted into a watchtower, and the older children rotate duties there. The outside walls of the barn are fortified and loopholed for defense. This building is where any guests will be sheltered, unless they have paid for better arrangements.

Tool Shed: This is a small building attached to the barn on the barn's inside face. It is used to store the farm's meager supply of carpentry and metal-working tools.

Grain Storage Bins: Two of these are prewar prefab structures, but the third is a postwar construction of scrap lumber and sheet metal. The farm will not have a tremendous surplus of grain, but it will have a small quantity for trade (and the seed reserve for next season's planting, of course).

Animal Shelters: A number of low-lying animal shelters are located at several places around the farm, primarily to act as shelters for the farm's pigs or its small flock of chickens. The farm's small herd of cattle takes shelter in the barn.

REFEREEING THE ENCOUNTER

This encounter requires some roleplaying, and presents the referee with myriad possibilities. In general, however, a hostile approach will be greeted with hostility, while a friendly one will eventually win the farmers' trust.

NPCS

This particular farmstead has 22 inhabitants: six adult males, seven adult females, and nine juveniles (ranging from infants to early teens). The farm contains two families (those of a pair of siblings) and four unrelated laborers. Three of the adults are Experienced, and one has a shotgun. The rest are Novice NPCs armed with melee weapons, mostly clubs or farm implements pressed into combat service. Count their weapons as spears.

ALTERNATIVES AND VARIANTS

- An interesting adventure can be set up by using the "escaped zoo animal" ploy to force an encounter between the PCs and some exotic (and dangerous) creature. A group of farmers might be on their last legs because of the depredations of a wild beast and might plead for the characters' help in destroying this scourge. Of course, in this case the map must be changed from the farmstead to a section of more open countryside near the farm.
- A single character wounded after a fight might be found and taken in by the inhabitants of a farmstead who nurse him back to health in return for some later favor.

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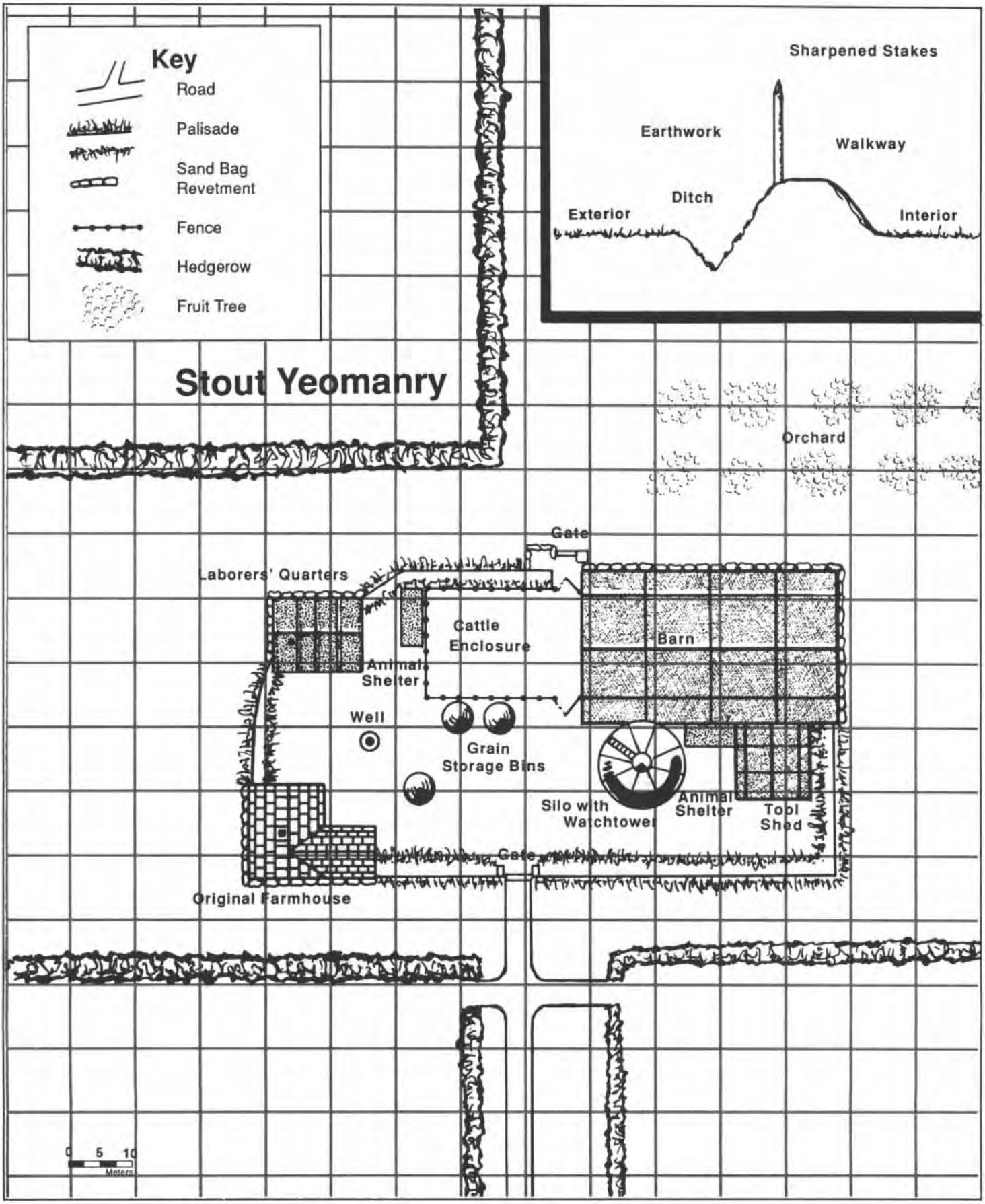

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Chaos Deathspike Megakillers

This encounter represents a few of the bewildering variety of interactions possible between the characters and a typical marauder band.

BACKGROUND

Marauders are one of the most common encounters in **Twilight: 2000** and will probably account for most combats since they are among the groups most likely to attack. Marauders are not normally as well armed or as experienced as the characters' group and will tend strike from ambush. Only when they can muster a vast superiority in numbers or equipment will they take offensive action of their own.

APPROACH

The characters are travelling down a rural road when they come to a stream. The bridge is out, and the group will have to divert to a shallow section downstream a few meters and ford the stream.

MAP DESCRIPTION

The map shows a road passing through a typical section of relatively close countryside which represents the area where the encounter first occurs. It shows the road which passes a wooded hill and then crosses a stream over which the bridge is out.

REFEREEING THE ATTACK

The marauders plan is to attack from ambush. A small group (with a grenade launcher) is to conceal itself in the rubble of the bridge (on the far side of the stream) and open fire, driving its prey off the road. A larger second group is concealed in the woods and is to wait until the defenders deploy to attack the first party, then fall on them from behind.

The party with the BG-15 will not open fire until the players are actually in the stream and most exposed. The referee should determine surprise based on the marauders' Observation asset of 13 and the characters' best Observation asset rating. If the characters are surprised, they are caught in the middle of the stream; if the marauders are surprised, the characters see the ambush in the woods. If neither or both characters and marauders are surprised, the characters spot the ambush as they reach the edge of the stream (but are not actually in it).

NPCS

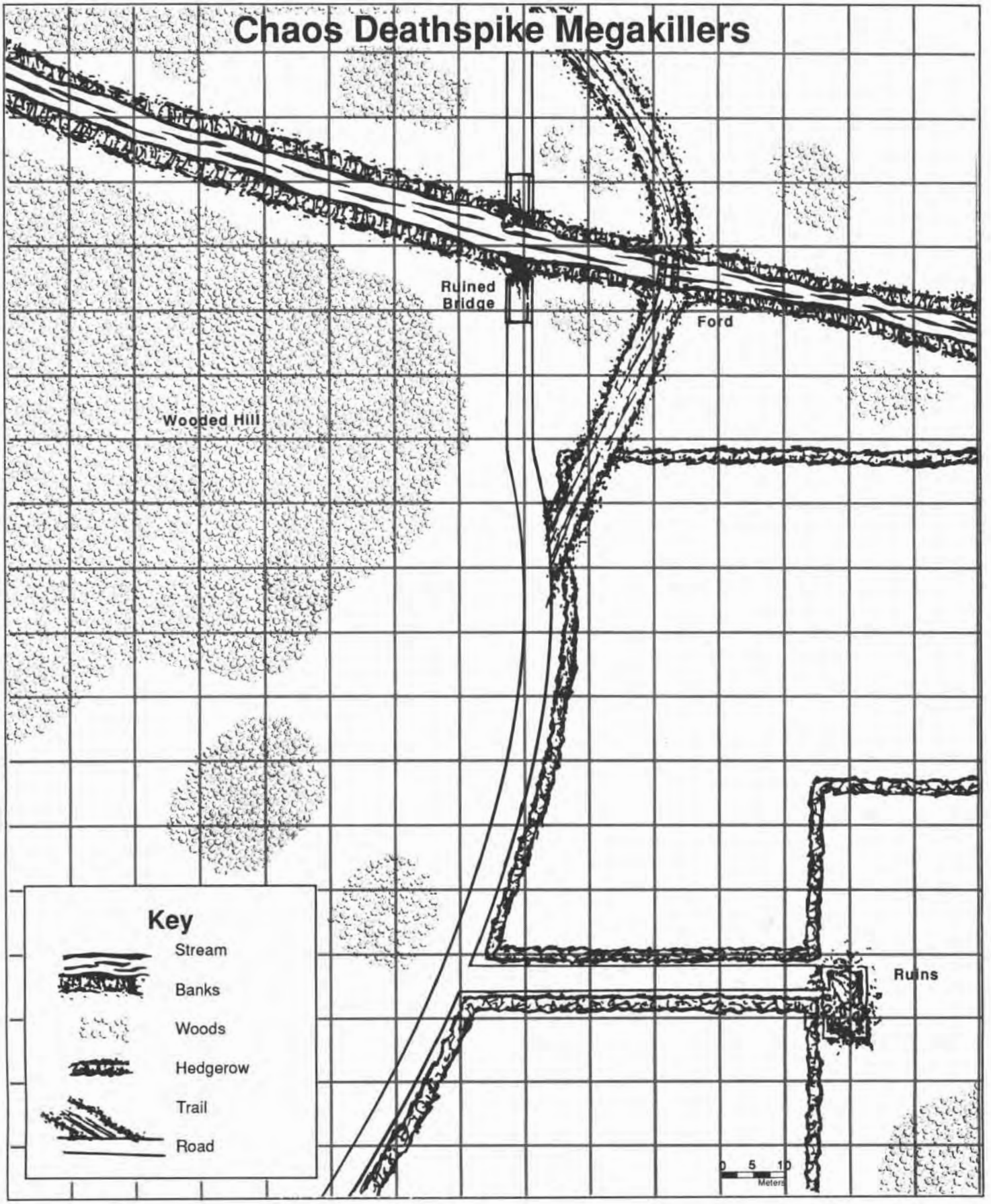
This particular marauder band consists of two subunits, one with four members and one with six. The first group consists of two Experienced NPCs and two Novices with AK-74s and an AK-GL grenade launcher (BG-15). The second group consists of three Novice and three Experienced NPCs armed with AK-47s and a PK light machinegun. The marauders have ample ammunition for their small arms, but only four HE rounds for the BG-15.

ALTERNATIVES AND VARIANTS

- If the characters are particularly well equipped (and if they have a tank or APC), allow the marauders one RPG-7 or more grenades for the GL.
- Perhaps the marauders have mined the stream and are depending on the explosion(s) to confuse things enough to allow their ambush to succeed.
- Another possibility is for the characters to come across a group of marauders in the process of springing this ambush on a third party (chosen from the appropriate encounter table).
- A particularly devious band of marauders might use a fake ambush site as bait to lure the characters into a very real ambush. Part of the marauder band might pose as wounded refugees to distract the PCs' attentions until too late. Such tricks must be used sparingly, however.



Conny Delshagen (order #3265201)



Conny Delshagen (order #3265201)

Home, Home, I'm Deranged

A great many people have become mentally unbalanced by the trauma of the war, and the few of them who survive have reverted to a primitive existence of foraging, scavenging, and theft. At first glance, primitives might be viewed as a nuisance, but sometimes they can represent a real threat. This encounter presents a view of primitives that allows for a tense, dicey situation.

BACKGROUND

Due to the extremely reclusive nature of primitives, they will usually flee in most situations. This encounter, however, assumes that the primitives have achieved surprise over the characters by a rather nonstandard method.

APPROACH

The characters are assumed to have taken up residence in an urban area infested by primitives (perhaps having encountered them earlier in the day and frightened them off). The characters have inspected the building and determined that it is safe enough for a night's stay (albeit with some preparation). Consequently, the characters have taken a few precautions (posted a couple of sentries, etc.). A band of primitives will attempt to penetrate the building, however, and will try to rob the characters blind at some point during the night.

MAP DESCRIPTION

The map shows a building being used by the characters as a temporary shelter. It has three floors above ground and a crawlspace running under the whole building. The referee may give details from the following description as he sees fit.

The building is typical of the half-ruined structures common in urban and suburban locales these days.

The walls are in good shape, and the windows are without glass, but those on the bottom floor have had bars fitted (this was obviously done before the war).

It is an older building and has a wooden floor (partially collapsed in some places) over a crawlspace (a very cramped area underneath the floorboards used to provide access to plumbing and electrical connections). The bottom of the crawlspace is rubble and crushed rock.

REFEREEING THE ATTACK

When the characters settle into the building, the referee should present them with the map and ask what they will do to inspect and secure the building.

The characters will probably search each room, paying special attention to the windows, doors, and fire escape.

After nightfall, when most of the characters are asleep, the group of primitives will infiltrate the building as silently as possible. They will be more interested in stealing things than killing, and thus will not risk attacking the sentries except in self-defense. They will do their best to sneak from room to room, picking up food, weapons, loose clothing, and other items.

NPCS

Three of the primitives in this encounter are Novice NPCs, and the group has an Experienced leader. They are all armed with knives (or the equivalent) and primitive clubs made from lengths of pipe or something similar. They will flee upon the first signs that the characters are awakening or upon the sound of the first gunshot, but will fight with fanatic fervor if cornered.

ALTERNATIVES AND VARIANTS

Exactly how the primitives get past the characters' security is a matter for some imagination. Here are some suggestions:

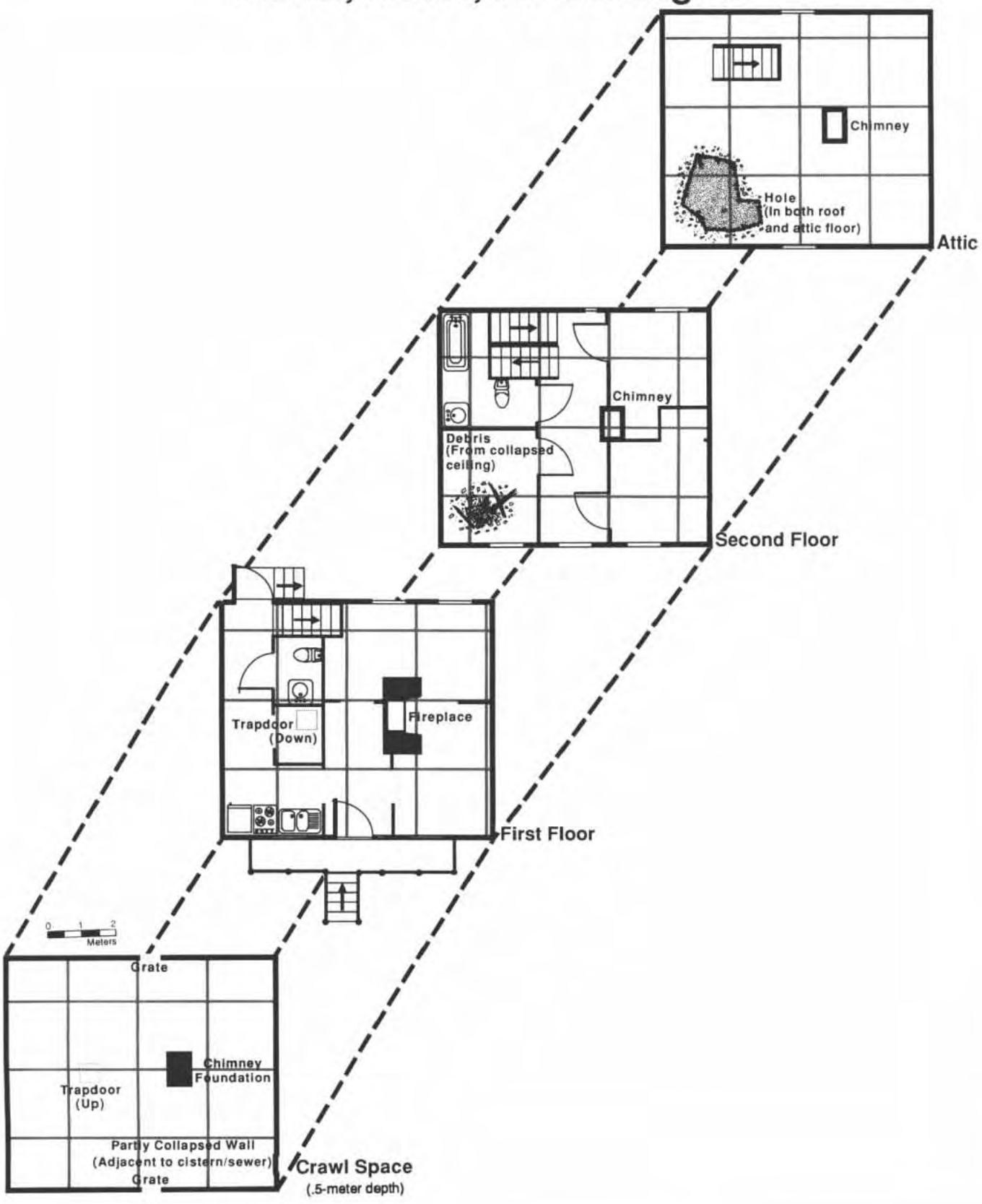
- The crawlspace could have a connection to the sewers (perhaps by means of an old cistern or an abandoned well). Maybe the primitives have previously tunneled to the crawlspace, connecting the building to a rabbit warren of excavations leading to the city sewers, subways, utility tunnels, and so on.
- One or more primitives could cross on a telephone wire or clothesline from an adjacent building and gain access through the roof or an upper story window.
- Particularly agile primitives might shinny up a drainpipe or a dangling wire, or leap from another building if the gap is not too great.

Naturally, the success of all these approaches depends on how paranoid the players are, and how little sleep they are willing to allow their characters.



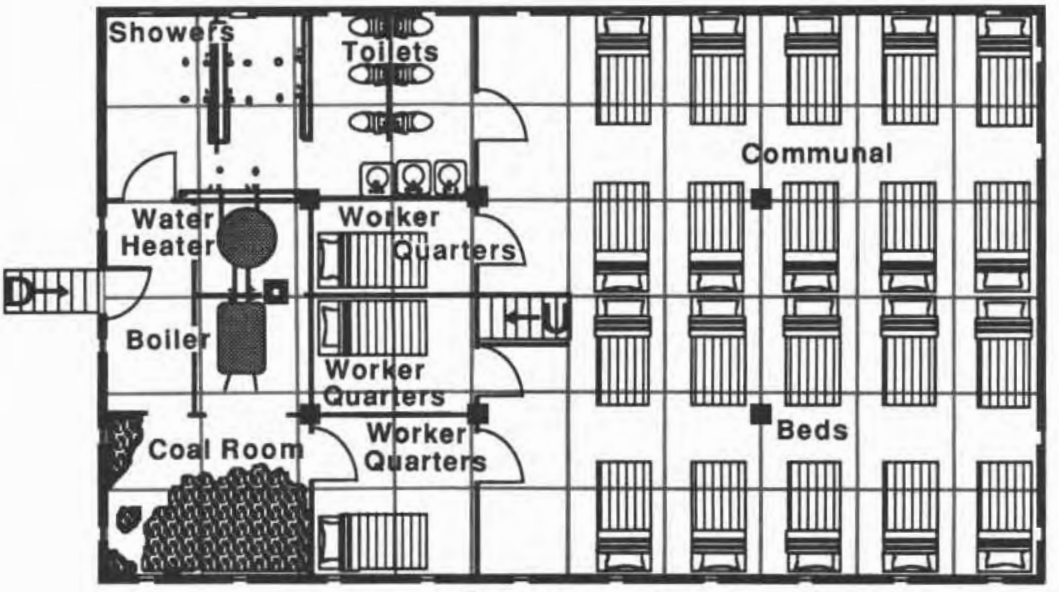
Conny Delshagen (order #3265201)

Home, Home, I'm Deranged



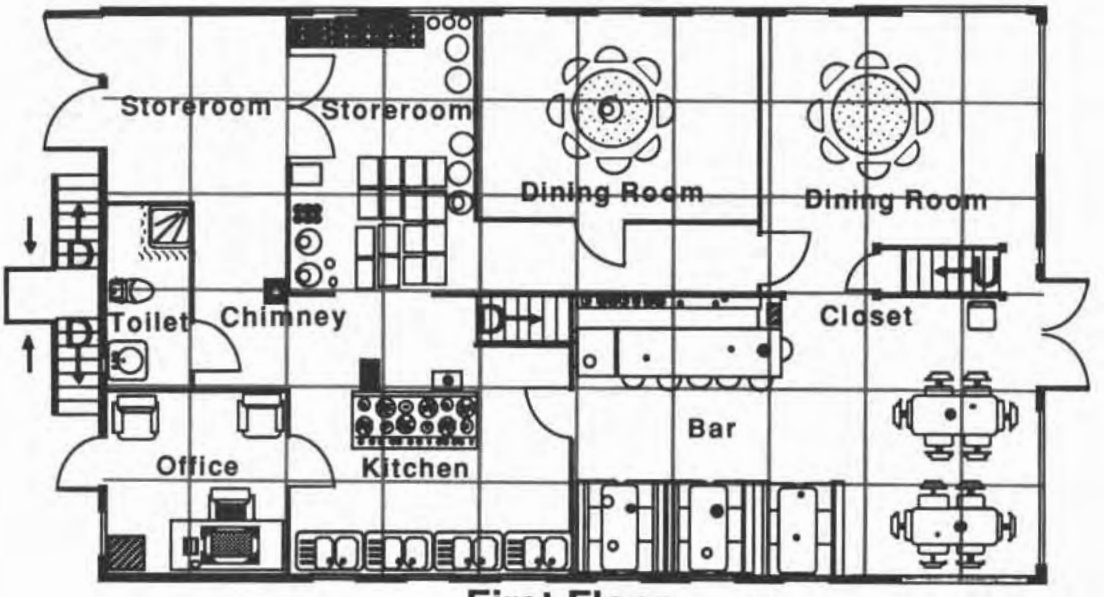
Conny Delshagen (order #3265201)

Bar/Inn/Roadhouse

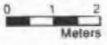


Basement

(1.75 meters below ground level)

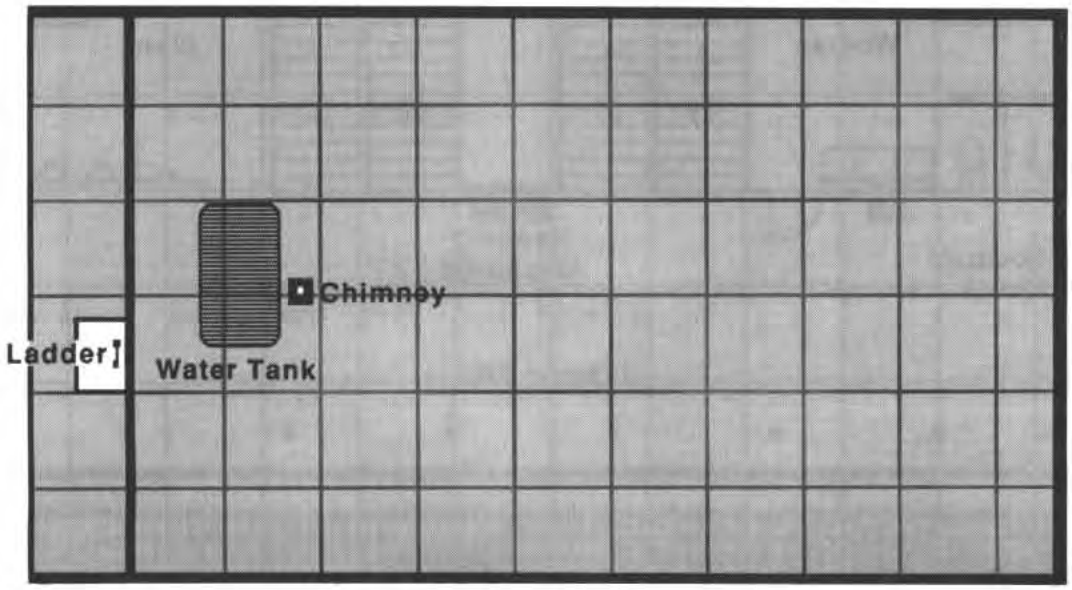


First Floor

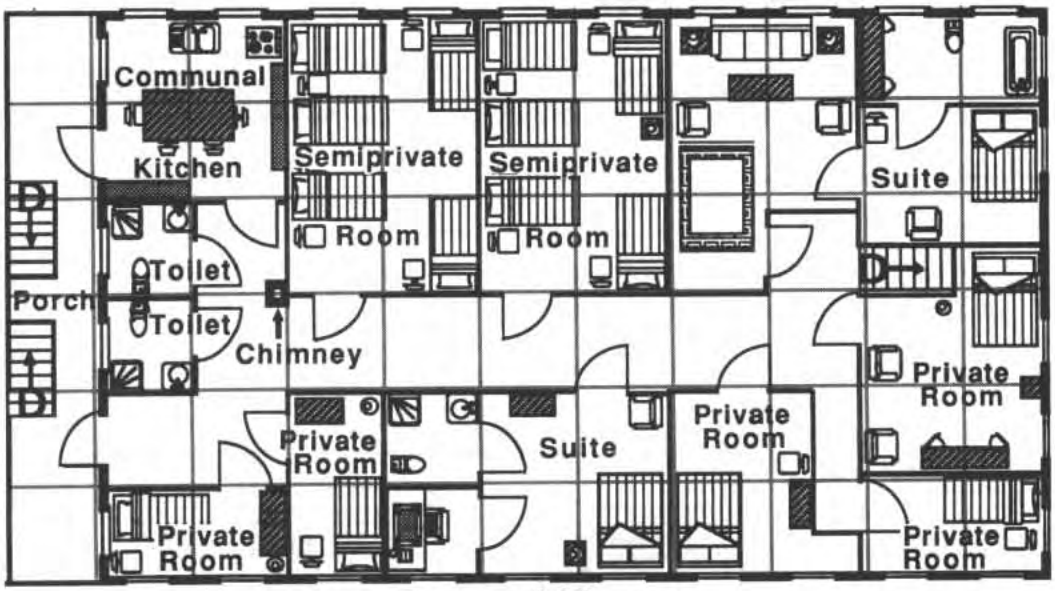


Conny Delshagen (order #3265201)

This place caters to merchants and travellers, providing meals, refreshment, and a reasonable place to sleep. The name will vary with the country, but places like this are found throughout the world and serve a second and vital function in the game—that of hiring hall.



Roof

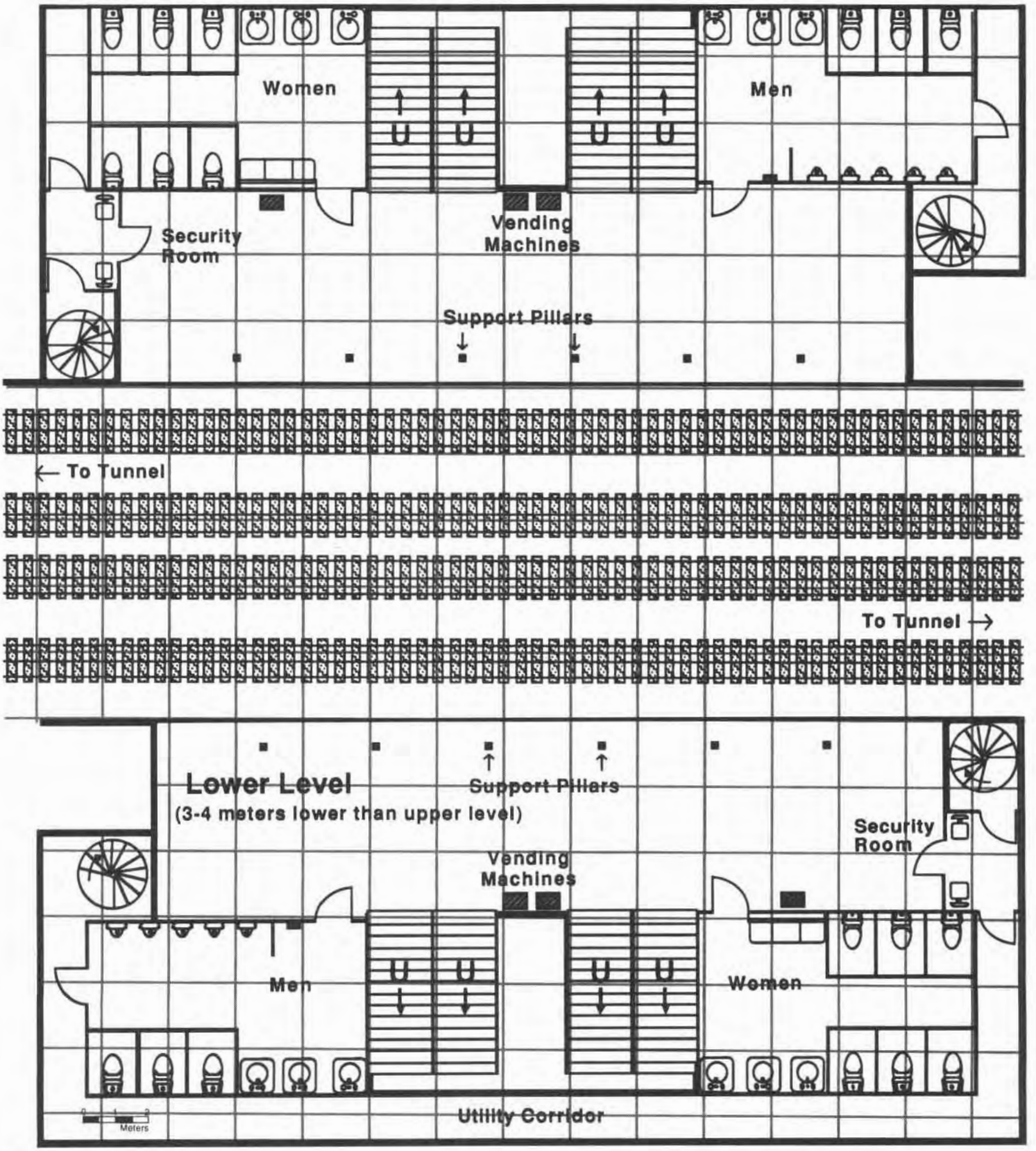


Second Floor



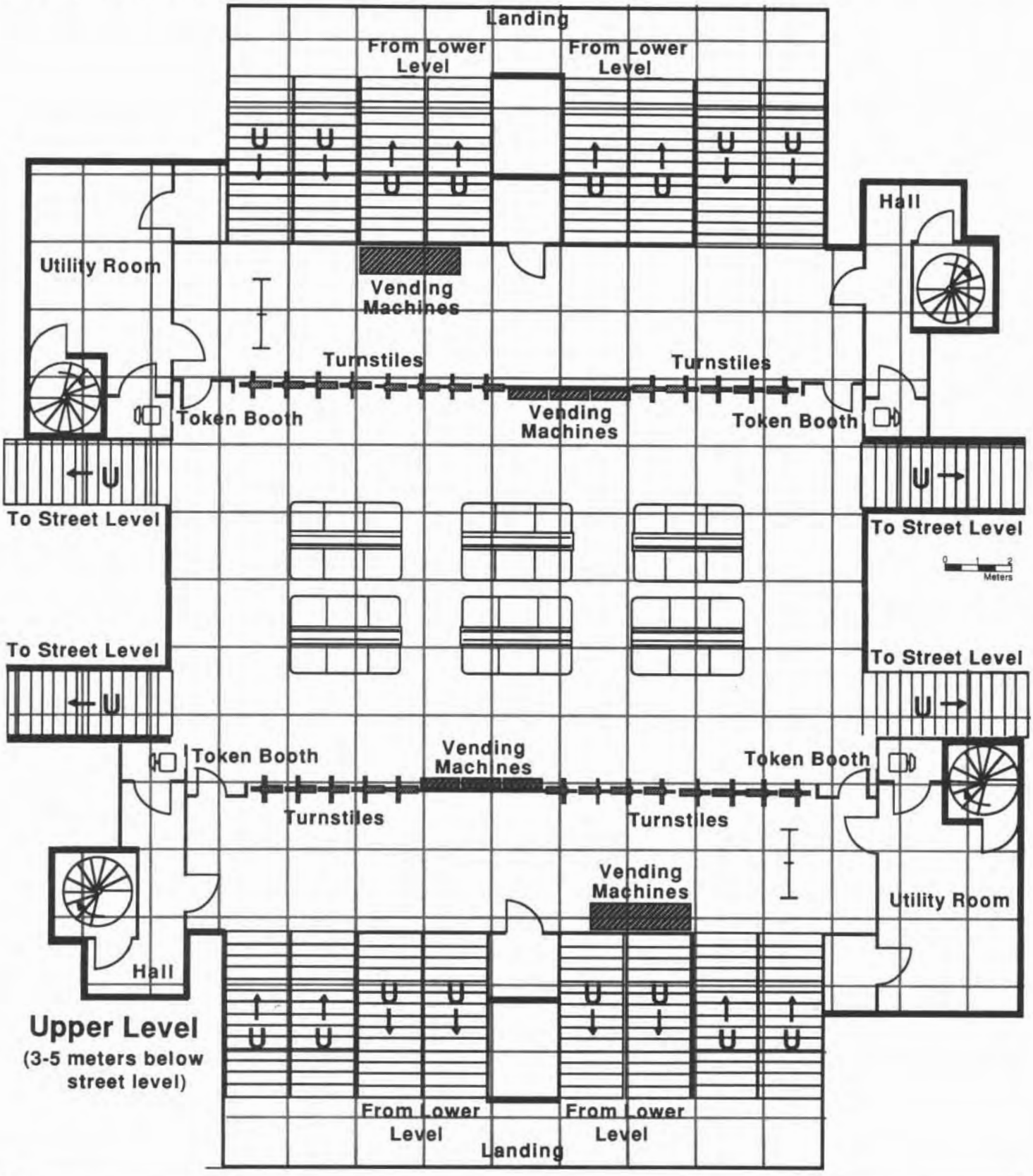
Conny Delshagen (order #3265201)

Subway Station



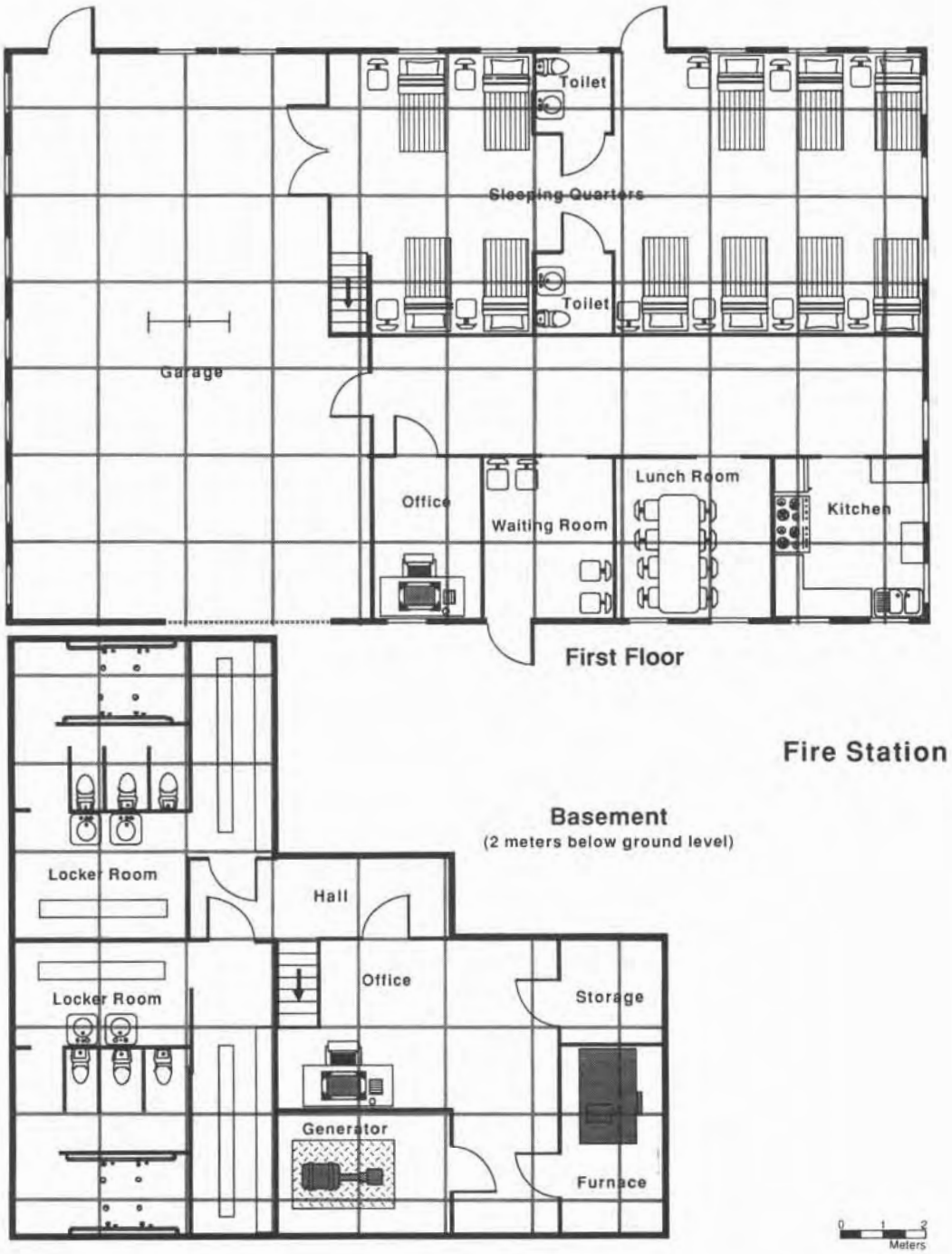
Conny Delshagen (order #3265201)

Dank, dark, and slimy, abandoned subway stations are a popular locale for demented, loony groups, marauders, gang headquarters, and secret storehouses. They are also used for clandestine meetings, "underground" business deals, and anything that should not see the light of day.



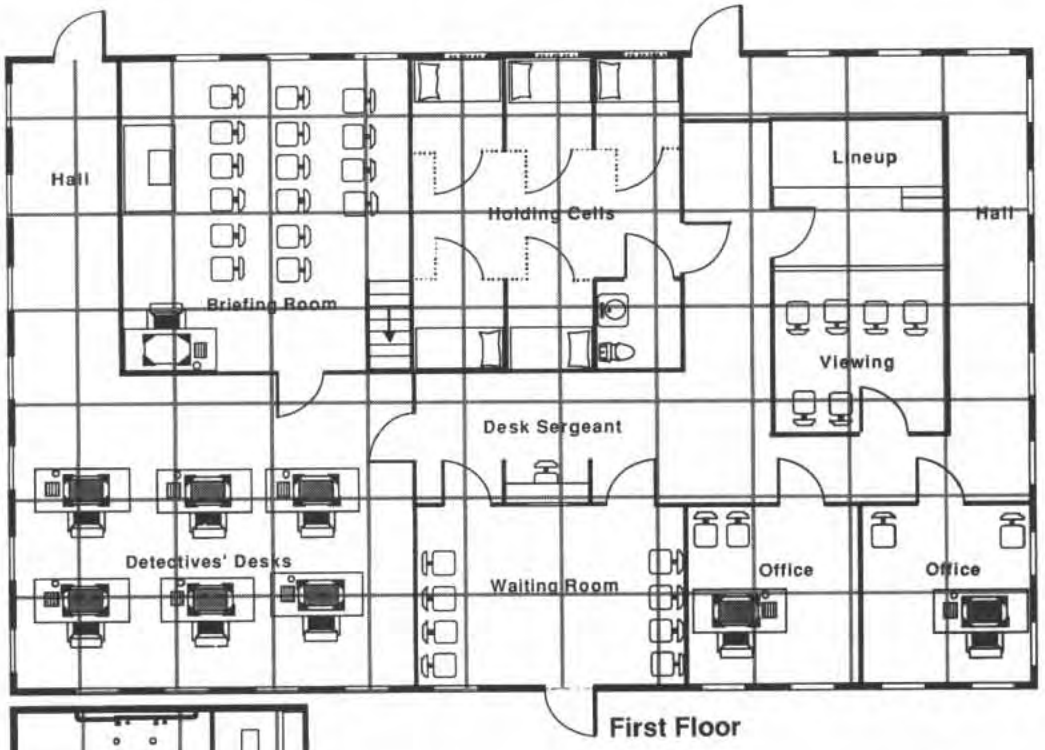
Conny Delshagen (order #3265201)

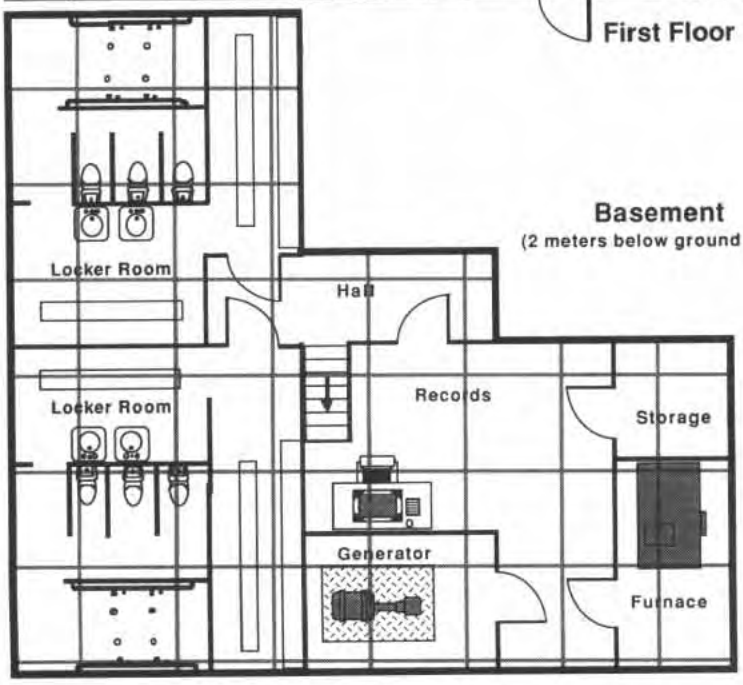
Police/Fire Station



Conny Delshagen (order #3265201)

These buildings are substantially built, usually have their own generators (although without fuel these are useless), and are probably still occupied by someone. The occupiers may be a gang of thugs, a militia unit, or a military patrol, but whoever they are, they will not want to give the place up.

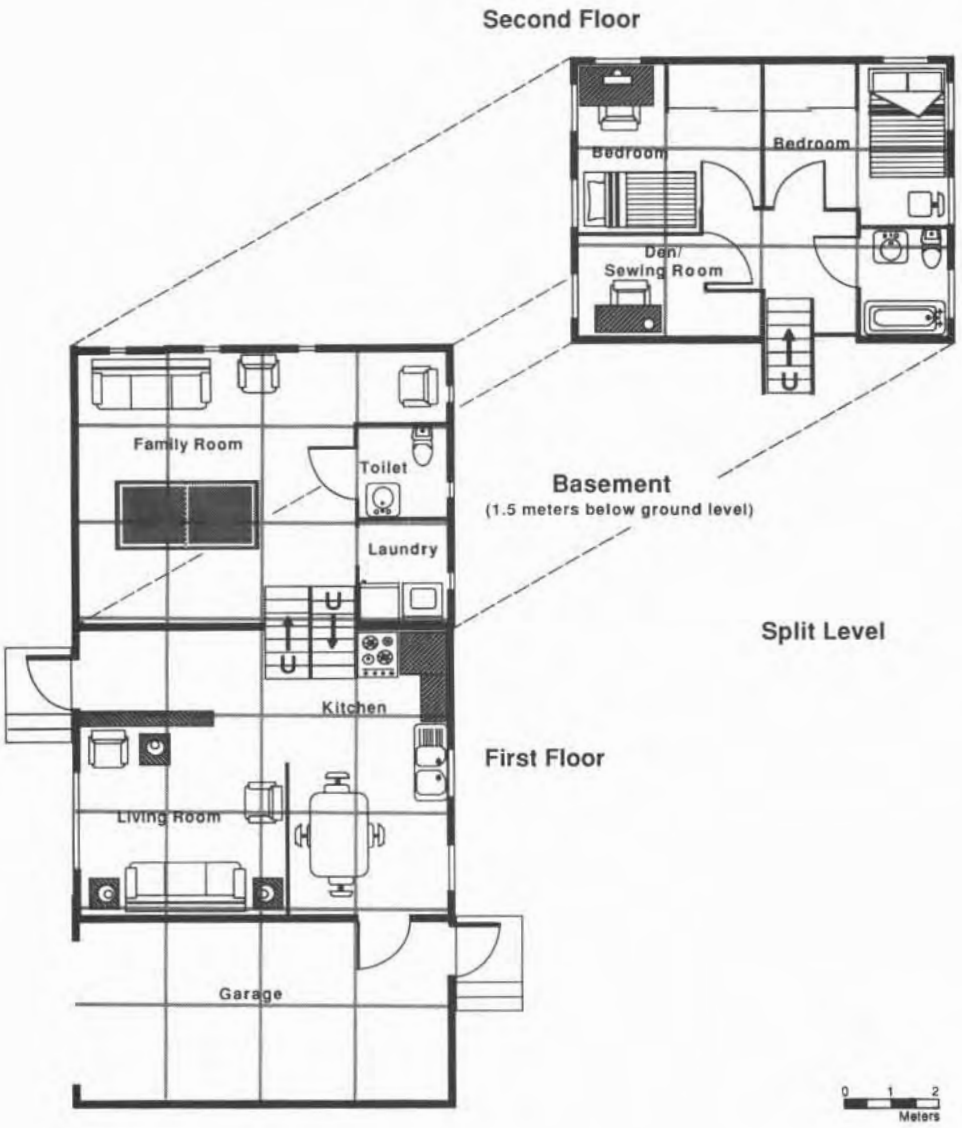




Police Station

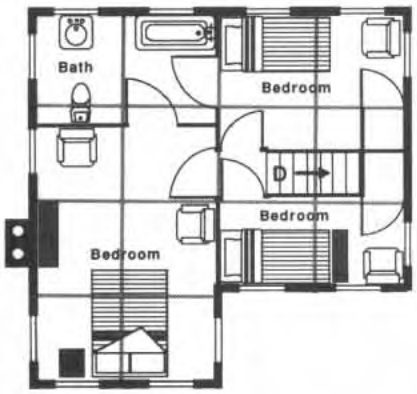
Conny Delshagen (order #3265201)

Suburban Townhouse

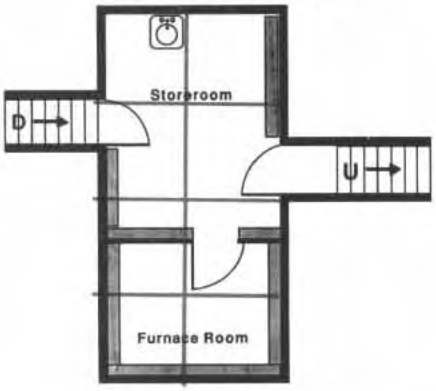


Conny Delshagen (order #3265201)

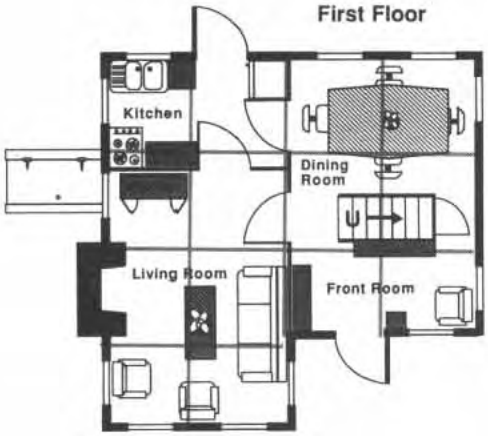
This setting represents a typical suburban dwelling of a pattern familiar to many people of many nations in AD 2000.



Second Floor



Basement
(2 meters below ground level)

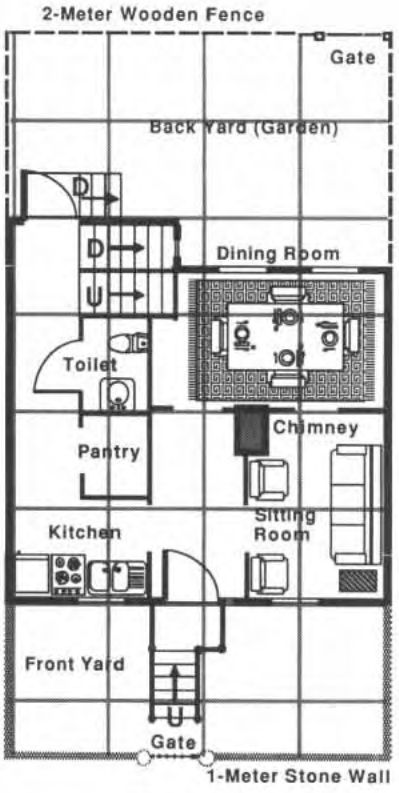


First Floor

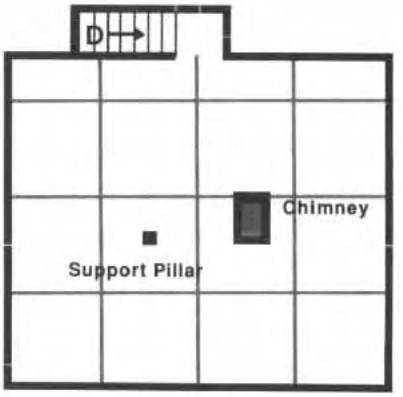


Conny Delshagen (order #3265201)

Old City House



First Floor

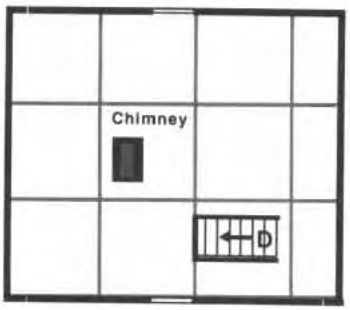


Basement
(2 meters below ground level)



Conny Delshagen (order #3265201)

Older buildings have advantages and disadvantages. They are often more solidly built than their modern counterparts, but they may have foundation problems.



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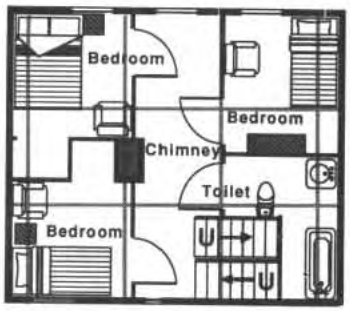
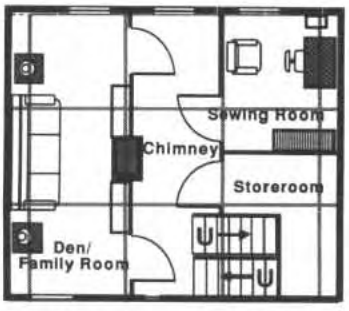


Second or Third Floor

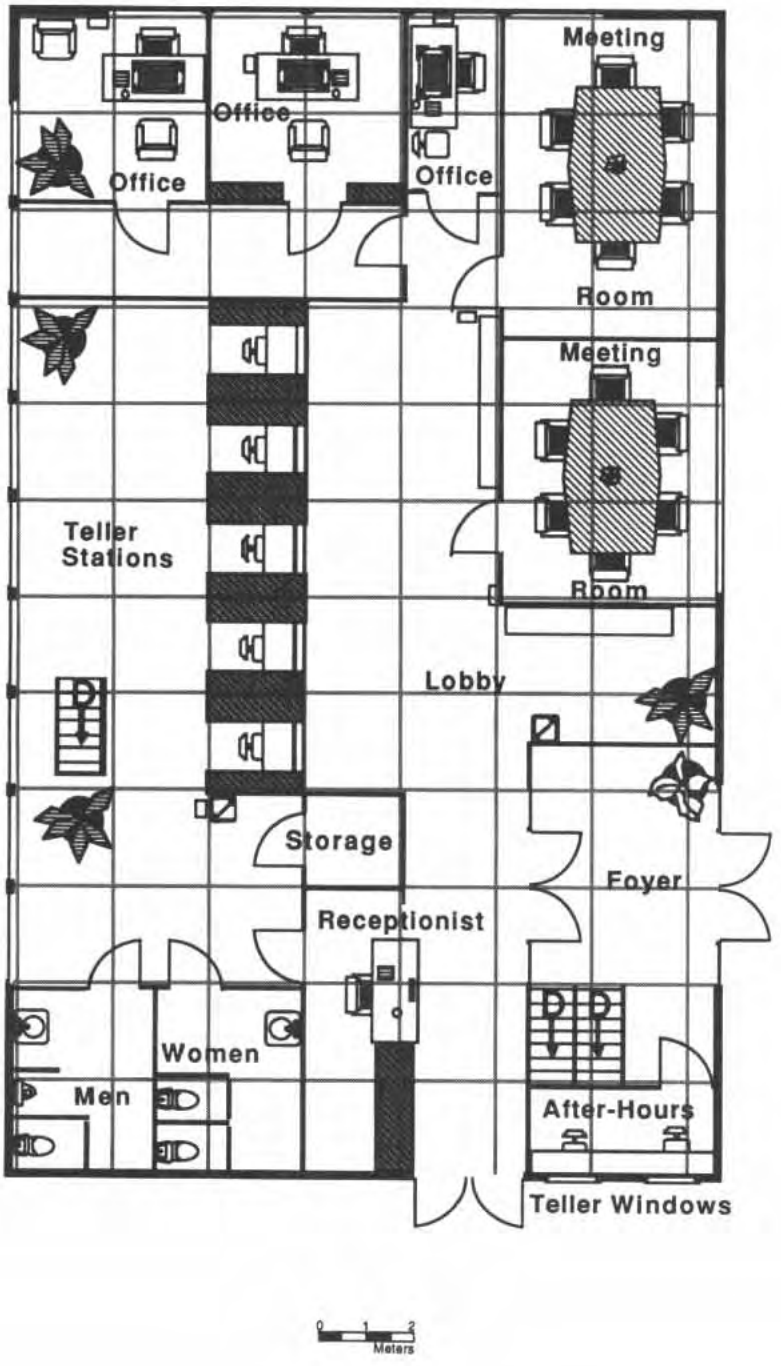




Optional Second Floor

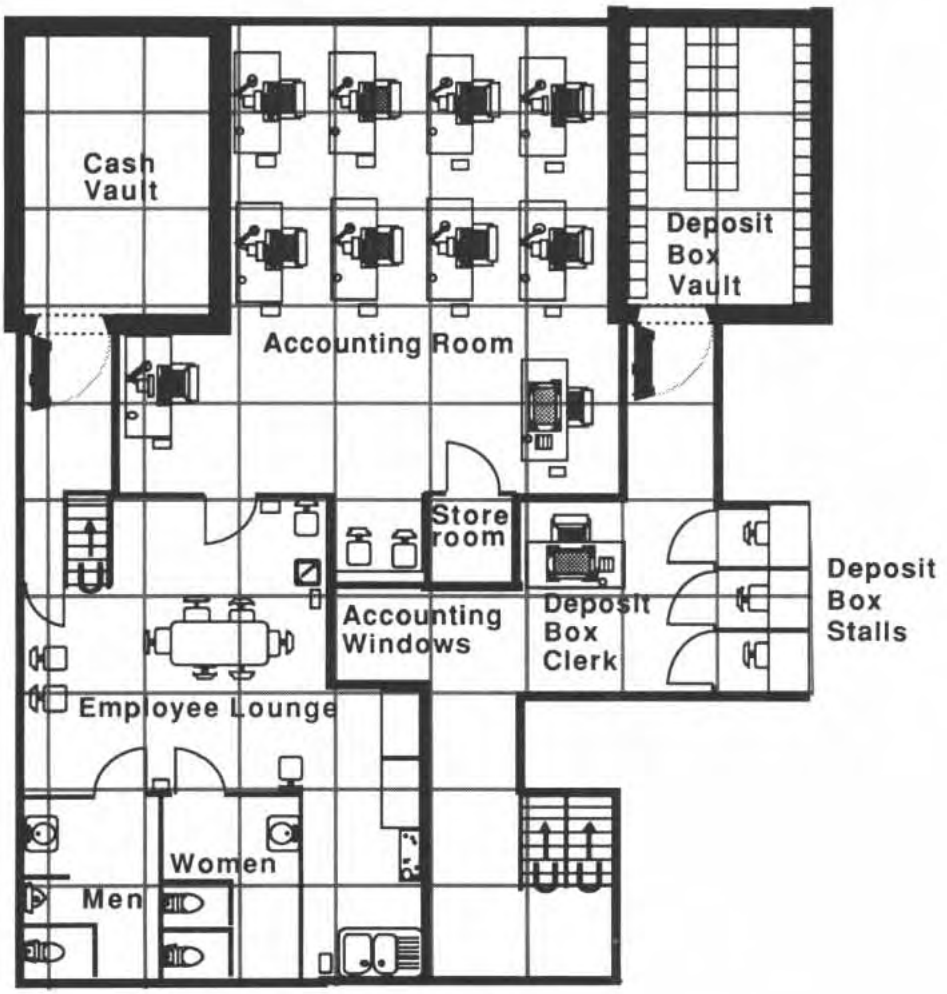
Conny Delshagen (order #3265201)

Bank/Office Building (Modern)



Conny Delshagen (order #3265201)

This represents a typical modern business building. Doubtless it is serving in some other capacity at the present.

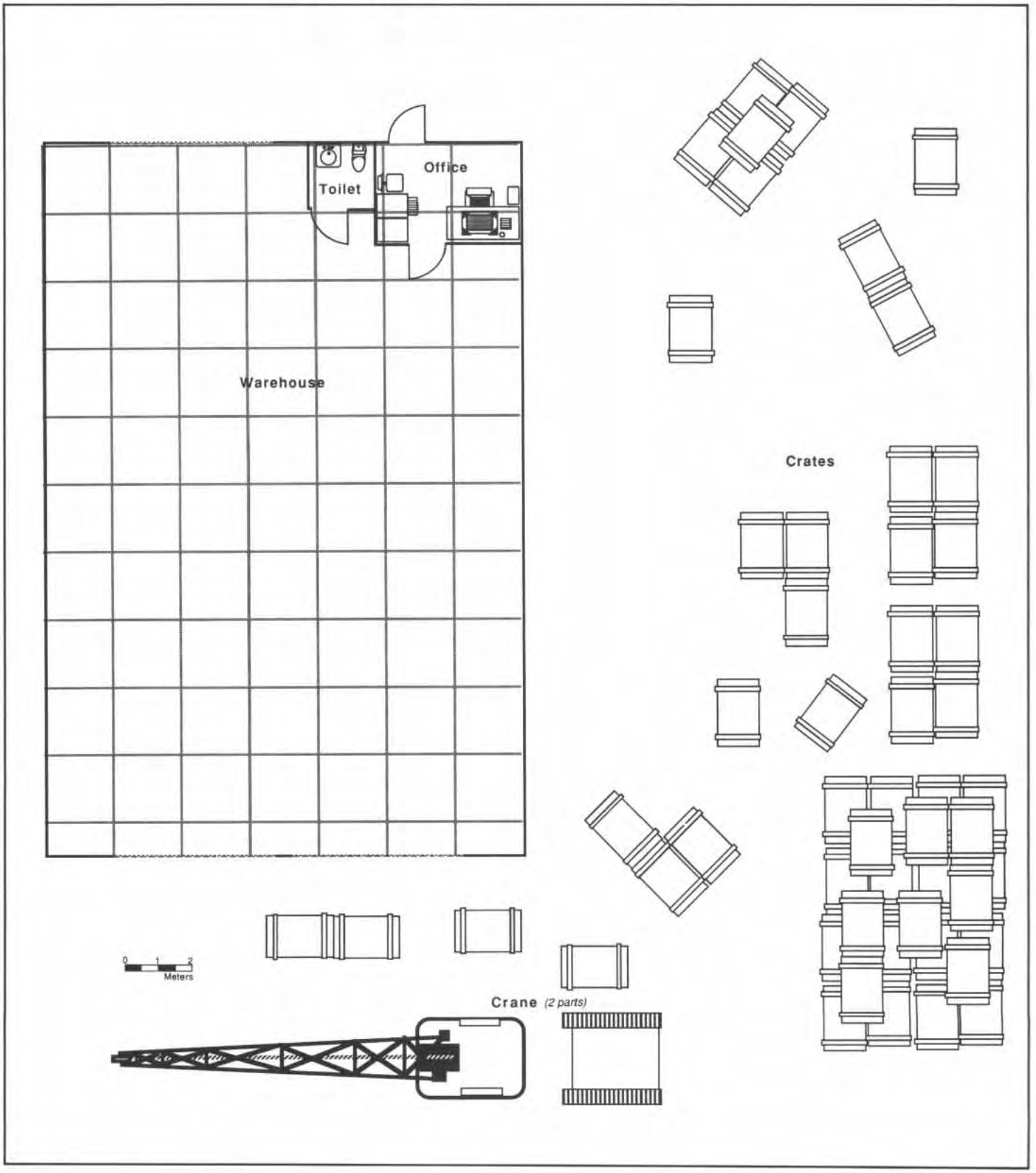


Basement

(2 meters below ground level)

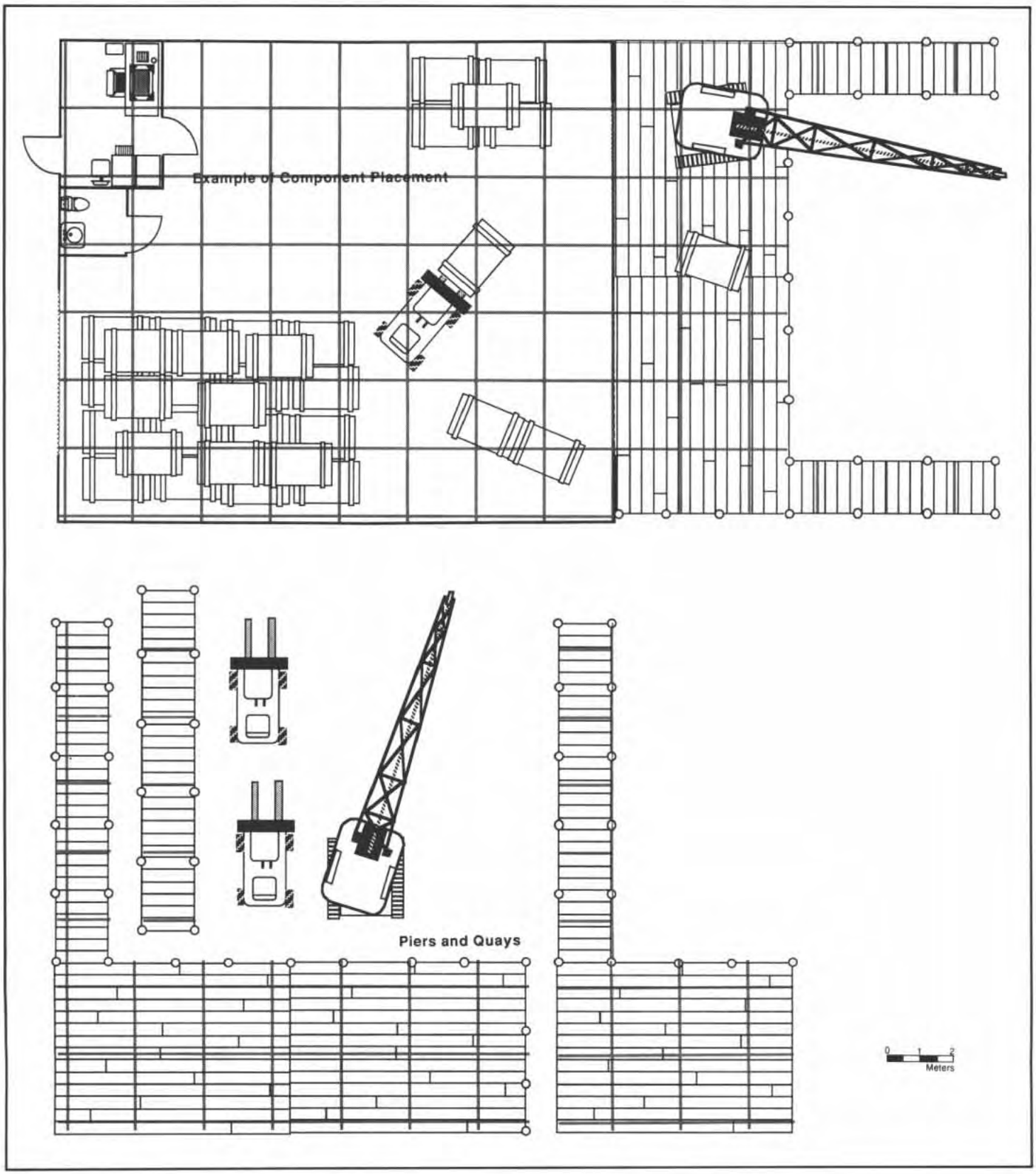
Conny Delshagen (order #3265201)

Cheap Warehouse/Dock



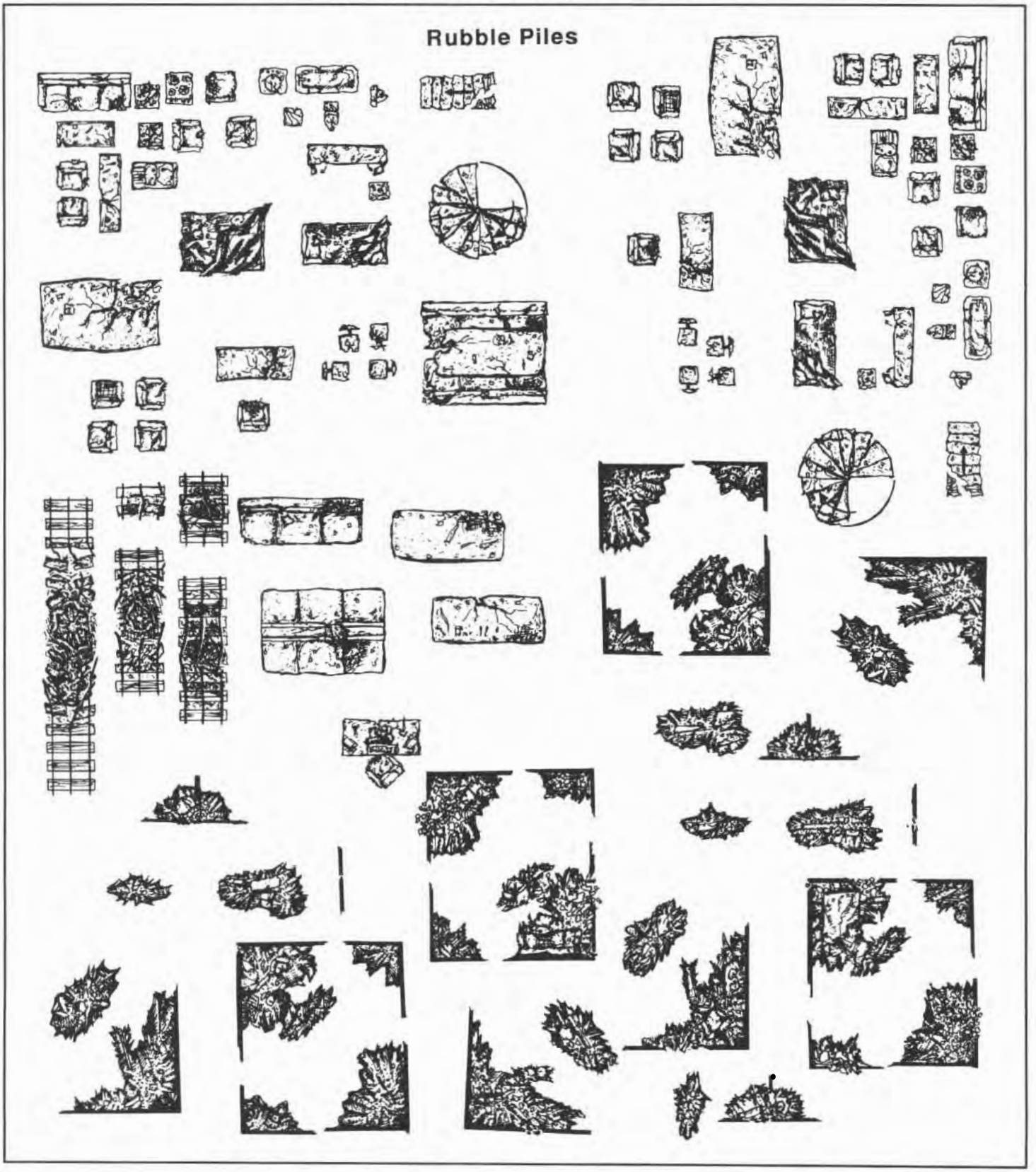
Conny Delshagen (order #3265201)

This is a modern, prefabricated storage building without a great deal of sophistication or creature comforts. It may or may not be occupied and is probably in bad shape if abandoned (they don't build 'em to last, these days).



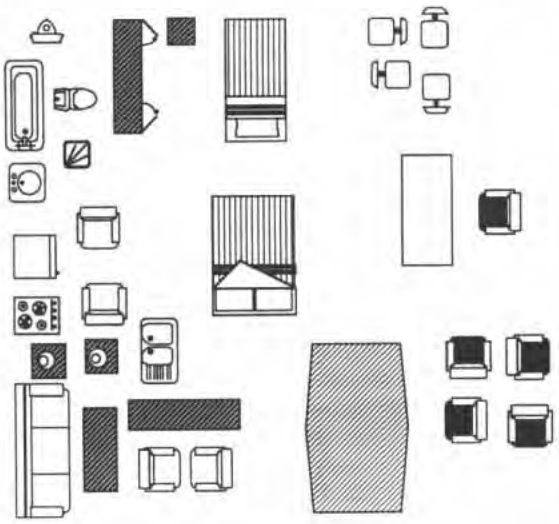
Conny Delshagen (order #3265201)

Damaged Building Components

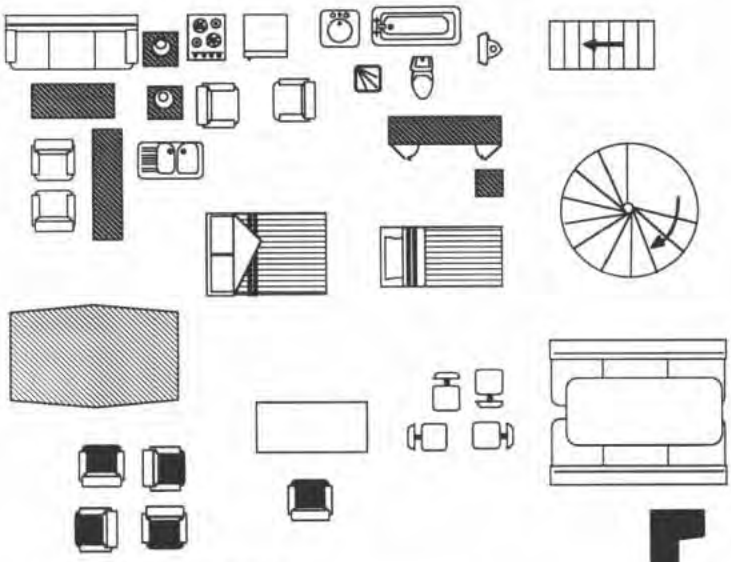


Conny Delshagen (order #3265201)

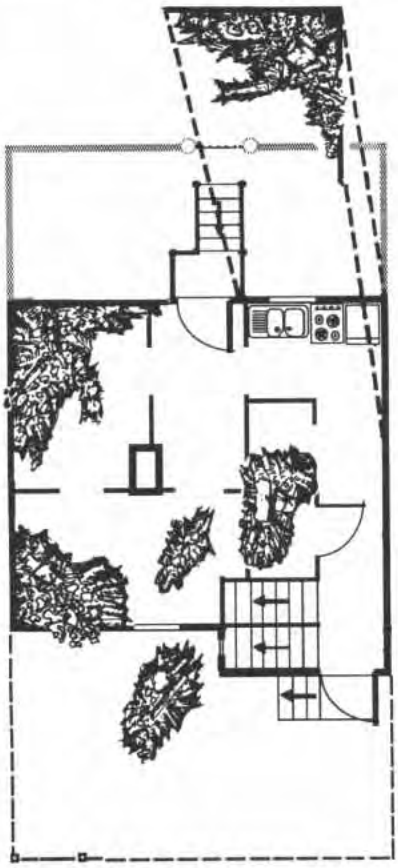
These pages contain a number of rubble piles and other junk designed to be photocopied, cut out, and placed over the other floor plans in this chapter in order to convert an intact building into a partially or totally destroyed one.

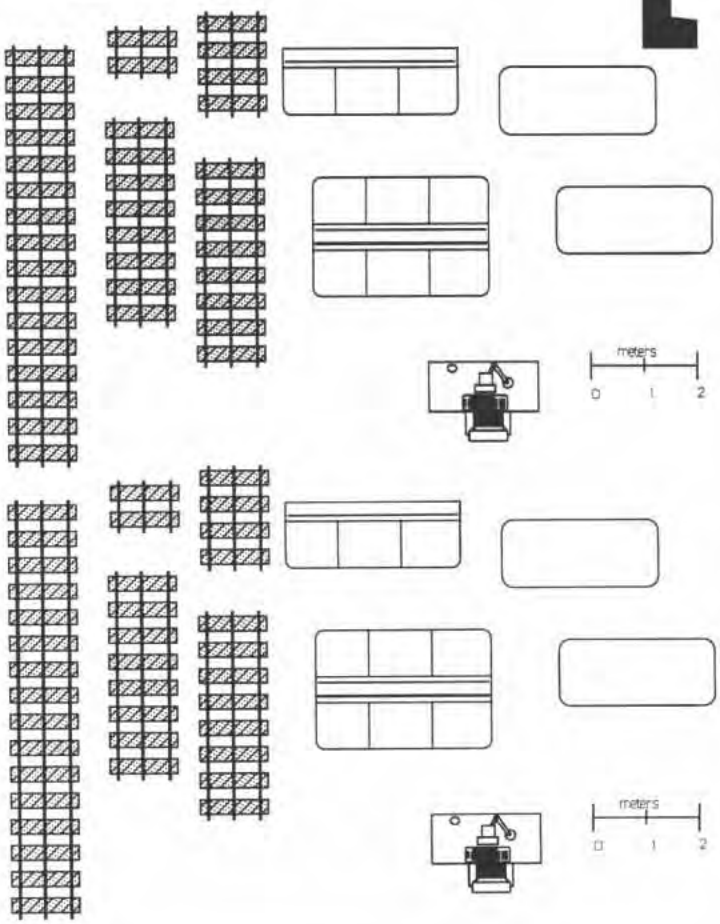


Assorted Furnishings



Sample Arrangement





Conny Delshagen (order #3265201)

COMBAT RULES

From time to time, characters in **Twilight: 2000** will find themselves in situations where violence (combat) is the only way out. Most of the action occurs on the ground, with air actions almost nonexistent and naval actions limited to inland waterways such as rivers and lakes. Deep water naval combat and aerial combat are beyond the scope of this game.

All combat in **Twilight: 2000** uses the same core task resolution system as the rest of the game, and as such, success in combat is dependent upon the quality of the personnel involved. While a weapon's performance characteristics are certainly important, the success with which it can be handled has everything to do with the attributes and skill levels of the character using it.

Combat is discussed in the following order: Basic Concepts, Combat Resolution, Effects of Fire and Combat, Wound Effects and Healing, Vehicle Combat, and Other Combat-Related Issues.

Basic Concepts

THE COMBAT TURN

Combat is resolved in a series of *combat turns*, each one five seconds long. At least one action may be performed by a character in a combat turn, and each action is completed in one combat turn. Some characters with higher Initiative ratings may be able to perform more than one action in a combat turn.

Actions include movement, certain maintenance tasks, and of course, attacks. Many of these actions, especially the attacks, require task rolls. An action is a precisely defined activity as listed below, beginning on page 196.

INITIATIVE

The number and order of actions that a character may conduct in a turn are determined by the character's Initiative number. This number usually ranges from 1 to 5, but this limit can be exceeded by player characters with large amounts of experience. The Initiative number can also be temporarily reduced in the course of combat as a result of panic or wounds. Player character Initiative is determined as described in "Character Generation" (page 23). NPC Initiative depends on how the NPCs are generated. A detailed NPC as created by the referee using the character generation rules receives Initiative according to the character generation rules. Simplified, or stock, NPCs have Initiative according to their described experience level. This is in the table below. All animals have an Initiative of 6, except as noted in their individual entries, on pages 162-163.

NPC Initiative Table

NPC Type	*Initiative*
Elite	5
Veteran	4
Experienced	3
Novice	1

Wound Effects on Initiative: A character's Initiative is reduced by 1 when slightly wounded, by 3 (total) when seriously wounded, and by 5 (total) when critically wounded. A character whose Initiative level is reduced to 0 or lower may not act at all. (See the "Wound Effects and Healing" section, page 211, for more information.) The Initiative as adjusted by wounds is called the current Initiative, as opposed to the character's permanent Initiative when fully healthy.

Wounds have other effects on conducting actions. Scratch wounds, knockdowns, and stun results can deprive characters of a turn's action, although they do not change their Initiative numbers. Again, see page 211 for exact details.

Panic Effects on Initiative: Panic has no effect on a character's Initiative number *per se*, but characters who have panicked lose their actions for the duration of the panic effect. See "Involuntary Actions" below for details.

Sequence of Actions: Actions in each turn are conducted in order based on Initiative number. The characters with the highest current Initiative number go first, followed by the next highest Initiative, then the next, and so on. Each set of actions grouped by Initiative number is called a *step*. Thus, there is the Initiative 5 step where all characters with current Initiative of 5 may act, followed by the Initiative 4 step, and so on.

The referee moderates this flow of actions by calling out Initiative steps in order (highest to lowest). When a player's current Initiative number is called, the player will tell the referee the action he or she is conducting (as in "firing at the soldiers behind the wall"). The referee will announce the actions for any NPCs acting at that point, provided they are detectable to the PCs. The referee then resolves all combats and calls the next Initiative step.

It is likely that not every step will be used each turn. Before beginning play, the referee should establish the range of Initiative numbers present in the group so that the group can be aware of which Initiative steps would be empty and can be skipped. Some referees organize their sessions by having their players sit around the table in order of Initiative, so that the sequence of actions proceeds around the table. However, the effects of wounds will change not only the order of certain characters' actions, but also change the Initiative steps that are used.

For example, a group with Initiative numbers of 7, 5, 3, and 2 would skip Initiative steps 6 and 4, as there is no one to act in those steps. However, if the character with Initiative 5 takes a slight wound (reducing him or her to Initiative 4), now steps 6 and 5 are skipped, and 4 is used. If the Initiative 7 character is seriously wounded (reduced to Initiative 4), each combat turn now begins with step 4, as there are no longer any Initiative numbers above that level.

When every character has acted, the turn is over and a new turn begins.

High Initiative Characters: Characters may achieve Initiative levels higher than 5. Any character with a current Initiative higher than 5 receives an extra action each turn. This action is conducted in the Initiative step equal to one-half of the character's Initiative number (rounding fractions down).

For example, a character with an Initiative of 7 would conduct one action when the referee called out "7" and one when the referee called out "3." Once such characters receive wounds to reduce their current Initiative to 5 or lower, they lose this second action. In the example of our Initiative 7 character, a slight wound (minus 1 to Initiative) would still allow two actions: one at 6 and one at 3. However, a serious wound (minus 3 to Initiative) reduces the character to only one action per combat turn, at step 4. If the character took

Conny Delshagen (order #3265201)



this wound during step 6 or 5, he would lose his second act immediately, and would not get his second act that turn.

Resolving Ties: If two characters are conducting actions at the same time which may interfere with each other (such as firing at each other), the character with the highest Agility goes first. However, for purposes of this determination, subtract the bulk rating of the character's weapon from his or her Agility. If there is still a tie, roll a die with the high die roll going first.

Interrupting Initiative Sequence: There are two sorts of circumstances which allow characters to act out of their Initiative sequence:

Opportunity Fire: Opportunity fire indicates that a character is aiming in a specified direction or at a specific area, and that if an enemy character passes through his or her line of sight, he or she may immediately fire on the enemy. This is resolved as if it happened simultaneously with the enemy movement. Thus, a character may fire opportunity fire in a turn during an Initiative step in which he or she would normally not be able to act. However, executing this opportunity fire does use up the character's action for the turn. High Initiative characters who have two actions may use their second action only if the opportunity fire was resolved before the step when the second action would normally be conducted.

A player may only conduct opportunity fire once during a turn. See "Special Cases," page 204, for more on opportunity fire.

Ambush: An ambush consists of one or more characters firing from previously undetected positions at an enemy force. The ambushers may open fire when one or more of their troops reaches an Initiative point or, if they are using aiming to conduct opportunity fire, when the moving force enters their line of fire.

MOVEMENT

Movement during combat can be resolved in whatever detail the situation warrants. In many cases, no map is needed—long-range sniping between parties on foot, for instance. In others, the referee can do well enough by just drawing a map and positions on a piece of paper.

If greater detail is needed, the referee can make a map beforehand, and the positions of characters and vehicles can be represented by pins, drawing on plastic overlays, counters, or miniatures figures. Any scale may be used; movement rates and weapon ranges are given here in meters.

Combat movement rates are expressed in meters moved per five-second combat turn. Vehicles and animals have unique combat movement rates listed with the specific vehicle or animal description and on the Combat Movement chart (page 273).

Personnel Movement

People may move at four different rates: crawl (two meters), walk (10 meters), trot (20 meters), or run (30 meters). A character who is burdened (see Load, page 25) travels half this fast. Characters who are crawling are prone.

Animal Movement

Animals have three movement rates: walk, trot, or run. These rates are listed for each animal on the animal data charts, pages 162-163. The rate a non-ridden animal uses is up to the referee.

Riding Animals: Horses and mules (and, less commonly, camels, and elephants) may be ridden using Riding skill. Anyone (regardless of skill) may ride a walking animal safely. Riding a trotting animal is safe for anyone with any Riding skill and is Easy: Agility for other characters. A character with Riding skill has a maximum safe speed on an animal equal to 20+(Riding), which may be achieved without risk by anyone with Riding skill.

A character may ride at greater than the safe speed—up to 40 meters per round (full gallop)—at the risk of falling off. Avoiding a fall is Difficult: Riding or Agility, rolled once per turn. A fall results in damage according to the "Falls from Moving Vehicles/Animals" rule on page 210.

If a Catastrophic Failure occurs (see page 135), a mishap happens. Mishaps include breaking a animal's leg in a chuckhole, tearing a muscle from leaping, or becoming bogged in mud so as to injure the animal. The referee should determine the exact nature of the mishap according to circumstances. A mishap of this sort will probably result in a fall, as noted above.

Grid System

The maps and building floorplans included in **Twilight: 2000** are all provided with a

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square grid to control movement and measurement of firing ranges. Two different scales of grids are used, one for outdoor encounters, and one for buildings and other interiors. The outdoor grid uses squares representing 10 meters from side to side (sometimes referred to as tactical grid squares). The illustration below shows an American-style 100-yard football field with an outdoor grid system superimposed on it. The offensive team is shown lined up for a play with the ball on its own 40-yard line.

This should provide you with a good feeling for the actual area covered by one of these grid squares. Obviously, it is fairly easy for people to conduct activity in such a square without interfering with each other.

Interiors generally require more detailed coverage, and in any event cover much smaller areas. As a result, we use a two-meter grid for these.

This grid can also be used for outdoor encounters which take place at close quarters, such as in an alleyway or in a small clearing in the woods.

The same offensive line shown on the 10-meter grid is shown again on a two-meter grid.

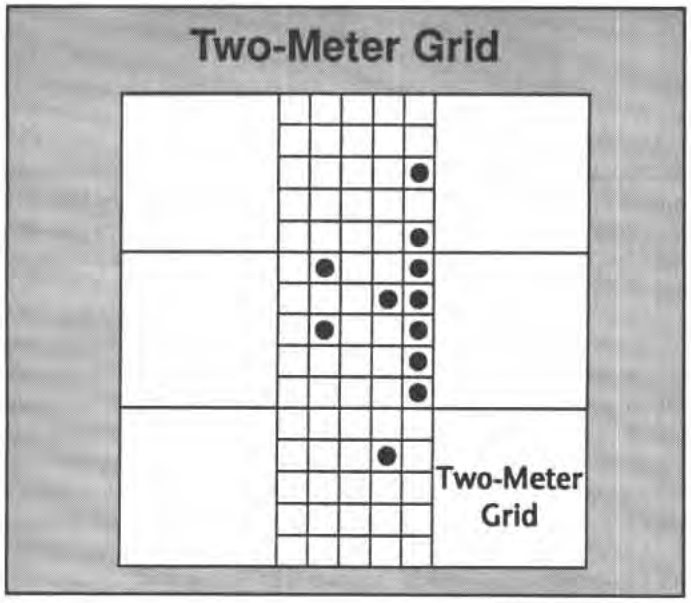
Note that three large 10-meter grid squares are reproduced and broken into their component two-meter squares. In this case, each man occupies a single square. Although it is possible for more than one man to stand in a two-meter area, it is difficult for both to then conduct any sort of activity without interfering with each other.

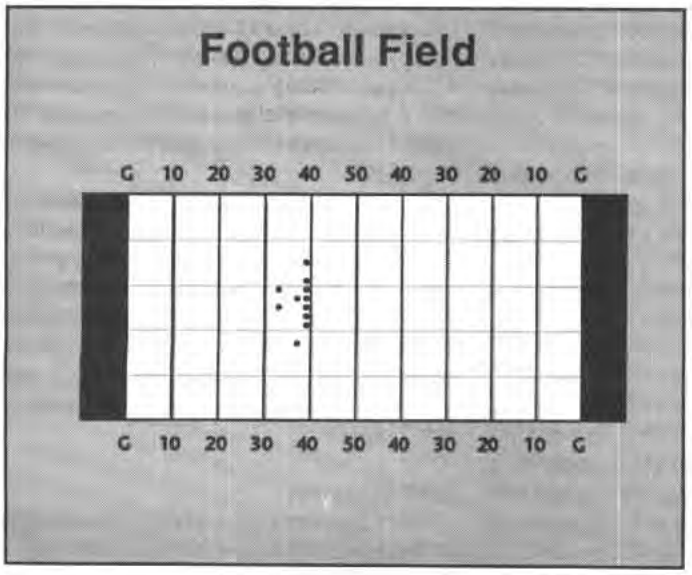
These grid sizes have been chosen to make them as easy as possible to use with the movement rates and ranges in **Twilight: 2000**, particularly when used in conjunction with miniatures.

• When using the interior two-meter grid, a character can crawl one grid square, walk five, trot 10, and run 15 squares per turn.

• When using the outdoor grid, the same character could walk one, trot two, and run three squares per turn. It would take that character five turns worth of crawling to move one square.

• It is possible to move and fire diagonally through a square as well as orthogonally (straight up and down or side to side), but the diagonal distance is greater. Count a square as being 50% longer diagonally than orthogonally. That is, it counts as three meters of range or movement to cross a two-meter square diagonally, and 15 meters of movement or range to cross a 10-meter square diagonally.





ACTIONS

A character may perform one action in each combat turn (except as specifically noted elsewhere). Actions are chosen when it is actually time for the character to act. The possible combat actions are listed below.

Combat Actions

Aim: Aiming allows the best possible chance to hit a target. The aim action can be used in two different ways. First, it can be done immediately before a fire action in order to aim at a specific announced target. This allows resolution of the subsequent shot against that target (conducted in the following combat turn, or by a high-Initiative character, later in the same turn) as an aimed shot (aimed shots are explained under "Direct Fire," page 202).

Second, a character may aim at a certain target or area in order to conduct opportunity fire.

Aiming at a target or area also enables a character to fire at any target which later moves through his or her line of sight. This is called opportunity fire. To continue waiting for a target to come into view, merely continue to conduct an aim action each turn.

Crawl: The character moves two meters in a prone posture.

Drive: This is the action used by the driver of a vehicle to move the vehicle during the turn. The movement rate varies with vehicles and with the risks that a driver is willing to take to drive faster. These details are discussed on page 214.

Fire: The character fires his or her weapon at any target which is currently visible to the character or which has been visible during the current turn at some point. With some weapons this may be combined with a walk or trot. If the fire action is conducted against a target which the character is currently aiming at (having expended his or her previous action to do so), the fire is executed as an aimed shot.

If the fire is made at a target that the character was not aiming at, it is executed as a quick shot. Aimed and quick shots are explained on page 202 under "Direct Fire."

Go Prone/Stand Up: A crawling character is prone. A prone character may stand up at any time, either as an action by itself or as part of a walk, trot, or run action. Standing up cuts the distance moved in an action in half.

Melee: This constitutes either an armed attack with a melee weapon (which may be combined with a walk or a trot) or an unarmed attack. There are several types, one of which must be specified, any of which may be combined with a walk or a trot. These are discussed in detail beginning on page 198.

Mount/Dismount: Getting on or off of a vehicle or riding animal.

Ready/Change Equipment: This can consist of putting down your rifle and taking out a knife, drawing a pistol, linking two ammo belts together, readying a radio to transmit, etc.

Reload: It generally takes one combat turn to reload a weapon, although some take longer (and thus require several reload actions to finish).

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Ride Animal: This is the equivalent of a drive action, but for riding animals.

Run: The character moves 30 meters (three grid squares).

Take Cover: The character dodges behind any close-by cover (see "Cover" on pages 209 and 217).

Talk: Players will want to discuss their plans, but the referee should be careful to keep these discussions within the bounds of reality. Since each action is only five seconds long, the referee should not allow a player to say more than one sentence or so during a combat turn. While talking can be combined with most other actions, it cannot be combined with firing.

If trying to talk on a radio, a player must first spend a turn opening contact. Each radio has its listed short range, at which difficulty is Average. Ranges and difficulty levels increase the same as fire combat (i.e., Difficult at medium [2×short] range, etc.). The player must also give his or her call sign and that of the character being called, as in "Red Dog, this is Can Can. Over." Unless the other character has a communicator ready to transmit, it will probably take an action to ready it and then another to transmit a reply. The reply may be "Can Can, this is Red Dog. Go ahead. Over," but is more likely to be simply, "Red Dog. Go."

The referee should be fairly strict in enforcing the need for acknowledgements before new transmissions are sent.

Communication by radio is difficult, time-consuming, and confusing if not done properly. In the interests of playability we do not include rules for static, slipping off frequency, weak batteries, or any of a number of confounding problems, nor do we require characters to follow strict US military radio protocols. For simplicity, referees should disregard these complexities, and simply require a deliberate and clear communications procedure.

Trot: The character moves 20 meters (two grid squares).

Walk: The character moves 10 meters (one grid square).

Involuntary Actions

Certain conditions in combat require the character to conduct an involuntary, mandatory action rather than one of the normal actions listed above.

Panic: Whenever a character is knocked down by wound damage (see "Wound Effects and Healing," page 211) or surprised (attacked from an unexpected direction, ambushed, or surprised by an encounter as defined in the encounter rules), there is a chance that he or she will panic. This is not blind panic which sends the character screaming away, but panic which causes him or her to momentarily freeze.

To determine if a PC panics, roll 1D6. If the result is greater than his or her Initiative rating, he or she panics. The PC may not conduct any action for the number of turns by which the die roll exceeds his or her Initiative. However, if the character is forced to freeze for more than one combat turn, he or she may go prone on the second turn and remain there until able to move again. If the character has already conducted his or her action for the turn, the following turn counts as the first turn frozen. If the character has not yet acted in the turn in which he or she panicked, the current turn becomes the first turn frozen.

NPCs use the same system as PCs. Note that player characters or detailed NPCs with an Initiative of 6 or more never panic, while even Elite stock NPCs may.

For example, a character with Initiative 3 is knocked down in Initiative step 2 of the third combat turn. The PC rolls a 5, indicating that he has panicked. Because the roll exceeds his Initiative by 2 points, the character freezes for two turns. Because the character had already acted earlier in the third turn, the fourth turn counts as his first turn frozen. The PC is still frozen on turn 5, but may elect to fall prone during that turn. Unless he has been further injured while frozen, the character may begin normal actions again on turn 6.

Bail-Out: If a vehicle is penetrated by fire (final penetration is greater than armor) from anything other than small arms fire, there is a chance that each character inside will panic and bail-out. The roll is the same as for panic, above. If a character fails the roll, he or she must immediately climb out of the vehicle, seek the best available cover within two meters, and remain there for two turns (in addition to any time spent getting out of the vehicle). After the two turns are over, the character may get back in. It takes one turn to get out of or into a side or rear door, and two turns to get out of or into a top or turret hatch.

Charge: If a character on foot is being charged by a powered vehicle or running animal within 100 meters (that is, he or she is about to be run over by something large and fast), he or she must check for panic. PCs that panic do not freeze; instead, they run. Subtract 1 from the panic roll if the character has a weapon with a good chance of stopping the attacker and is prepared to fire it.

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Combat Resolution

The sections below describe how the various combat actions listed above are played out. They are divided into two broad areas: Melee Combat and Fire Combat.

MELEE COMBAT

Melee combat covers close quarters combat, either hand-to-hand or with melee weapons, such as knives, bayonets, and clubs. All of the actions listed below under "Unarmed Melee Combat" and "Armed Melee Combat" are included under the combat action "Melee," page 196.

Unarmed Melee Combat

Characters must be within two meters of each other to make unarmed combat actions. There are eight types of unarmed combat actions: hand strikes, kicks, leaping kicks, throws, diving blows, grapples, escapes, and strangling. Hand strikes, kicks, leaping kicks, throws, and diving blows attempt to do damage to the target; grapples attempt to seize and hold the target, while escapes seek to escape from such holds; and strangling is a variation of grappling which attempts to do damage to the target.

A character may make only one unarmed combat attack per combat turn.

Note that many of the actions listed below are resolved as tasks using the Agility attribute. Characters engaging in melee combat who have any skill level in Acrobatics may use their Acrobatics asset in place of their Agility attribute at the same difficulty level as listed for Agility alone.

Strike Attacks: There are two types of strike attacks: hand strike and kick. Both are resolved in exactly the same way, with the exception of damage and hit location. Either type of strike attack is a task—Difficult: Unarmed Martial Arts. Success means that the attack hits. In the case of a surprise attack (unexpected attack from behind), no roll is made; the attack automatically hits.

Blocking Strike Attacks: If a character successfully hits an opponent, the opponent may be able to block the blow. Blocking is also a task—Formidable: Unarmed Martial Arts. Success means that the attack has no effect. Surprise attacks cannot be blocked (if they could, they wouldn't be a surprise).

A character may attempt to block at any time when a blow is directed at him or her, but a successful block counts as an action for the combat turn. However, an Outstanding Success on a block roll means that the block did not count against the character's actions. Once a character has made a number of successful blocks equal to his or her allowed actions for a turn, the character may attempt no more blocks during the turn.

For example, MacGyver, with a current Initiative of 2, is hit in Initiative step 6 and blocks the unarmed melee strike. In Initiative step 2, he could usually conduct his normal action, but cannot this turn because he blocked, using one turn's actions. Had he rolled an Outstanding Success on the block, he would still have his action for step 2.

Aimed Strike Attacks: A character may decide to concentrate a hand strike or kick against one particular body part—Formidable: Unarmed Martial Arts. If the attack succeeds, the die roll for location (see below) is not made; the attacker chooses the hit location. If the attack fails, it will miss entirely.

Hit Location: Hit location (if the attack succeeds and is not blocked) is rolled on the Human/Animal Hit Location Chart (biped or quadruped, as necessary, see below). A normal (non-aimed) strike attack is rolled on 1D6, and a non-aimed kick is rolled on 1D6+4, yielding results of 5-10.

The die roll for hit location is not made for a surprise strike (an unexpected attack from behind) or an aimed attack. The attacker is allowed to pick his or her target in these two cases.

Damage: Damage inflicted from a hand strike is equal to the attacker's unarmed combat damage rating. Damage from a kick is equal to 1.5 times the unarmed combat damage rating (round fractions to the nearest whole number).

Armor: Armor absorbs damage points equal to twice its value from each strike attack and suffers no damage. (See the Body Armor Protection Chart on page 210.) One hit is inflicted on the attacker on the body part (right arm, left arm, right leg, or left leg) used in the attack for every two hits absorbed by the armor (round off to nearest whole number). Thus, if Monk punched Gerhard in the torso and caused 6 points of damage, and Gerhard was wearing a flak jacket (armor level 1), Gerhard would only suffer four hits, while Monk's right arm would suffer one hit.

Leaping Kick: A leaping kick is an attempt to put more force behind a kick by throwing oneself feet-first at the enemy. It is a Difficult test of Agility. Success indicates that the character has hit the enemy and also that the attacker has managed to land on his or her feet. Failure indicates that the attacker has misjudged his or her leap. While the leap still hits the target, the attacker is also knocked down and suffers damage.

Avoidance: If a character is surprised (an unexpected attack from behind), the attack always hits. If not surprised, the character may attempt to avoid the attack (Difficult: Agility). If the kick is avoided, the attacker lands on his or her feet or falls to the ground, according to his or her original Agility roll, but the target is missed by the attack.

Effects: A successful leaping kick knocks its target to the ground and inflicts damage points equal to twice the attacker's CON. An unsuccessful leaping kick which is not avoided knocks both the target and the attacker down, and inflicts damage points equal to the attacker's CON on each of them. An unsuccessful leaping attack which is avoided only inflicts the listed unsuccessful effects on the attacker.

Grappling: Grappling is an Average: Agility task. It is somewhat simpler to resolve than a strike. Blocking is not possible; there is no hit location; and armor has no effect. Grappling "damage" is calculated in the same way as for a strike, however, the results of the attack are termed *controlling hits*. They are

Human/Animal Hit Location

Die	*Biped*	*Quadruped*
1	Head	Head
2	Right arm	Forequarter
3	Left arm	Forequarter
4	Chest	Forequarter
5	Abdomen	Chest
6	Abdomen	Chest
7	Right leg	Abdomen
8	Right leg	Hindquarter
9	Left leg	Hindquarter
10	Left leg	Hindquarter

Biped: Table assumes front/rear shot.
Side Shot: Far side hit equals near side hit.
Prone Biped: Table assumes top shot.
Side Shot: Far side hit equals near side hit.
Front Shot: Leg or abdomen hit equals miss.
Rear Shot: Head, arm, or chest shot equals miss.
Quadruped: Table assumes side shot.
Front Shot: Hindquarters or abdomen hit equals miss.
Rear Shot: Head or forequarters hit equals miss.

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not damage, but rather are a measure of the extent to which one character has physically controlled another (with a hammerlock, by pinning him or her to the ground, etc.). Once a character has inflicted controlling hits on another character equal to or in excess of that character's Strength, the target character is totally controlled and ceases struggling. The controlled character may not move; the controlling character may not move without releasing control (all controlling hits disappear). Until that time, however, the character may attempt to escape or grapple with the original attacking character.

If both characters grapple, the first one to achieve hits equal to his or her opponent's Strength controls the other.

Escape: An escape attempt is resolved in the same way as a grapple (i.e., an Average test of Agility), except that if the attempt is successful, controlling hits equal to the unarmed combat damage rating of the character making the successful attempt are removed from the accumulated total which the other character has already built up.

Strangling: Strangling is handled like grappling, with three main differences: (1) It *may* be blocked by an Average test of Agility; (2) armor *does* have effect; and (3) a character who becomes "totally controlled" becomes unconscious and begins to suffer head wounds equal to the attacker's unarmed combat value *each turn* thereafter, for as long as the hold is maintained. If the hold is released before death ensues, the victim rolls to regain consciousness per the serious wound rules. *Note:* Garottes double the attacker's unarmed combat damage rating for strangling attacks.

Throws: A throw is a defensive move, similar to an escape or a block. However, it allows the defender to turn the tables on the attacker and not only avoid being damaged, but inflict damage on the attacker.

A character who is hit by a successful grapple, strangle, hand strike, or kick (not a leaping kick) may attempt a throw. The character must first make a successful block roll (grapples may not be blocked; this roll is merely to set up for the throw). If the block is not successful, the attack does damage to the character normally, and the throw may not be attempted. If the block roll succeeds, the character may attempt the throw.

A throw is a Formidable test of Unarmed Martial Arts, and cannot be avoided by the object of the throw. Success indicates that the opponent is knocked down and suffers damage. Failure means that only the block was successful (except in the case of a "blocked" grapple—because grapples cannot be blocked, the grapple attack's effect is unchanged), but that the character has used up an action. The action is used up even if the block was unsuccessful. Note that the block to set up for the throw is considered part of the throw action, so does not count as a second action.

Effects: A successful throw inflicts damage points on the attacker equal to twice the attacker's own CON. Although victims of a successful throw may not avoid being thrown, they may attempt a Difficult: Agility roll to limit damage by controlling their landing (if the throw roll was an Outstanding Success, no roll may be made to limit the damage). If the Agility roll is successful, only half damage is applied.

Diving Blows: A diving blow is an attempt to throw oneself at the enemy and knock him or her down. Blocking is not possible (although avoidance is), and armor has no effect. Note that unlike other forms of unarmed melee combat, the attacker does not make a roll to succeed: the diving blow always succeeds unless the target succeeds at an avoidance roll.

Avoidance: If a character is surprised (an unexpected attack from behind), the attack always hits. If not surprised, the character may attempt to avoid the attack (Average: Agility). If the blow is avoided, the attacker falls to the ground, having missed the target. If the attack is not avoided, it automatically hits.

Effects: If a diving blow hits, either the attacker or defender is knocked down and suffers hits. If 1D6+(2xConstitution) of the attacker is greater than Strength+Constitution of the defender, the defender is knocked down and suffers hits equal to the difference of the two totals. Otherwise, the attacker is knocked down and suffers hits equal to the difference between the two values. Defenders who are surprised use only their Constitution for the comparison.

Armed Melee Combat

Armed melee combat is conducted with melee weapons.

Range: The two general categories of melee weapons are short range and long range. Characters must be within two meters of each other (the same as for unarmed combat attacks) for short-range attack and within three meters for long-range attacks. If a character with a short-range weapon (including an unarmed character) encounters a character with a long-range weapon, the character with the short-range weapon may not attack in the first turn of contact (although a short-range melee weapon may block).

The ranges of melee weapons are given in the Melee Weapons Table on page 252.

Hit Procedure: An armed melee attack is a task—Difficult: Armed Martial Arts. In the case of a surprise attack (unexpected attack from behind), no roll is made; the attack automatically hits.

Modifiers: Certain melee weapons add a hit modifier to the character's Armed Martial Arts asset, also shown on the Melee Weapons Table, page 252. This modifier is added to or subtracted from the character's asset; however, it may never reduce the skill portion of a character's asset to below 1.

Blocks: If a character successfully hits an opponent, the opponent may be able to block the blow. A block is a task—Formidable: Armed Martial Arts. If the task is successful, the attack misses. The character blocking must also be armed with a melee weapon (it doesn't make much sense to block a cutlass with one's hand). A character may attempt to block at any time when a blow is directed at him or her, but a successful block counts as an action for the combat turn. An Outstanding Success on a block roll means that the block did not count against the character's actions. Once a character has made a number of successful blocks equal to his or her allowed actions for a turn, the character may attempt no more blocks during the turn.

Hit Location: Hit location is rolled on the Human/Animal Hit Location Chart on page 198.

The die roll for hit location is not made for a surprise attack; the attacker picks his or her target.

Aimed Attacks: The attacker may attempt to pick his or her target in any melee attack; this is a task—Formidable: Armed Martial Arts. If the attacker hits, he or she chooses where he or she hits. Additionally, the referee may mandate certain hit locations if the situation warrants it. If an injured player crawls up to an enemy with a knife, he or she is unlikely to hit the enemy anywhere but in the legs. Likewise, a character mounted on horseback and swinging a club is not going to hit the leg of a man on foot.

Damage: Damage inflicted from a melee attack varies with the weapon used. The Melee Weapons Table gives the damage value of each weapon.

Armor: Armor absorbs hits equal to twice its armor level from each armed combat attack, and suffers no damage.

Animals In Combat

Animals attack as if engaging in melee combat. Most of these attacks involve animal weapons (horns, claws, teeth, and so on) and are resolved as armed melee combat. This means that an animal attack cannot be blocked

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by an unarmed melee combat attack, but may be blocked with a melee weapon. Some animal attacks are treated in a special manner, these are discussed in their individual entries below. Animal diving blow attacks can be dodged using the normal unarmed melee combat rules. The animal data charts give the information needed for animal combats.

Animals do not use attributes (STR, AGL, CON) in the way that characters do. In order to hit a target, an animal rolls against a fixed To Hit number noted on the animal data chart. This number is used just like a normal character task: the D20 roll must be less than or equal to the number in order for the attack to succeed, however, difficulty levels, etc., are not dealt with. The use of STR and CON to generate damage values are also replaced by tabular damage values.

Some animals have special features, as discussed below:

Bears: A bear makes two armed melee attacks per round, one with claws and one with jaws. After the first successful claw attack, the claw attack becomes a grappling attack (which cannot be blocked by either Martial Arts skill). This grappling is special, and each successful phase of grappling inflicts controlling hits upon a target and inflicts 1D6 points of damage to the chest area. Once a bear has inflicted enough controlling hits on a target to completely subdue (control) it, the jaw attacks automatically hit and do double damage. A bear's Strength is equal to its Constitution.

Dogs/Wolves: During the first round in which a dog attacks, it is allowed two simultaneous attacks: a diving blow and a melee attack. However, no more than two dogs can make diving attacks per character per combat phase. Any remaining dogs will just make a melee attack. Once a dog has made a diving blow or a regular melee attack, it may not try any further diving blows. This same rule applies to wolves as well.

Large Cats: Large cats include lions, leopards, and cougars (tigers are not large cats...they are *huge* cats.) The first phase in which a large cat attacks, it is allowed two simultaneous attacks: a diving blow and a melee attack. Once a large cat has made a diving blow or a regular melee attack, it may not try any further diving blows. Lions suffer the same numerical restrictions on diving attacks as dogs. All large cats make one melee attack per phase after the diving attack is done.

Rhinos, Elephants, and Wild Cattle: Attacks by these animals count as charges for the purpose of panic.

Tigers: Same as bear.

Animal Wounds: Like NPCs, animals have their capacity for damage abstracted into two rows of hit points. The number under the "Hits" column is the number of boxes in each row. Use the NPC record forms provided, blacking in or adding boxes as necessary.

The first hit on the first row is a slight wound. Once the first row is filled, The first hit on the second row is a serious wound. Animals suffer –1 to initiative with slight wounds, and an additional –2 (for a cumulative total of –3) for serious wounds. Once the second row is filled, the animal is critically wounded, loses consciousness, and will die, as discussed under "Wound Effects" on page 211.

Because they do not have CON attributes, seriously wounded animals do not roll against their CON to remain conscious as characters do. Rather, an animal rolls to see if it flees once it is wounded to the serious level (see "Animal Morale," immediately below).

Animal Morale: Animal morale is a fancy term for deciding if they attack or run away. The morale number is divided into an attack number and a flee number. Both numbers are the number that must be rolled less than or equal to on a D20 to produce that behavior.

An animal has a chance of attacking listed with its other statistics. This is the likelihood that a creature will attack when first encountered if the PCs stumble upon it accidently. Of course, if the referee planted the animal intentionally, whether it attacks or not is entirely up to the referee. That chance of attacking serves also as the likelihood that the animal will continue to attack even if wounded.

Whenever an animal first suffers damage from a combat, there is a chance it will flee. By the same token, whenever an animal is killed or rendered unconscious, there is an equal chance that the rest of the animals in the attacking group will flee. This die roll is made each time an animal is killed or rendered unconscious

Once an animal takes its first hit on the second, serious wound, line, it rolls again to see if it will flee. A –5 DM is applied to this die roll. If the animal flees, the other members of its group also roll for flight.

FIRE COMBAT

Fire combat can be conducted at considerably greater distances than either unarmed melee combat or armed melee combat. Fire combat weapons (and hand grenades) are listed in the combat charts beginning on page 254, which give a variety of information on each weapon. Weapons capable of firing more than a single type of round have a separate listing per type of round. The use of this information is explained in the subsequent rules.

There are two general varieties of fire combat: direct fire and indirect fire. Direct fire is conducted when the gunner can actually see his or her target and fires a round directly at it with the intention of obtaining a direct hit. Indirect fire is usually conducted when the gunner cannot see the target and instead fires at a high angle to lob his or her round over intervening terrain obstacles with the intention of it coming down in the close vicinity of the target. For the most part, only certain heavy weapons and artillery (grenade launchers, mortars, and howitzers) are capable of indirect fire.

Weapon Parameters

All weapons have restrictions based on their use according to the way in which they function and the way in which they are supplied with ammunition.

Human Limits: A single character can fire only one weapon at a time (including a vehicle gunner, who usually has several weapons in his or her turret).

Rate of Fire: Each shot in the game represents a single bullet or projectile. It is possible to fire more than a single shot from most weapons in a five-second combat turn. All weapons in the game have either a reloading (Rld) rating or a rate of fire (ROF) rating.

Weapons with a reloading rating hold only one round in the weapon at a time, may only fire the one round which is loaded during a fire action, and must then be reloaded before firing again. The reload rating is the number of reloading actions necessary to reload the weapon. If the weapon has more than one loader as part of its crew, each loader must spend the indicated number of actions reloading. For each loader missing from the gun crew, add 1 to the reloading time for the others.

Weapons with a rate of fire listing have either a letter code or a number. The various letter codes are defined as follows:

SS (Single Shot): This weapon can only fire once per firing action and must then be reloaded.

BA (Bolt Action): Each time the rifle is fired, the bolt mechanism must be worked to eject the spent cartridge and move a fresh cartridge from the magazine to the chamber. Bolt-action rifles may be fired once per fire action. The working of the bolt is assumed to take place as part of the same action.

LA (Lever Action): Each time the rifle is fired, the lever must be worked to eject the spent cartridge and move a fresh cartridge from the magazine to the chamber. Lever-

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action rifles may fire once per fire action, the same as bolt-action rifles.

PA (Pump Action): Pump action weapons are usually shotguns. Each time the shotgun is fired, the slide must be worked to eject the spent shell and move a fresh shell from the magazine to the chamber. Pump-action weapons may fire three rounds per fire action.

DAR (Double-Action Revolver): A double-action revolver does not have to be cocked between shots, as the first part of each trigger pull cocks the hammer. This makes the trigger pull somewhat harder than on a semiautomatic pistol. A double-action revolver can fire three rounds per fire action.

SA (Semiautomatic): This weapon will fire one shot with each squeeze of the trigger, and the weapon reloads itself for the next shot. There are several different types of semiautomatic weapon.

Semiautomatic weapons use the force of each firing round to recock the weapon and pull another round into the firing chamber. They may fire up to five shots per fire action, and have the listing "SA" in the ROF column of the weapon data.

SAR (Single-Action Revolver): A single-action revolver needs to be cocked between shots. A single-action revolver can fire one round per fire action.

Automatic Fire Weapons: Weapons with a number instead of a letter code are capable of fully automatic fire as well as semiautomatic fire. The number shown is the number of bullets in a typical burst from the weapon.

As a practical matter, no character may fire at more than three different targets in the same action due to restrictions in changing targets.

Each automatic weapon can fire up to either five individual shots or five bursts per action turn.

Reloading: All small arms have a Mag listing (for magazine) which consists of a number and, in some cases, a letter code. This shows the type of feed device used for ammunition in the weapon and the number of rounds in it. The most common form of magazine is a detachable box magazine which attaches through the stock or pistol grip. *Weapons with no letter code after their Mag value are fed by box magazines,* each of which contains the number of rounds shown.

One reloading action is sufficient to detach an empty box magazine and insert a full one.

Other forms of magazines are noted by letter code as explained below:

R (Revolver): A revolver's feed device is a nondetachable revolving cylinder which usually holds six bullets. If loaded individually, three bullets can be loaded into the cylinder per reloading action. If a quick-loader (a circular clip holding six cartridges which enables all six to be dropped into the open cylinder at once, also called a speed-loader) is available, one reloading action is sufficient to reload the weapon.

I (Individual): Weapons with nondetachable magazines, particularly underbarrel tubular magazines, often have to be reloaded one bullet at a time. Up to three bullets may be loaded into a individual feed device per reloading action.

B (Belt): The weapon, a machinegun or automatic weapon of some type, is fed by a belt usually containing from 50 to 100 or more rounds held together by metal links. As the rounds are fired, the links come apart and are ejected with the spent shell casings. Two reloading actions are necessary to replace a belt. However, if the machinegun has a two-man crew (gunner and loader), this requirement can be met by both expending one action reloading in the same turn. Two belts can be linked together forming one long belt, but if this is done, the weapon cannot be moved until the belt is expended or removed from the weapon (linking a belt and removing one is one action).

C (Cassette): A cassette is a large, self-contained ammunition feed system which takes five actions to replace.

Direct Fire

Direct fire is the most common form of combat in the game. In direct fire, the target is visible to the firing character. Direct fire is conducted with both small arms and heavy weapons.

Small arms are rifles, pistols, machineguns, and similar weapons. Their two principal distinguishing characteristics are that they are generally man-portable and they fire either a nonexploding round of less than 20 millimeters in diameter or a number of small pellets (in the case of shotguns). Small arms fire can be directed at any sort of target, but is usually directed against personnel.

Heavy weapons fire rounds which are 20 millimeters in diameter or greater and which are capable of containing a significant explosive filler. Some heavy weapons (such as



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grenade launchers, rocket launchers, and some tac missiles) are man-portable, but many must be mounted on vehicles or heavy field carriages (such as howitzers). Projectile-firing heavy weapons use high explosive (HE) and other similar ammunition to attack troops and soft vehicles, but many also have an array of specialized rounds for attacking armored targets.

General Procedure: The chance of hitting a target with individual shots depends primarily on three things: marksmanship, range, and recoil. The combination of these factors will produce a D20 chance of hitting a target, defined as a task, using the tasks and skills rules. The player or referee then rolls 1D20 for each shot fired. If the target number or less is rolled, the target is hit. Any other roll is a miss. In fire combat, the task's target number is often referred to as the *hit number.*

Outstanding Success: Whenever an Outstanding Success is rolled when firing at a target, double damage is applied to the target.

Automatic Hit: An unmodified roll of 1 in a direct fire task is an automatic hit, regardless of skill, asset, or the difficulty of the shot.

Automatic Miss: An unmodified roll of 17-20 in a direct fire task is an automatic miss, regardless of skill, asset, or the difficulty of the shot. This is a modification of the automatic failure rule under "Tasks and Skills," beginning on page 133 (where auto failure resulted only on a 20), and applies only to direct fire tasks.

Marksmanship: All small arms use one of four skills as their marksmanship skill. (*Note:* Although bows are not small arms in the conventional sense, nor does their use literally constitute fire combat, they are handled under these rules in **Twilight: 2000**, and are therefore listed here.)

Skill	*Weapons*
Small Arms (Pistol)	Revolvers, automatic pistols
Small Arms (Rifle)	Carbines, rifles, automatic rifles, assault rifles, battle rifles, sniper rifles, sporting rifles, submachineguns, shotguns
Early Firearms	Crossbows, muskets, arquebus, all black-powder firearms
Archery	Short, long, and composite bows

Four other skills are used as marksmanship for the various heavy weapons:

Skill	*Weapons*
Autogun	Automatic cannon or grenade launchers and machineguns
Heavy Gun	Large-caliber direct fire guns
Grenade Launcher	Non-automatic grenade launchers and unguided antiarmor rockets
Tac Missile	Guided tactical missile launcher

Aimed Shots: An *aimed shot* is one which takes place after the character has spent one action aiming the weapon. A target must be visible in both the aiming and firing turns for an aimed shot to take place, and the player must tell the referee which target he or she is aiming at when the PC conducts the aiming action.

Quick Shots: If more than one shot is fired in a turn, only the first shot can count as aimed; a subsequent shot must be a *quick shot.* In addition, any shot fired which does not follow an aim action, or which is fired at a target other than the one aimed at, counts as a quick shot. All quick shots are conducted at one difficulty level higher than aimed shots.

Range: The four ranges for direct fire are short, medium, long, and extreme. The value printed in the Range column of the combat tables (beginning on page 254) is the weapon's *short range* in meters. *Medium range* is twice short range; *long range* is twice medium; and *extreme range* is twice long.

For example, a weapon with a printed range of 50 has a short range of 50 meters, a medium range of 100 meters, a long range of 200 meters, and an extreme range of 400 meters.

Hitting a target with an *aimed shot* at short range is an Average task. At medium range it is a Difficult task. At long range it is a Formidable task. At extreme range it is an Impossible task. For quick shots, raise the difficulty one level.

Note that a character firing a quick shot at long range would have to succeed at an Impossible task (Formidable for range, increased one difficulty level for firing a quick shot) in order to hit the target.

Rifle Scopes: Sniper rifles come with a scope fitted to them. Any other rifle may have one fitted at additional cost by a gunsmith (they may not be initially acquired so equipped). The printed range on the combat tables (even for sniper rifles) is for the rifle *without* a scope. If a scope is mounted, add 15 to the printed range figure *when conducting aimed shots.* In addition, aimed shots at extreme range are conducted as if at long range for purposes of hit difficulty. Note that scopes have no effect on quick shots.

For example, a rifle with a printed range of 75 and a scope would be treated, for purposes of aimed fire, as having a short range of 90 meters, a medium range of 180 meters, a long range of 360 meters, and an extreme range of 720 meters.

Firing Range Difficulties

	Difficulty	
Range	*Aimed Shot*	*Quick Shot*
Short	Average	Difficult
Medium	Difficult	Formidable
Long	Formidable	Impossible
Extreme	Impossible	Not Allowed

Recoil: Recoil is a measure of how much a weapon kicks when it is fired, which affects accuracy. Recoil affects only small arms in the game, not heavy weapons. Each small arms weapon has a recoil value for a single shot. If it is capable of automatic fire, it also has a recoil value for firing a burst. Whenever a character fires a small arms weapon, total the amount of recoil the weapon generates that turn by multiplying the recoil of a single shot or a burst by the number of single shots or bursts fired.

Once you know how much recoil the weapon generates in a turn, compare the total to the firing character's Strength. If the recoil is equal to or less than his or her Strength, fire is resolved normally. If it is greater than his or her Strength, reduce the hit number by the difference.

For example, a character with a Strength of 7 is firing two single shots from a pistol which has a single shot recoil value of 5. The cumulative recoil is 10 (2×5), and the final hit number would be reduced by 3 (10–7). If the character were firing an aimed shot with a chance of hitting on a 7 or less and one additional quick shot with a chance of hitting on a 3 or less, the hit chances would be reduced to 4 for the aimed shot and 1 for the quick shot (all other factors being equal). The same character firing one shot from the pistol would have no reductions in hit chance. While high-recoil weapons can physically be fired as quickly as low-recoil weapons, it is often counterproductive to do so. The effects of recoil on automatic fire are different and are treated under "Automatic Fire," page 203.

Pistol Recoil: Pistols may be steadied by using both hands and bracing oneself. This may only be done while stationary, and reduces the printed recoil by 1.

Two Weapons: If a character is carrying two weapons at once (one in each hand), he or she

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may fire either one, but not both. For purposes of controlling the recoil of either weapon, the character's Strength is reduced by 1.

Automatic Fire

The hit procedure for automatic direct fire differs from that for individual shots. Whenever a character fires a weapon on its automatic fire setting, he or she fires one or more bursts of rounds.

The number of rounds in a burst is the number listed in the weapon's ROF column. Each individual shot fired in a burst is resolved separately as a marksmanship task at the Impossible difficulty level, regardless of range.

For example, a weapon with an ROF of 5 fires five shots per burst, and any automatic weapon may fire up to five bursts in a fire turn (as discussed under "Rate of Fire," above). A character who fired all five allowed bursts would have fired 25 rounds and rolls a total of 25D20 task rolls for hits. If the character had, for example, a Strength attribute of 2 and a marksmanship skill of 1, the combined total of 3 would be reduced to 0.75 for an Impossible task (3+4), which rounds down to 0. Remember, however, that a roll of 1 always succeeds on a task roll (and the chances of getting a 1 on 25D20 rolls is pretty good).

The actual number of dice rolled per burst is reduced by either range and/or recoil.

Range: Subtract one die from each three-round burst, two dice from each five-round burst, and three dice from each 10-round burst for each range band beyond short.

For example, a small arms weapon which fires 10-round bursts would roll 10D20 per burst at short range, 7D20 at medium, 4D20 at long, and 1D20 at extreme.

A weapon which fires five-round bursts would fire 5D20 at short range, 3D20 at medium, and 1D20 at long.

Burst Size (rounds)	*Dice lost per range band beyond short*
3	1
5	2
10	3

Recoil: Recoil for automatic fire is calculated the same way as for individual shots. If the recoil number is greater than a character's Strength, the number of dice rolled per burst is reduced according to the difference Recoil–Strength.

For three- and five-round bursts, reduce the number of dice rolled per burst by the difference.

For weapons with 10-round bursts, reduce the number of dice rolled per burst by *twice* the difference.

For example, Alvarez, with a Strength attribute of 7, fires her Uzi submachinegun (see data on page 100) in an action turn. The Uzi fires five rounds per burst, and Alvarez decides to fire a total of two bursts (10 rounds). The Uzi statistics in the weapon cards or combat tables show that the Uzi has a burst recoil of 5.

Since she is firing two bursts, the total recoil in the turn is 10, which is 3 higher than her Strength.

As a result, she subtracts three dice from each burst fired, leaving her with a total of 4D20 rolled for hits instead of 10D20 (short range is assumed).

Burst Size (rounds)	*Dice lost per point of extra recoil*
3	1
5	1
10	2

Danger Zone: The danger zone is the area where persons not actually aimed at may be hit by stray shots from a burst of automatic fire.

The danger zone is an area five meters to either side of a line drawn between the firing character and the target, and includes all potential targets which are within the same range band as the target. However, the danger zone is never wider than the distance to the target from the firing character. That is, if firing at a target at short range, the danger zone is one meter wide one meter away from the firing character, two meters wide two meters away, and so on until it reaches its maximum width (10 meters at a range of 10 meters).

Once a player has rolled all of his or her automatic fire hit dice and noted how many rounds hit, the player takes half of the dice which missed (rounding fractions down) and rolls them again, using the same Impossible skill roll rolled for the original hits. Each hit rolled on this second set of dice is inflicted on another target in the danger zone. The referee will assign these hits to the other targets, beginning with those closest to the intended target.

Any dice which missed from this second roll (or half of all dice which missed from the first roll, if there were no other potential targets) are set aside and will be used to attack any character moving through the weapon's danger zone for one full turn. A full turn for the purposes of this rule is the remainder of the current turn and all of the next until the firing character's Initiative. However, if the firing character does not act in the next turn due to wounds, etc., then the fire lasts only until the end of the current turn. Note that by careful use of this effect, automatic weapons fire can be used to interdict movement or keep enemy troops under cover by simply firing through open doorways, over the tops of walls, etc.

Minimum Dice: A three- or five-round burst will never be reduced to less than one die per burst, regardless of the number of reductions for range and/or recoil made. A 10-round burst will never be reduced to less than two dice per burst.

Long Bursts: Some weapons have a burst size of 50. Treat these as 10-round bursts for purposes of hit determination, but each hit achieved counts as three actual hits.

Movement and Fire

Movement by either the firing character or the target reduces the chance of scoring a hit.

Advancing Fire: Characters may not fire while crawling or running. No aimed fire is possible while walking or trotting, but characters may fire quick shots or automatic bursts normally. For purposes of controlling recoil, however, a walking character's Strength is reduced by 1 and a trotting character's Strength is halved, rounding fractions down.

Fire From Moving Vehicles: Characters may not conduct aimed fire from a moving vehicle. They may fire quick shots or bursts normally.

All such fire, however, is conducted at one higher difficulty level than the actual range for purposes of determining hits.

Aimed shots may be made from a moving boat, but *all* shots are conducted at one difficulty level higher. Grounded boats are not considered to be moving; unpowered boats adrift in water are considered to be moving unless in absolutely calm water.

The firing of vehicle-mounted armament from moving vehicles is discussed under "Firing from Moving Vehicles," page 215.

Fire From the Saddle: Characters firing while mounted on an animal do so the same as dismounted characters, with two exceptions:

First, their movement category is based on the movement of the animal. Thus, characters on a running animal may not fire at all, on a trotting animal they may not aim, etc. Due to their uneven gait, fire from walking camels and elephants is the same as fire from these creatures when trotting.

Second, the skill used to determine the chance of hitting with single shots is either the

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character's relevant marksmanship asset (Small Arms, Grenade Launcher, etc.) or his or her Riding asset, whichever is lower.

Target Movement: If the target is moving 30 meters or more in the current turn, it is more difficult to hit. See the table on page 215 for the increases in difficulty level due to target speed. Note that if a character is using automatic fire to fire at such a target, each increase in difficulty level is treated as an increase of one range band in order to change the number of dice rolled for hits.

Ammunition

Every time a weapon fires it uses ammunition. These are all called *shots*, no matter their physical form (fixed cartridge, caseless cartridge, loose powder and ball, etc.). A weapon can only store so many shots before it must be reloaded.

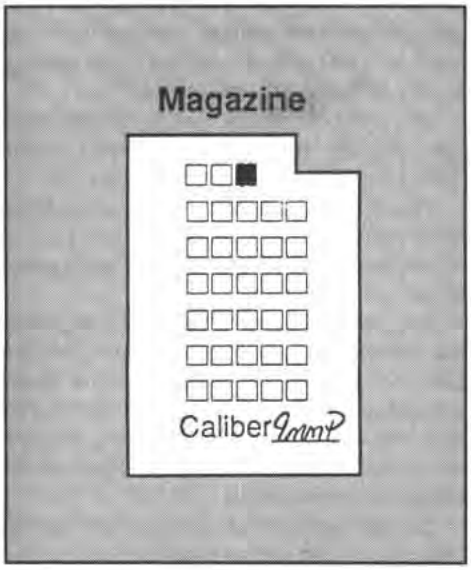
Ammunition record forms have been provided on page 253, and permission is specifically given to photocopy them.

Players should each have one or more copies of this form to keep track of the ammunition they are carrying.

Write down by each magazine the type of ammunition loaded and mark off the excess rounds so that the number of boxes is equal to the number of rounds loaded. When a magazine is loaded into a weapon, the player simply circles it on his or her form, and marks off shots as they are fired.

The boxes are laid out in rows of five each, so most weapons can record bursts fired by marking off one or two complete rows. It is suggested that individual shots be marked off from the top of the magazine form and bursts marked off from the bottom.

A 32-round box magazine for a submachinegun is shown below.



Special Cases

Special cases modify the basic firing rules.

Target Obscured: If the target is partially obscured (in brush, fog, mist, light smoke, etc.), the difficulty level to hit is increased by one level. See the "Tactical Visibility" section beginning on page 233, for further discussion.

Firing at Riders: If the target is a rider on an animal, motorcycle, bicycle, or similarly sized conveyance, the firing PC must declare whether he or she is firing at the rider or mount. In either case, fire is resolved normally, but if a single shot misses its intended target, it has a 10% chance of hitting the other. For automatic fire, misses are rerolled for additional hits on other targets in the danger zone, but half of all additional hits are taken on the other target (rider or conveyance).

Opportunity Fire: Another use of the aim action is to sight along a certain line of sight to a target or area and wait to shoot at any enemy that crosses that line. This is called *opportunity fire* and allows the aiming character to act out of turn, by shooting at the enemy during the enemy's Initiative step, as that enemy crosses the line.

If the enemy character was already visible to the opportunity-firing character at the beginning of the action which triggered the opportunity fire, the first shot fired counts as an aimed shot; otherwise, all individual shots are quick shots. (Automatic fire is possible instead, but then no shots count as aimed fire. See "Automatic Fire" on page 203.)

Guided Weapons: Tac missiles are guided weapons, and have several different types of guidance systems that are handled slightly differently. For game purposes, there are two types: command- or operator-guided, and homing.

Operator-Guided: The missile must be aimed all the way to the target by its operator. This usually involves the act of keeping the launcher's sight on the target, and the sight automatically transmits course corrections to the missile (via wires, laser comm-link, etc.). This sometimes requires the operator to remain exposed to the target, although some systems use periscopic sights for this reason. A subset of operator-guided missiles is teleguided. This missile also requires the operator to guide it all the way in, but in this case the operator views the target from sensors on the missile itself, and so does not need to remain in the line of sight of the target. Both these types of operator-guided missile are rolled against the Tac Missile asset of the operator. If the target moves from view of the operator before the missile impacts, the missile misses.

Unlike other direct fire weapons, the range given on the combat charts for a tac missile is its maximum range. Within this range, the chance to hit is the same regardless of distance—it is always an Average task. The character must aim before firing and must continue to aim during the entire flight of the missile or it will miss the target. All missiles travel 1000 meters per five-second turn, unless otherwise noted. If the character is hit by any sort of attack, he or she will stop aiming, and the missile will miss.

Homing: These are the true "fire and forget" missiles. The missile carries its own sensors which allow it to follow the target once it has had the target identified to it by its operator. Proper operation of these missiles requires the operator to give the missile's guidance system a clear view of the target and proper firing parameters before firing. Once the missile is away, it requires no further attention from its firer. Hits with homing missiles are rolled against the Tac Missile asset of the operator. The weapons listing shows the missile's short range, at which the task roll has a base difficulty level of Average, which increases with range as normal direct fire.

The guidance system is listed on the relevant weapon data card.

Multiple-Barrel Guns: The ZSO-30-4 has four barrels, and other weapons may have more. Resolve all steps of the firing procedure as if they were single-barrel guns. When the total number of hits has been determined, however, multiply by the number of barrels (four for the ZSO-30-4, for example).

Shotguns and Flechettes: Some weapons, primarily shotguns and grenade launchers, can fire rounds that consist of many smaller antipersonnel projectiles that spread out in flight to increase the chance of hitting. Such rounds fired by shotguns are called buckshot. Those fired by grenade launchers and some heavy guns are called flechette (or sometimes "beehive," for their distinctive sound), and consist of many small darts.

Shotguns may fire either slugs or buckshot rounds. Slugs are fired in the same way as any other small arms fire using the ratings provided with the weapon. If the shotgun fires buckshot, however, the rules below apply.

Buckshot and flechettes behave as follows.

At short range, they are treated as normal single-shot weapons with their listed short-range damage, as the pattern of buckshot or flechettes has not yet spread out.

At medium and long range, each shot is treated as a 10-round burst using the automatic fire rule, including the reduction of dice rolled for hits for recoil and range (and so is immediately reduced to seven dice rolled for hits for being at medium range). Each rolled hit does 1D6 damage.

Some shotguns or flechette-firing weapons are capable of automatic fire. The listed

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burst size of the weapon is the number of 10-round "bursts" of buckshot or flechettes that are actually fired. At short range the player rolls a number of standard direct fire tasks (as modified by recoil) equal to the burst size, with each hit doing the indicated short range damage. At medium or long range, use the range rule from automatic fire to calculate the number of dice rolled for hits based on the appropriate burst size (i.e., subtracting one die per range band from a three-round burst, two dice from a five-round burst, etc.). This shows the number of 10-round bursts to be rolled for at that range. Each of these 10-round bursts must also have its number of hit dice reduced for range and recoil.

For example, a CAW firing a five-round burst of buckshot would roll five dice for hits at short range. At medium range, there would be only three bursts to roll for (because a five-round burst loses two rounds per range band), and each of the 10-round buckshot "bursts" would be reduced to seven dice rolled for damage (because 10-round bursts are reduced by three dice per range band). At long range, there would only be one burst left (the five-round burst has lost two more rounds for the next range band), and that burst would be further reduced to only four dice rolled for hits (the three dice per range band rule again). For simplicity, this example did not include the effects of recoil, which would further reduce the number of dice.

Each hit does 1D6 damage.

Buckshot and flechette differ in that flechette rounds are more aerodynamically shaped, and therefore have better penetration and range performance. Buckshot has a penetration of Nil, and can only fire out to medium range, and not to long or extreme. Flechettes have a penetration of 1 at short and medium range, and can fire out to long range, but only have a penetration of Nil at long range. Flechettes cannot fire to extreme range.

Large-Caliber Flechettes: Large-caliber guns may also fire flechette rounds. Where available, large-caliber flechette ammunition is indicated as "Flech(LC)." These also may be fired out to long range. Large-caliber flechettes differ from small-caliber flechettes in two ways. First, at short range they are treated as 10-round autofire bursts, not single shots. Second, each rolled hit at any range represents three actual flechette hits on the target.

Shotgun and Flechette Danger Zone: Flechette rounds and shotguns firing buckshot have danger zones like those described in the automatic fire rules above, except that shotguns and small-caliber flechettes do not create a danger zone at short range, because they are treated as single shots at this range: either they hit their target or they don't. Large-caliber flechettes do create a danger zone at short range.

Type of Round	*Maximum Range*	*Danger Zone Begins*
Shotgun		
Buckshot	Medium	Medium
Flechette	Long	Medium
Large-Caliber		
Flechette	Long	Short

As with the automatic fire danger zone, dice that do not hit their targets are rolled against other targets in the danger zone and against other targets that move through the danger zone during the turn.

Multiple Modifiers: All modifiers to the number of dice rolled or the range at which fire is delivered are cumulative. When a weapon is firing bursts, the number of dice is never reduced to 0 (see "Automatic Fire," page 203).

Direct Fire Deviation: Certain weapons deviate if they miss when fired in direct fire—rifle grenades and grenade launchers, for example. The die is rolled for distance and direction in the same way as for indirect fire, as noted below; however, the distance die roll is multiplied by only one meter.

Indirect Fire

Indirect fire is fire at a target which the firing character cannot see, following the directions given to the firer by a forward observer who can see the target. Only weapons with an indirect fire range—IFR (listed on the weapons charts)—may use indirect fire.

Calling Fire: In order for indirect fire to be possible, the firing character or gun crew must be in communication (usually by radio) with a character (called a forward observer) who can see the target. The target is a stationary position; it can be a building, but it can't be a moving vehicle (although it can be the place where the forward observer believes the vehicle will be when the fire hits). Before fire begins, the forward observer must talk to the firer for six combat turns. After fire has begun, the forward observer may want to call in corrections to make the fire more accurate. The same restrictions on both characters' actions apply as with other communication; in particular, the firer may not fire his or her personal weapon during the conversation.

Hit Number: Hitting the target is a Formidable task using either the appropriate weapons asset of the firing character or the Forward Observer asset of the observing character, whichever is less (in a crew-served weapon, the skill of the gunner in command is used). If firing a hand-held grenade launcher (either a rifle grenade or a hand-held grenade launcher), the gunner's task difficulty level becomes Impossible.

The following skills are used by gunners when firing weapons in indirect fire:

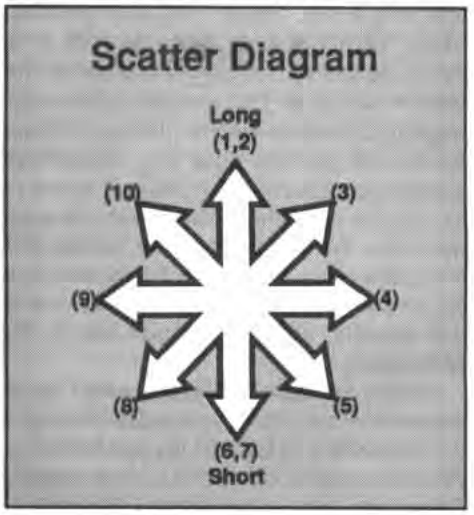
Skill	*Weapon*
Grenade Launcher	All grenade launchers and mortars
Heavy Artillery	All indirect fire field guns, howitzers, mortars, and rocket launchers

Note that mortars may be fired by players with either the Grenade Launcher or Heavy Artillery skill. Characters with both skills may choose which to use. Use the appropriate asset and difficulty level to compute the indirect fire "to hit" number.

Deviation: If the round misses, it deviates—i.e., lands somewhere near (or not so near) its aim point. The referee determines the distance and direction of the deviation from the target of the intended impact point. First the referee rolls 1D10 for distance of deviation. For grenade launchers and rifle grenades, multiply the result by five meters. For mortars, guns, and howitzers, multiply the result by 10 meters. For artillery rockets, multiply the result by 20 meters.

Type of Weapon	*Deviation multiplier (meters)*
Grenade launcher, rifle grenade	5
Mortars, guns, howitzers	10
Artillery rockets	20

If the indirect fire weapon is firing at greater than half its indirect fire range, double the result of the deviation roll. The referee then rolls 1D10 and consults the Scatter Diagram to determine the direction of deviation.



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Corrections: If the shot doesn't hit, the forward observer may call in corrections. After each correction, subtract 1 from the to-hit die roll and subtract 1 from the die roll for distance of deviation if the round misses. Thus, four corrections would allow 4 to be subtracted from the to-hit die roll (thereby increasing the chance of a hit by 4). A deviation roll of less than 0 is changed to 0.

At least one additional shot must be made after each correction before another correction is possible.

Accuracy: There is a maximum limit to the accuracy of indirect fire. The maximum hit number for most indirect fire is 14; for rifle grenades and hand-held grenade launchers, the maximum hit number is 10. In addition, the deviation distance roll may never be reduced by more than 5 for most indirect fire weapons; for rifle grenades and hand-held grenade launchers, the roll may never be reduced by more than 3.

Weapon	*Max Hit No.*	*Max Dev. Reduction*
Mortar, howitzer, gun, rocket	14	5
Grenades	10	3

Subsequent Shots: If a shot hits, subsequent shots will continue to deviate around the target because of the maximum limits of accuracy. If a shot does not hit, subsequent shots will deviate around the initial impact point (not the target). In both cases, the deviation distance roll is reduced by 5 (for most weapons) or 3 (for rifle grenades and hand-held grenade launchers).

For example, Wood has a grenade launcher and Grenade Launcher asset of 12. Carson has Forward Observer asset of 14. Carson is on a hillcrest observing enemy soldiers coming up the hill. Wood is on the other side of the hill. Carson radios Wood and tells him to fire. Wood fires one grenade, which hits on a 3 or less. He rolls a 6, indicating a miss. For deviation distance the referee rolls a 5—the grenade misses the target by 25 meters. He then rolls a 2, indicating that the grenade goes long. Wood fires another grenade; this time there is no roll to hit, and the grenade deviates from the point where the first grenade hit. The referee rolls a 3 for distance, reduced by 5, which makes the deviation distance 0; a direction roll is unnecessary, and the grenade hits in the same place.

Carson radios a correction, which takes the next combat turn. This correction increases the chance of a hit to 4. On the turn following, Wood fires again, but rolls a 6, thus missing. The referee rolls a 5 for distance. Because of the correction, this is reduced to a 4, or 20 meters from the target. The referee rolls a 3 for direction (long and to the right). Wood's next shot follows the above deviation procedure (no roll to hit).

During the next turn, Carson radios another correction, and when Wood fires again he will hit on a 5 or less. This time he hits the target. Having hit the target, all further deviation is around the target, subtracting 5 from the distance roll.

Self-Observed Fire: The firing character may act as his or her own observer if he or she can see the target. (This is done if the target is out of the weapon's direct fire range or if the weapon is a mortar with no direct fire capability.) In this case, only the firer's asset (Grenade Launcher or Heavy Artillery, as appropriate) is used.

The rules above apply except that there is no delay for corrections; fire is corrected automatically after every shot until a hit is scored.

Thrown Weapons

Any hard object can be thrown at another character or animal. Hitting the target is Difficult: Thrown Weapon at effective range and Formidable: Thrown Weapon at long range. Effective range is equal to the character's throw range if the object weighs one kilogram or less. If the object weighs more than one kilogram, effective range is equal to the character's throw range divided by the weight of the object. Long range is twice effective range. Thus, if a character had a throw range of 20 meters, he or she would have an effective range of 10 meters with a two-kilogram object, five meters with a four-kilogram object, etc.

If a thrown object hits its target, it causes hits equal to the sum of the throwing player's Strength plus 1D6, regardless of the weight of the object. Thrown objects have an armor penetration of Nil.

A throwing knife will always inflict 1D6 hits, regardless of the range or Strength of the thrower. Its armor penetration is likewise Nil.

Hand Grenades: Hand grenades are a subset of thrown weapons, and also are thrown at specific targets. Hand grenades may be thrown at either effective range or long range, as explained above.

If the throw misses, roll for distance and direction of deviation in the same way as for indirect fire, but multiply the distance of deviation die roll by one meter if throwing within effective range and two meters if within long range. The total deviation may never be greater than half the range of the throw. Thus, if a grenade is thrown at a target 20 meters away, the grenade cannot deviate more than 10 meters. Hand grenades have a time fuse that is activated by the action of throwing it, and (for simplicity) are assumed to land and detonate in the same turn in which they are thrown.

Grenade Deviation

Range	*Deviation*
Effective	×1 meter
Long	×2 meters

A player may throw additional grenades at the same target. If the target does not move, add 1 to the thrower's Thrown Weapon skill for all grenades after the first.

The referee can alter the chances of a hit based upon the difficulty of the throw; he or she might reduce the difficulty level by one for throwing a grenade at a large target like the cargo bay of a truck or increase it by one for trying to throw a grenade through the firing slit of a bunker.



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Effects of Fire and Combat

Once a target is hit by a weapon, the weapon's destructive effects upon the target must be calculated.

EXPLOSIONS

Many types of ammunition do damage solely by virtue of their kinetic energy. That is, they slam into the target and damage it by sheer brute force. All small arms fall into this category, as do many antitank rounds.

Other types of ammunition, however, explode when they hit, and this section describes their effects.

Descriptive Terms: The power of an explosion is described by two ratings: concussion and burst. Concussion is the effect of the massive overpressure wave generated by the explosion, while the burst radius is the area filled with small, high-energy fragments (often called shrapnel). These jagged metal fragments can cause severe injury. But they lose energy quickly due to their eccentric ballistic shape and thus do not carry anywhere near as far as a bullet.

Concussion: The listed concussion value for an explosion is the number of damage dice rolled if in contact or in the same 10-meter grid square as the explosion. If a character is in an adjacent 10-meter grid square, the explosion does half of this value, rounding fractions down. If one square farther away, it does half of this value, rounding down, and so on until the concussion is reduced to 0.

Concussion can affect part or all of the body, so the number of concussion damage dice called for are rolled and divided evenly among the various body parts. Simply divide the total damage suffered by 7 and add that many points to each body part. All points left over which are not evenly divisible by 7 are added to body parts as instructed by the referee. At least 1 of the extra points should be to the head, and the remainder should be distributed on the side facing the explosion or to any previously injured part.

If the target character is actually in physical contact with the explosive, the full concussion value is taken first as damage to the body location in contact with the explosion. Then the character suffers the full concussion value *again*, but divided among all of the hit locations, the same as a character standing in the square but not in contact with the explosion.

The following example table shows the reduction of concussion damage at successive ranges for an explosion with a concussion value of 30.

Concussion Example

Range	*Concussion*
Contact	30+30
Same square	30
1 square away (adjacent)	15
2 squares away	7
3 squares away	3
4 squares away	1
5 squares away	None

Cover: Characters completely behind solid cover, such as behind a thick wall, completely inside a trench or foxhole, or inside an armored vehicle, do not suffer the effects of concussion. Characters under partial cover (such as partially exposed behind a wall, in a foxhole, or in the hatch of an armored vehicle) and prone characters halve the concussion value of any attack on them. (This does not apply to explosions which are in physical contact with them, such as grenades dropped into their trench.)

Characters in a small, tight enclosure, such as an armored vehicle or small concrete room, into which an explosive is delivered, suffer double concussion damage divided evenly among their hit locations.

Burst: The burst rating for an explosion is its primary burst radius—the area saturated with a high density of fragments. The secondary burst radius, which has a lower concentration of fragments, is twice this. The burst radii are expressed in meters, but are stepped in increments usable with the tactical grid system. (See the Sample Burst Diagrams on page 259.)

Hit Procedure: Roll 1D10 for each character within either the primary or secondary burst radius of an explosion. Characters within the primary burst radius are hit by multiple fragments on a roll of 1-3, a single fragment on a roll of 4-6, and no fragments on a roll of 7-10. Characters in the secondary burst radius are hit by multiple fragments on a roll of 1-2, a single fragment on a roll of 3-4, and no fragments on a roll of 5-10. If a character is hit by multiple fragments, roll 1D6 to determine the number.

Fragmentation Attack Table

Burst Radius	*Range*	*1D6 hits*	*1 hit*	*No hits*	*Dam*	*Pen*
Primary	1×Burst	1-3	4-6	7-10	2D6	1
Secondary	2×Burst	1-2	3-4	5-10	1D6	Nil

Damage and Penetration: Fragments do damage as small arms fire. Fragments closer to the explosion are more dangerous than those farther away. Fragments in the primary burst area do 2D6 damage and expend one damage die per level of armor value (AV) struck. (Thus, they may penetrate armor of AV1 and still do 1D6 damage). Fragments in the secondary burst area do 1D6 damage and will not penetrate armor.

All hit, damage, and penetration information is summarized on the Fragmentation Attack Table, above.

Exploding Round Penetration: All exploding rounds have a listed penetration value expressed as the minimum armor value of penetration. The actual penetration of the round is the listed penetration plus the roll of 2D6 (except for rounds with a listed penetration of Nil). Compare this to the armor value of the target vehicle and consult the vehicle damage tables on page 218.

Submunitions

Submunition ammunition (sometimes called ICM or Improved Conventional Munitions) includes bombs and artillery rounds filled with grenades. The round bursts at a high altitude and scatters grenades throughout its listed burst radius. In the case of HE (high-explosive) submunition rounds, these are high-explosive/fragmentation grenades. In the case of DP (dual-purpose) submunition rounds they are HEAP (high-explosive, armor-piercing) grenades capable of penetrating the roofs of armored vehicles.

Submunitions (ICM) Attack Table

Round	*Close*	*Adjacent*	*Concussion*	*Burst*	*Pen*
120mm ICMDP	1-2	1-2	3	15	4C
122mm ICM	1-3	1-2	3	15	Nil
152mm ICM	1-4	1-3	3	15	Nil
155mm ICMDP	1-4	1-3	3	15	4C
203mm ICMDP	1-5	1-4	3	15	4C

Submunitions Direct Hit Chance: Personnel, 1; Vehicle, 1-5 on 1D10

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When a character or vehicle is in the burst zone of an HE- or DP-carrying submunition round, consult the Submunitions Attack Table on page 207. On the numbers listed under the Close column on a D10, a grenade lands in the same grid square as a character or vehicle. (Roll once per grid square containing one or more characters or vehicles, not once per character or vehicle in the square.) On the numbers listed under the column labeled Adjacent, a grenade lands in the adjacent grid square. The Concussion, Burst, and Penetration columns list those values for the individual grenades contained in a round.

The chance of a direct hit on a character or vehicle in the grid square is also noted on the Submunitions Attack Table. This is rolled for only if it has already been determined that a grenade landed in the same grid square.

Roll once for each character and vehicle in the square. If more than one hit is achieved, then the referee should randomly determine which of the characters or vehicles actually suffered the hit.

All direct hits on vehicles are resolved as overhead attacks.

WOUNDS AND DAMAGE

A character can be injured as a result of combat in several ways.

Gunshot Wounds

Each time a character is hit by fire, he or she is wounded. The extent of the injury is determined by three factors: hit location, weapon damage, and target protection.

Hit Location: Whenever a character is hit, roll 1D10 and consult the Human/Animal Hit Location Chart on page 198 and 252. This indicates the body part struck and injured by the shot.

Weapon Damage: All weapons do the same damage at all ranges. The damage value of the weapon is listed on the relevant weapon card, and is the number of D6 rolled. Some weapons have a damage value of –1. In this case, roll 1D6 and subtract 1 from the result.

Some weapons fire exploding rounds. These weapons have a damage rating consisting of two separate listings: concussion and burst. These effects are calculated with the explosion rules above.

Target Protection: If the target is wearing body armor and the shot strikes a protected body part, the shot may not be able to penetrate the armor. Flak jackets and Kevlar vests protect both the chest and abdomen. Helmets partially protect the head. If a character is hit in the head, roll 1D6. The shot strikes a steel helmet on a roll of 1-3, a Kevlar helmet on a roll of 1-4. Any other roll hits the unprotected head.

The Body Armor Protection chart on page 210 indicates the areas protected by a given type of body armor.

Each weapon has a penetration rating that reflects its ability to punch through armor. This rating may consist of the simple notation Nil, indicating that the shot will be stopped by any armor protection, or it may have up to three different numeric ratings. If so, *the first rating applies to both short and medium range*, the second to long range, and the third to



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extreme range. If a weapon's penetration drops to Nil at any range band, it remains unable to penetrate armor at longer ranges, so no additional entries are made.

The penetration value of a weapon is the number of damage dice it loses for each armor value it is required to penetrate. *Multiply the target's armor protection by the weapon's penetration value and subtract the result from the weapon's damage value.* If the remainder is a positive number, the shot penetrates, and the referee rolls that many dice for damage. If the remainder is 0 or a negative number, the shot fails to penetrate.

For example, a character fires an M16A2 rifle at short range and hits his or her target in the chest, which is protected by a flak jacket. The M16A2 rifle has a damage value of 3 and a penetration of 1 at short range, and the flak jacket has an armor value of 1. Multiplying the penetration (1) by the armor value (1) and subtracting the result (1) from the weapon's damage value (3) shows that the M16 penetrated the flak jacket and did 2D6 of damage.

Outstanding Success: Any time that an Outstanding Success is rolled when firing at a character, double the damage caused by the shot.

Blunt Trauma: When a bullet from a small arm or a fragment from an explosion strikes a person, it packs considerable force and will cause injury even if it does not penetrate the target's body armor. This is called blunt trauma. A target suffers 1 actual point of damage for each D6 worth of damage absorbed by the armor. Note that bullets/fragments which penetrate and cause some normal wound damage will also still cause blunt trauma.

In the example of the M16A2 rifle firing above, the target would take 1 point of blunt trauma damage for the one damage die absorbed by the flak jacket.

Cover: Characters and vehicles may hide behind obstacles as protection from fire. If the hit location rolled is covered by the obstacle, the shot has no effect unless it is able to penetrate the obstacle. The Armor Values of Cover Table on page 274 gives the armor values of common types of cover.

For example, a character is under cover behind a tree. The referee decides that, since the character is firing a weapon, his or her head and right arm are exposed. If the PC is hit in the chest, the shot strikes the tree instead and provides an armor value of 12.

Similarly, a character sticking her head out of a foxhole is likewise protected. Any hits fired from ground level (overhead shots obviously negate her protection) that are rolled to hit her legs, arms, abdomen, and torso are no effect, because the thickness of the dirt between the firer and target is too great to be reasonably penetrated. However, if the surface in front of the character were reasonably hard, such as rocky surface or a metal vehicle hull if the character were instead sticking his or her head out of a tank's hatch, there is a chance that some of the "hits" rolled against the character's protected body parts may ricochet or "skip" off the surface at a low angle



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and hit the PC's head. This chance should not exceed 1 in 10 (a 19-20 on a D20), and should be related to the slope of the surface (but a lot of tank drivers have died this way).

Damage dice absorbed by an obstacle do not cause blunt trauma injuries against the target character.

Quick Kill: Any shot which hits the chest or head may constitute a killing shot. Roll a D20. If the roll is less than or equal to the damage value of the shot, the target is instantly killed except on a roll of 20 exactly.

If the hit was scored on an area protected by armor, roll versus the remaining damage value of the round after penetration, if any.

For automatic fire, roll only once per turn (regardless of the number of shots that hit).

This rule should be applied only to NPCs. It is recommended that PCs who suffer a killing wound instead double the damage inflicted by the round. (*Note:* We know this is unrealistic, but this is, after all, a game. Referees should consult their players before disregarding this recommendation.)

Burns

Many chemicals and incendiary weapons burn at very high temperatures (2200° to 2700° Celsius) and cause burn damage. Players may also suffer burn damage from exploding vehicles and open flames.

Characters come in contact with burning chemicals or other materials when they are hit by fragments from the explosion of an incendiary bomb, shell, or grenade. Whether the character is hit and by how many fragments is determined exactly as for normal fragments, as explained in the explosions burst rule on page 207, but if a character is hit by a burning fragment, burn damage is suffered instead of a normal wound.

Characters come in contact with burning fuel by being inside or near a vehicle when its fuel tanks explode. The primary burst radius of an exploding vehicle is 15 meters. All characters inside the vehicle when it explodes are covered with burning gasoline.

Characters come in contact with open flames when moving through a burning structure or a grass fire, usually to escape but perhaps to rescue a wounded companion.

The amount of burn damage caused is determined by the temperature of the flame and the length of exposure.

Temperature: Incendiary chemicals (such as white phosphorus or thermite) cause 2D6 damage *per second* in contact with a body part. Burning fuel causes 1D6 points of damage *per second* in contact with a body part. Moving through a burning structure causes 1D6 damage *per turn* per body part in proximity to the flame. This is summarized on the Burn Damage Table, below.

Burn Damage Table

Source	*Damage*
WP	2D6
Thermite	2D6
Fuel	1D6
Structure/grass fire	1D6

All damage dice are *per second,* except for structure/grass fire, which is *per turn.*

Exposure Time: In the case of open fires, the exposure time is measured in terms of combat turns actually in close proximity to the fire. In the case of fuel or incendiary fragments, exposure time begins at the start of the combat turn immediately after the character was hit. Characters hit by burning fragments will instantly attempt to remove them. They will make one such attempt per second in the turn, by making an Average task roll against Agility. Each successful attempt removes or extinguishes the fragment or fragments on one body part. The character still suffers burn damage for the second in which he or she succeeds in extinguishing a flame.

For example, a character is hit by three burning fragments of white phosphorus, two on his arm and one on his leg. In the first second, he fails to extinguish any fires and takes 4D6 damage to his arm and 2D6 damage to his leg. In the next second, he brushes off the burning fragments from his arm, but still takes 4D6 damage to his arm and 2D6 to his leg. In the third second, he brushes the debris from his leg and suffers 2D6 damage. His total damage has been 8D6 to his arm and 6D6 to his leg.

If a character suffers sufficient damage to lose consciousness part of the way through a turn (say, after three or four seconds), he or she will remain conscious until the end of the turn. Other characters may help extinguish the burning character, making one attempt per second of the turn in the same way as described above.

Protection: Any sort of helmet will protect the head against an open flame. Fuel and incendiary fires will burn through the helmet, or their heat will be conducted through it after 30 seconds (six combat turns). The helmet may be removed and discarded in one second without need for an Agility roll. Most flexible vests will protect characters against open flames, but they will catch fire if contacted by fuel or incendiaries.

Body Armor Protection

Type	*AV*	*Head*	*Chest/Abd*
Flak Jacket	1	No	Yes
Kevlar Vest	1	No	Yes
Steel Helmet	1	1-3	No
Kevlar Helmet	1	1-4	No

Falls

Characters falling from a height take damage upon hitting the ground. This damage is equal to 2D6 per meter fallen. Damage is distributed according to the Human/Animal Hit Location Chart (pages 198 and 252) as follows: Roll three locations. The first location takes half the total damage points. The second takes one-quarter the total, and the third takes the remainder. If the same location is rolled twice, it takes additional damage accordingly. It is possible for one location to receive the full damage.

Damage from falls is reduced by Agility. Roll a number of D6 equal to the falling character's Agility and reduce the damage by that amount (removing hit points from locations at the character's choice). Unconscious characters may not use their Agility in this manner.

For example, a character with Agility 4 falling from three meters would take 6D6 damage, reduced by 4D6.

Referees may adjust the total number of damage dice at their discretion to reflect intangibles and variables such as type and hardness of surface landed on. For example, most characters should be able to handle a jump from a one- or two-meter high object onto dry, level ground without damage (a two-meter fall is 4D6, which averages 14. A character with an average Agility, 6, would roll 6D6, averaging 21, hence no damage). But if the surface beneath had slick mud and sharp rocks hidden beneath a layer of leaves, the referee should increase the number of damage dice. Also, characters who were pushed or fell involuntarily from even a low object should have the number of damage dice increased.

Falls from Moving Vehicles/Animals: Characters who fall out of a moving vehicle or off of a moving animal take damage as if they had fallen one meter per 10 meters of combat move (7 kph) of speed. For example, a character who leaped from a 2½-ton truck moving at 40 meters per combat turn, and at an altitude of one meter would roll 10D6 for damage (one meter for altitude, plus the equivalent of four meters for speed is five meters, times 2D6).

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Wound Effects and Healing

WOUND EFFECTS

A variety of effects result from wounds, some temporary and some more lasting.

Immediate Effects

These temporary effects apply to a character who has just been wounded. These are in addition to the lasting effects of the wound itself, which are discussed below, under "Wound Severity."

Knockdown: If a character suffers more points of damage in a combat turn than his or her current Agility, he or she is knocked down and may not conduct any other action for the rest of the current turn. Concussion damage counts the same as gunshot and fragmentation wounds for determining knockdown, but burn damage does not.

Stun: Any damage to the head, including burn damage, has a chance of stunning the character. To avoid stun, roll 1D6 and add the damage suffered from the wound. If the result is equal to or less than the character's Constitution, he is unaffected. If the result is greater than his Constitution, he is stunned. Stunned characters must make a roll against their Constitution each turn in order to regain consciousness. The task is Difficult if the result was equal to or less than twice the character's Constitution, and is Formidable if the result was greater than twice the character's Constitution. This roll is made during the character's normal Initiative step of the turn. If successful, the character is conscious, but may not act in the current turn. The character may act normally in the following turn.

For example, a character suffers a wound to the head with a damage of 6 and rolls a 5, for a total of 11. His Constitution is 9. He must make a Difficult roll against his CON (rolling a 9 or less) at his Initiative step each turn until he regains consciousness.

Stunned characters are automatically also knocked down.

Wound Severity

There are four levels of wound severity: scratch, slight, serious, and critical. If one of a character's body parts has taken damage less than or equal to half its hit capacity (round down), it is "scratched." If one of a character's body parts has taken damage more than half of its hit capacity up to equal to its hit capacity, it is slightly wounded. If it has taken more damage than its hit capacity, but less than or equal to twice its capacity, it is seriously wounded. If it has taken damage in excess of twice its hit capacity, it is critically wounded.

Note: If a character takes enough damage from a hit to immediately take a part of his or her body from unwounded to slightly wounded, the effects of a scratch wound are superseded by the effects of the slight wound.

Scratch Wounds: Scratch wounds mainly represent the initial shock of suddenly being *hurt*. The first time that characters take damage during combat, the characters lose their next action. Characters never suffer more than one lost action per day (24-hour period) for scratch wounds, regardless of how many they suffer in a combat.

Slight Wounds: A slight wound immediately reduces the character's Initiative rating by 1 point. However, characters never suffer more than one Initiative reduction for slight wounds, regardless of how many they suffer. Slight wounds have no other effect on combat, although the referee may decide to penalize actions making use of slightly injured arms or legs.

Serious Wounds: A serious wound reduces a character's effective Strength by half (rounding the final Strength rating down) and causes an additional immediate 2-point reduction of the character's Initiative rating (for a total of 3, including the slight wound reduction). Characters whose Initiative ratings are reduced to 0 or less may not take any further actions during this combat.

Characters who suffer a serious injury must also make a special roll to avoid losing consciousness. This is a Difficult roll versus the character's Constitution attribute. The roll must be repeated every combat turn in which the character attempts to conduct any activity. A serious injury to the head automatically causes loss of consciousness. Unconscious characters make a Formidable roll against their Constitution each turn to attempt to regain consciousness.

Finally, a serious wound to the leg or arm causes the character to lose the use of that limb until it is healed.

Critical Wounds: A critical head injury causes immediate death. Critical injuries to other body parts cause immediate loss of consciousness and require medical attention within 10 minutes, or the character will die from loss of blood.

Characters who lose consciousness due to a critical wound make a D100 (percentile) roll against (less than or equal to) their Constitution at the start of every combat turn to attempt to regain consciousness. Once such characters regain consciousness, their Strength is halved (round down) and they also receive an additional immediate 2-point reduction to their Initiative rating (for a total of –5 to Initiative). Characters whose Initiative ratings are reduced to 0 or less may not take any further actions during this combat.

Wounded NPCs: It is neither necessary nor desirable to keep rigorous records on the number and location of all hits on every NPC. As a result, a simplified wound system is used.

All NPCs have the same hit capacity: 40. The referee is provided with NPC record forms in the appendix at the end of the book (and you are given permission to photocopy them for your own game use). The form has two rows of 20 boxes each labeled "Wounds."

As soon as an NPC takes any hits in the first row, he or she is slightly wounded and suffers a –1 Initiative penalty.

As soon as the first row of boxes is full and the character takes one or more hits in the second row, the NPC is seriously wounded. The character suffers an additional –2 Initiative penalty (for a total of –3), and his or her Strength is reduced by half (round final Strength down).

As soon as the second row of boxes is filled and the character takes one or more additional hits, the NPC is either dead or unconscious (but in either case is no longer a threat.)

Whenever an NPC is hit by fire, roll for hit location normally. If a head hit is scored, all damage is doubled. If either a head or chest hit is scored, there is a chance of a "quick kill" (see "Gunshot Wounds," page 210). Otherwise, hit location is used only to determine if the bullet hit a body part protected by cover or armor.

HEALING

Each of the body's seven hit locations may be wounded to one of four levels: scratch, slight, serious, or critical (as explained under "Wound Severity," above). In general, as wounded body parts heal, their wound level decreases through those levels in reverse order until they are no longer wounded—critical heals to serious, serious heals to slight, and slight heals to *unwounded* (healed). (Note that scratch wounds are a special case covered below.)

When a wound level decreases from critical to serious, the damage points are reduced to the midpoint of the serious level. When a wound level decreases from serious to slight, the damage points are reduced to the midpoint between slight and zero (which is technically the high mark for the scratch wound level—but the scratch wound level is ignored once a wound reaches slight, so this status is still considered slightly wounded). When a wound level decreases from slight, it reduces to unwounded.

For example, a character's arm has a hit capacity of 28 points and has taken 32 points of damage. It is seriously wounded. When it heals to slightly wounded, the damage points are reduced to 14, which is halfway between the top end of the limb's slightly wounded status and 0.

Note that penalties caused by a wound level (such as Initiative reductions) remain in effect until that wound level is reduced to the next level (at which point penalties for the next level remain in effect).

First Aid: It is best to treat wounds as soon as possible after they are incurred. In order for

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first aid to be effective, then, it must be applied within 36 turns (three minutes) of the time the wound was received. Effective first aid will reduce a critical wound to a serious one, or reduce the healing time of a serious wound by two days. First aid has no effect on slight or scratch wounds, except to prevent infection.

First aid is a Difficult task versus Medical (Trauma Aid), assuming a doctor's medical kit is on hand. If such a kit is not available, the task becomes Formidable. Use of a personal medical kit allows a character with neither Medical skill nor a doctor's medical kit to avoid the unskilled penalty when attempting a first aid task (thus it is a Formidable roll against the character's EDU attribute). The personal kit is used up after one attempt, regardless of the success or failure of the task. The first aid task may only be attempted once per body part per injury. Conscious characters can attempt first aid on themselves.

Stabilizing Critical Wounds: Critical wounds must be stabilized within 10 minutes or the injured character dies. (Remember, though, that death is automatic with a critical wound to the head.) Stabilizing a critical wound is a Difficult task versus Medical (Trauma Aid), but certain types of equipment add points to the effective skill level of the character performing the treatment. Blood plasma, strong sedatives, or a medical kit of some sort each add +1 to the skill level, and these things can be used in conjunction with one another for a collective bonus. In a hospital or clinic setting, whole blood may be used instead of blood plasma, for a bonus of +2 instead of +1.

Basic Healing Rate: A character without medical attention may heal from a slight wound level to unwounded in three days. To go from serious to slight takes four days, and from critical to serious takes one week. Note that healing of various body parts goes on simultaneously.

For example, on Monday, Pavel is shot up pretty badly in an ambush and receives a slight wound to his head, a serious wound to his chest, and a critical wound to each leg. Wood, the medic, stabilizes his critical wounds, and Pavel is taken to a friendly farmhouse nearby to recover. Three days later, on Thursday, his head wound has healed. By Friday, his chest wound has reduced to slight. On the next Monday, both critical wounds reduce to serious, and his slight chest wound reduces to unwounded (it has been three days since Friday). Four days later, on Friday, both legs reduce to slight, but Pavel gets out of bed and is involved in an altercation with a recalcitrant mule, taking another slight wound to the head (accidents will happen). By the next Monday, all three slight wounds have healed completely. Despite recent setbacks, Pavel is ready to go out and look for more trouble.

Recovery From Scratch Wounds: Scratch wounds require 24 hours to heal to an unwounded state. If a scratch wound is taken to a body part, and then further wounds to that body part during the day push that body part's wound level to slight, the rates and rules for healing from a slight wound are used. Slight wounds do not heal to a scratched state; they heal to unwounded without passing through the scratch wound level status.

Medical Care

Medical care and supervision will increase an injured character's basic healing rate. If a character is under successful medical care while healing, two days are trimmed from each stage of healing. In other words, critical wounds heal in five days, serious wounds in two days, and slight wounds in one day. (In the example above, had Wood stayed around to nurse him back to health, Pavel would have healed completely in eight days, rather than two weeks.)

Successful medical care requires two things. First, the caregiver must spend half an hour per wound level, per body area damaged, per day, tending to the wounds. (For instance, when Pavel was first injured, he would require four and a half hours of care per day. When he reached only three slight wounds, only an hour and a half of care was required per day.) Second, once per day the caregiver must pass an Average check of his or her Medical asset. If no medical equipment is available (a doctor's kit is minimum), then the task check becomes Difficult.

Failure means that one of the two days' worth of time to be saved was lost. In other words, if the task is failed one day during the treatment period, only one day is saved from the normal healing time. If the task is failed twice, no days are saved. Note that failing the task a third time (or more) does not add time to the basic healing rate unless a Catastrophic Failure is rolled on this third check (or beyond).

Surgery: Surgery can reduce a critical wound drastically. Like any other medical care, it is best performed at a hospital, where all necessary equipment is available and quality post-operative care is available. In **Twilight: 2000**, this is seldom possible.

Surgery requires the use of surgical instruments. It is a Formidable: Medical (Surgery) task to reduce a critical wound to serious, but if the task roll is successful, the reduction occurs immediately after surgery is completed. The use of blood plasma and local anesthetic each add +1 to the surgeon's asset, and are cumulative. If whole blood is used instead of plasma, it adds +2 to the effective asset level. General anesthetic adds +3 if it is used instead of local anesthetic.

Only one surgery attempt can be performed per critical wound. Failure means that the wound remains critical. Catastrophic Failure can result in extra healing time, loss of limb, or loss of life, depending upon the hit location receiving surgery, the severity of the Catastrophic Failure, and the referee's judgment of the situation as a whole.

Adequate Food and Shelter: If the referee decides that a wounded character has inadequate food or shelter, each wound level will require an extra day to reduce to the next level. These penalties are additive, meaning that a character with both inadequate food and inadequate shelter will take two extra days to reduce each wound level. For instance, imagine that Pavel, in the example above, was abandoned for some reason after having been stabilized.

Without adequate food he'll suffer an additional day to heal each wound level. If Pavel cannot drag himself to a cave or other shelter, he will require two extra days to heal each level due to lack of both food and shelter. Now, instead of healing his slight head wound on Thursday, it will take until Saturday, the serious chest wound will take until Sunday to become slight, and the two critical leg wounds will take until the next Wednesday to reduce to serious.

Infection: Every time a character suffers damage from melee combat, fire combat, or burns, there is a chance of infection. After every firefight (or accident), each injured body part has a chance of becoming infected on a roll of 2 or less on 1D20. If a person with at least Medical (Trauma Aid): 1 treats the wounded body area with antibiotic within eight hours, the chance of infection is reduced to 1 or less on 1D20.

If anyone uses a personal medical kit in an attempt to prevent infection, no infection results (but the kit is, of course, used up). This use of a personal medical kit may be combined with its use in a first aid attempt, above.

Infection is a major danger. Any time a character's wound is infected, healing (in all body parts, not just the infected one) stops until the infection is dealt with. In addition, for each week an infection lasts, the character takes an additional 1D6 damage points to the infected injured body part.

A character with a critical wound caused by an infection loses consciousness and remains that way until all wounds (even those not caused by the infection) are recovered to slight or he or she dies.

If, for example, a character takes a slight wound and that wound becomes infected, no healing takes place. After one week, the character takes an additional 1D6 hits in that arm (which may increase its wound level); after two weeks, another 1D6 is taken, and so on.

Treatment of Infection: Treating an infection is a Difficult: Medical (Diagnosis) task. If any antibiotics are used in the treatment, the task becomes Average. One attempt may be made per week.

A successful treatment means that the treated body part is no longer infected, and healing may take place if no other body areas are infected.

Conny Delshagen (order #3265201)

Vehicle Combat

These rules cover the use of land vehicles, boats, and hovercraft in combat. Incorporating vehicles into the combat sequence involves adding a few adaptations to the basic combat rules.

VEHICLE MOVEMENT

Any scale may be used; movement rates and weapon ranges are given here in meters. There are several different mobility classes of vehicles, each with particular rules for movement.

Ground Vehicles: Ground vehicles are those which maintain contact with the ground. In general, these vehicles' propulsive power is provided by frictional contact with the ground. Wheeled vehicles, tracked vehicles, and leg-powered vehicles (for example, horse-drawn wagons) are examples of this. Some unusual ground vehicles maintain contact with the ground via skis, runners, or wheels, but derive their propulsion from jets, propellers, or sails. Ground vehicles of all types are able to make better speed on roads than on unimproved terrain. How much better depends on the vehicle.

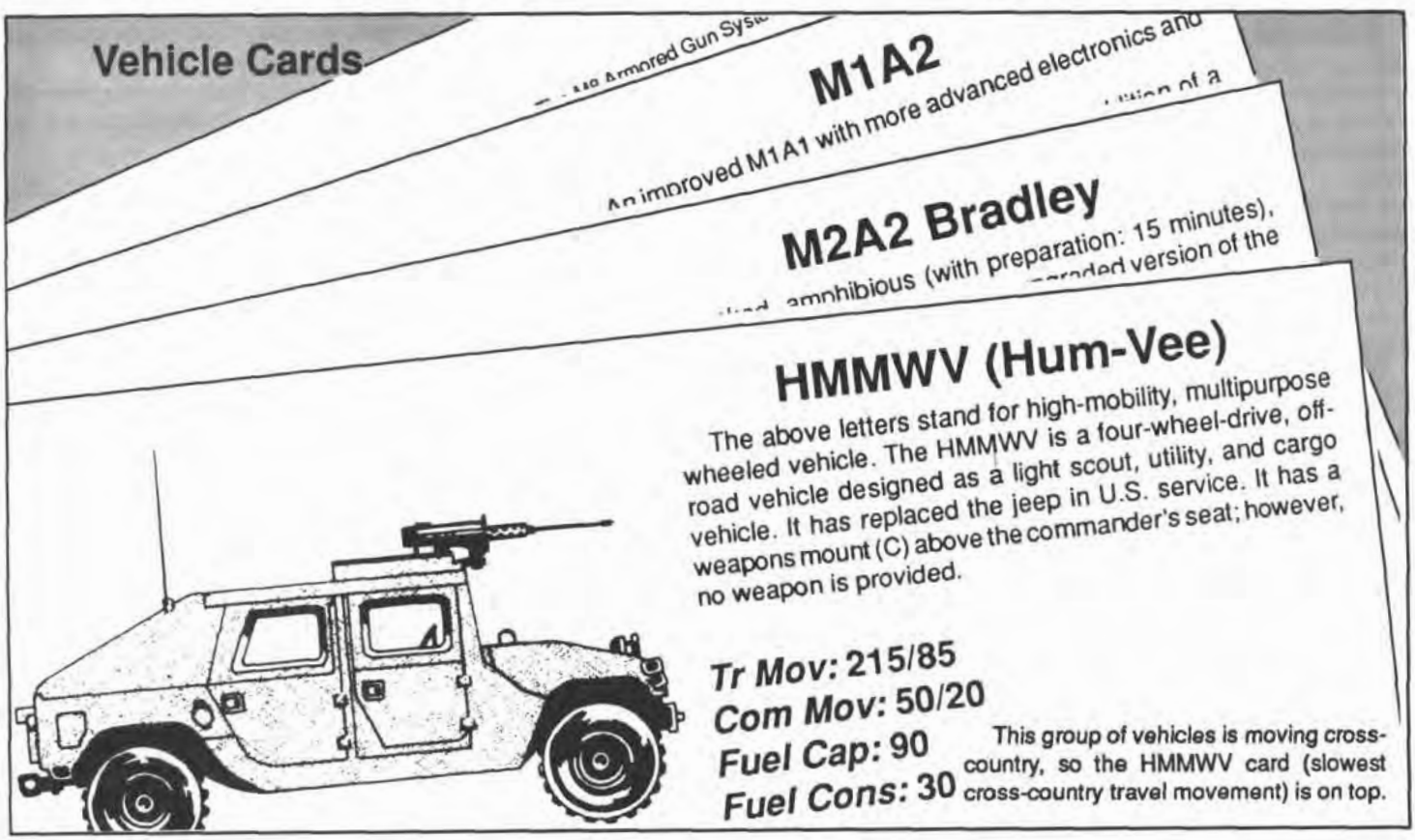
Movement rates for ground vehicles, in meters per combat turn, are given in the Combat Movement chart on page 252 and on the individual vehicle cards beginning on page 64. Note that the listed speeds are the *safe* combat movement speeds on- and off-road. A vehicle may travel faster than this safe speed at the risk of a mishap (see below).

Amphibious Vehicles: Some vehicles are capable of amphibious movement across relatively calm water. Any vehicles capable of amphibious vehicles have a third combat movement speed noted on their vehicle card, to the right of the Road Speed/Cross-Country speed (X/Y/Z instead of X/Y). This is their *safe* combat movement speed. Some vehicles (as noted on their cards) require preparation before amphibious movement can be undertaken. This means that the vehicle must stop at the water's edge, and the crew must leave the vehicle and erect a flotation screen. If a vehicle requires special preparation, this fact and the time taken is also noted on the vehicle card. Vehicles not so noted need only turn on their bilge pumps and erect a trim vane, which is not considered to require any additional time.

Hovercraft: Hovercraft are a special subset of ground vehicles, because they treat terrain differently. Rather than being in contact with the ground, they ride atop a trapped bubble of high-pressure gas. Because of their extremely low ground pressure, hovercraft can go where people on foot would sink. For combat movement, hovercraft can go anywhere, including water, but cannot traverse ravines, steep slopes, dense woods, or linear obstacles, such as walls, more than one meter in height. Like other ground vehicles, hovercraft are able to travel faster over roads. Hovercraft speeds are also given as *safe* speeds.

Water Vessels: Water vessels in **Twilight: 2000** are limited to small craft suitable for use on inland waterways such as rivers, lakes, canals, and protected areas such as bays or inlets. Hovercraft may also move on the water, and are described above. Such vessels are handled using Small Watercraft skill. Movement rates for water vessels are also given in 10-meter increments moved per combat turn. When using a two-meter grid, multiply this number by five; when using individual meter measurement, multiply it by ten. Note that many water vessels have a movement allowance of 0.5, 1.5, 2.5, etc. When moving on the 10-meter grid, these vessels move an extra square every other turn. Watercraft speeds are given as *safe* speeds.

Bicycles: The listed speeds are the *safe* speeds on- and off-road. A character can attempt to go up to twice the safe speed (Average: Agility). Failure results in falling off (no damage results). If the character is encumbered, he or she travels at half speed and may not go faster than that.



Conny Delshagen (order #3265201)

THE DRIVE ACTION

When vehicles are involved in combat, drive is the action used to move them. Drive includes the operation of all types of vehicles, from bicycles to tugboats. In some cases, performing this action will require a skill check. In others, the action is considered to be automatically successful. For instance, a character who was using the drive action to pilot a helicopter beneath a bridge might have to make a Difficult: Pilot (Rotary Wing) check, while another character who was driving a civilian car along a clear road in good weather would be required to make no check at all.

A few other actions can be combined with the drive action. Talking and driving can be done together freely. The ready/change equipment, reload, and fire actions can each be done while driving, but any necessary driving checks are at one level more difficult (sometimes requiring a check that might not otherwise be required).

Mishaps: Characters may drive a vehicle at up to 3 times the safe speed (unless otherwise indicated, below), but they run the risk of a mishap. Driving at up to twice the safe speed is a Difficult test; the asset used is the appropriate vehicle skill. Driving at up to 3 times the safe speed is a Formidable test. Driving at twice or 3 times the safe speed is sometimes referred to as *overdriving*. A vehicle may not be driven at more than 3× safe speed.

If a Catastrophic Failure is rolled, a serious mishap occurs. Serious mishaps include breaking an axle, throwing a track, rolling the vehicle, or in some other way putting it out of commission until major repairs are undertaken.

The referee should determine the exact nature of the mishap according to circumstances. On a crowded road, there may be a collision. A light vehicle is easy to overturn; a tank is almost impossible to overturn. Passenger injuries are also up to the referee.

Ground Vehicles: The roll is made once per turn. If a mishap occurs to a ground-contact vehicle (wheeled or tracked), the vehicle has become stuck in a pothole or ditch, or bottomed out in rough ground; the vehicle is stuck in place. Once per minute, the driver may attempt to get it moving again (Difficult: appropriate Vehicle skill); this occupies his or her time for the entire minute.

If the mishap was the result of a Catastrophic Failure, however, the vehicle suffers some sort of severe damage. The referee will determine the exact effects, based upon the situation at the time and the amount by which the die roll exceeded the minimum for catastrophic failure. It may be that the vehicle suffers a collision (perhaps with passenger injuries), for example, or simply that it has become too mired down to become unstuck without the aid of a towing vehicle.

A mishap on a motorcycle means that the rider has fallen off. The rider suffers 1D6–3 damage to a random location unless he or she makes a Difficult: Agility roll.

Amphibious Vehicles and Swamping: When travelling in water, a normal mishap means that the driver loses control of the vehicle, and it is hung up on an underwater obstruction, or swept from its desired course by current, wind, or other conditions. The driver must attempt a Difficult task each turn in order to regain control of the vehicle. Catastrophic failure indicates that the vehicle has been swamped and is beginning to sink. Characters should be warned that water is breaking over the hull and/or pouring through the hatches, and each crewmember can escape drowning only by succeeding at Formidable: Swimming.

Hovercraft: A mishap indicates that the vehicle has struck an obstruction or has lost lift due to violent maneuvers. The vehicle's speed is immediately reduced to its safe speed (even if this results in greater than normally allowed deceleration). Damage is at referee's discretion.

Vessels: Water vessel mishaps usually mean the vessel suffers a "stall" of some sort. Engines die, sails break loose, oars are dropped, and the like. To get the vessel under way again, the character in charge can attempt an Average roll versus Small Watercraft skill once per minute, as the sole activity for that minute. Success means the problem has been resolved. If the mishap was the result of a Catastrophic Failure, however, the vessel has suffered some sort of permanent damage, as determined by the referee, based upon the situation at the time.

In addition, there are effects unique to certain types of vessels:

Rowed Boats: For muscle-powered craft, the "safe" speed is the boat's listed speed. Rowing characters must roll 1D20 every minute against their Constitution to avoid accumulating a level of fatigue (see pages 149-150). Each successive minute spent rowing at twice the listed speed adds 2 to the die roll. Boats may not be rowed more than twice their listed speed.

Sailboats: Sailboats may move in any direction within the allowed arc, illustrated below. The referee will need to randomly determine wind direction before the combat begins. The safe speed can only be doubled, with a mishap avoided on a successful roll of Difficult: Small Watercraft skill.

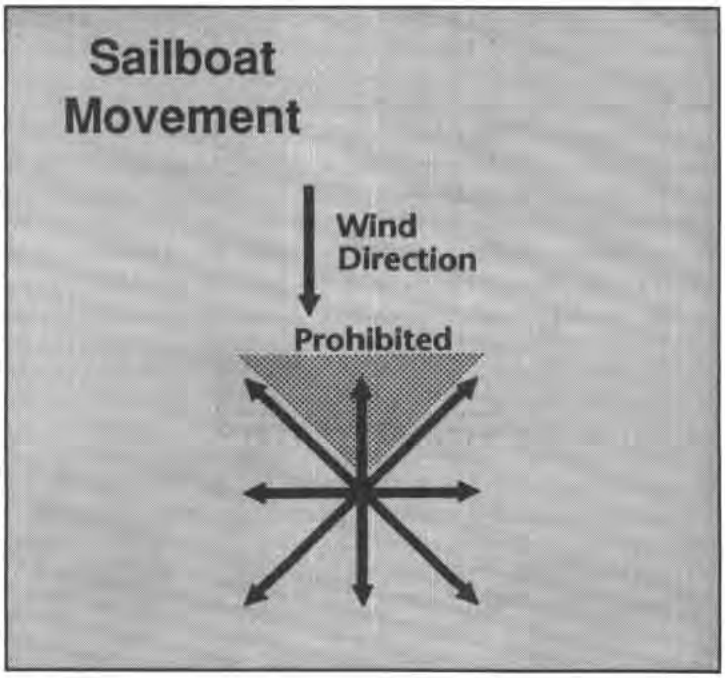
Powerboats: Powerboats are propelled and steered by an engine. Small configuration powerboats (size 1) can be rowed as well (if the engine is damaged). The safe speed can only be doubled, with a mishap avoided on a successful roll of Average: Small Watercraft.

Acceleration and Deceleration: Acceleration and deceleration are the amount by which a vehicle can change its speed each combat turn. Ground vehicles can accelerate by 10% of their maximum speed (rounding fractional values down) plus the driver's appropriate vehicle skill. Water vessels have their acceleration listed on their data cards.

For example, a vehicle with a maximum speed of 30 meters per combat turn could accelerate three meters per turn plus the driver's skill. A driver with no skill could only accelerate three meters per turn, while a driver with a skill of 6 could accelerate nine meters per turn.

All vehicles and vessels may decelerate at twice their acceleration rate. Thus the vehicle listed above would decelerate six meters per turn with an unskilled driver and 24 meters per turn with a skill 9 driver.

Water Vessels: Water vessels have the following additional considerations with respect to movement:



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Current: Rivers, streams, and oceans will have currents, which will affect the speed of a boat by impeding or adding to it, and which can cause unpowered boats to run aground or collide with obstacles. Canals and small bodies of water will usually not have significant currents. Currents will usually flow at a constant velocity and in a constant direction, and thus will need to be established by the referee before combat begins.

Current velocity is expressed in number of 10-meter squares per combat turn. Most large rivers have a current of one-half square per combat turn, which will move the vessel one meter down river every other combat turn. Near rapids or in narrow, swift-flowing parts of the river, this will increase to one square per turn, and near waterfalls it can increase to two, three, or four squares per turn.

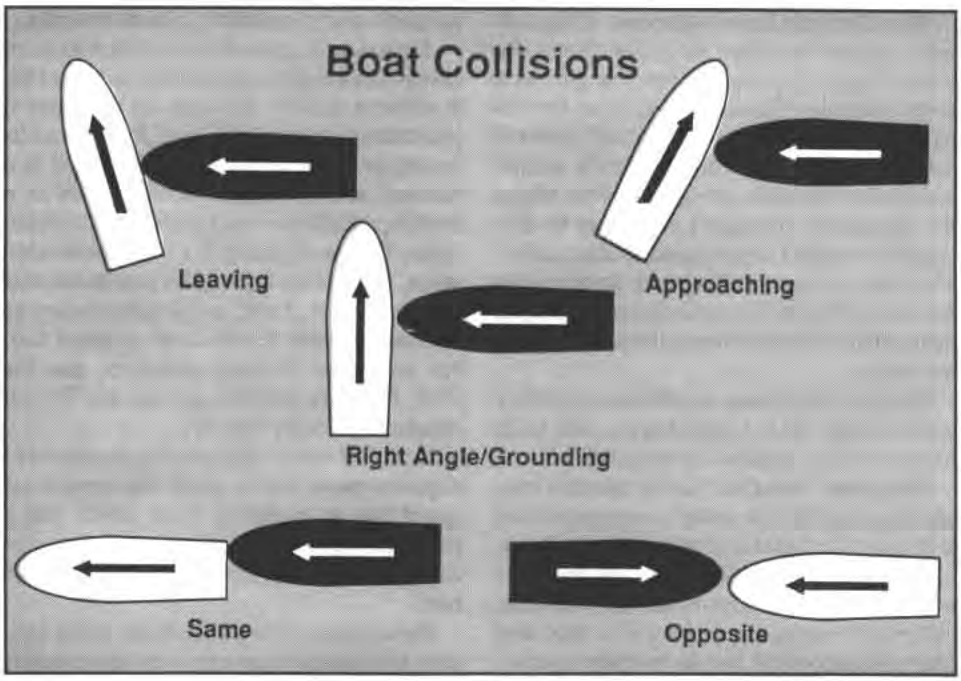
Turning: Each vessel has a turning value which is the number of 45° turns it can make each combat turn. Vessels with a fractional turn value (1/2, 1/3, 1/4 etc.) may make only one 45° turn every two, three, or four combat turns, as indicated.

Towing: Boats may tow other boats. Speed and acceleration are each reduced by 0.5 for every fivefold increase in tonnage. If speed is reduced below 0.5, the boat may not conduct the tow. If acceleration is reduced below 0.5 due to towing, the acceleration remains 0.5.

For example, a 200-ton vessel with a speed of 1.5 and an acceleration of 1 is towing a 1400-ton vessel. This is a sevenfold increase in tonnage, which counts as one fivefold increase (but not a second). Speed and acceleration are each reduced by 0.5 to 1 and 0.5 respectively.

Running Aground: Each boat has a listed draft and will run aground whenever it enters water shallower than this. Unless this is a deliberate grounding (as on a beach) and conducted at very low speed, the vessel suffers damage to its hull or running gear. Roll 1D6 and consult the Navigation Hazards table below to determine the result.

The referee should indicate water depths on the playing surface in three increments: less than one meter, one to three meters, and more than three meters. This can be accomplished by contour lines, shading, color, or any other convenient means. Deeper draft vessels may require additional depth gradations.



Collisions: Likewise, boats may collide with each other, or with floating objects such as logs, and suffer potential damage. Damage depends on the tonnage of the boat and the net speed at the time of grounding, as explained under the "Collision Damage" entry on page 220.

VEHICLES AND FIRE

Fire From Moving Vehicles

Characters may not conduct aimed fire from a moving vehicle. They may fire quick shots or bursts normally.

All such fire, however, is conducted at one higher difficulty level than normal for purposes of determining hits.

Weapon Stabilization: Some vehicles have stabilized main armaments classified as either basic or good. Vehicles with basic stabilization may fire aimed shots while moving at their safe speed. Vehicles with good stabilization may fire aimed shots while moving at twice their safe speed.

Firing at Vehicles

Firing at vehicles is similar in general principles to firing at individuals, but there are a few differences. Some additional die rolls must be made when dealing with vehicular weapons and vehicular damage.

Firing at Vehicles and Vessels: All vehicles and vessels have a size rating that indicates their size and ease to hit. Size is determined by the vehicle's length in 10-meter grid squares. Basically, a target is one difficulty level easier to hit for each size class above Size 1. This information is summarized on the Vehicle Target Size table, on the following page.

All vehicles have their size listed on their vehicle cards. If there is no size listing, the vehicle is Size 1.

No fire task may be adjusted to lower than Easy as a result of difficulty modifiers due to target size.

Target Movement: If the target is moving 30 meters or more in the current turn, it is more difficult to hit. Consult the table for the number of difficulty levels increased by the target's current speed.

Navigation Hazards

D6	*Result*
1	Boat aground. 10 miles travel lost pulling it off.
2	Boat aground. One full travel period lost pulling it off.
3	Screw or rudder damaged. Speed halved until repaired.
4	Hull damaged. 1D6+3 flotation hits.
5	Hull damaged. 1D6+2 flotation hits.
6	Hull crushed. Vessel is grounded to avoid sinking. Cannot be refloated unless a large work crew and vessel are brought to the site.

Target Movement Difficulty Modifiers

Speed in meters/turn	*Kph*	*Diff. Increase*
30	22	+1 level
60	43	+2 levels
120	86+	+3 levels

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Fire Control: Some weapons, almost always vehicle-mounted weapons, have fire control systems which assist the gunner's marksmanship. These are listed on the vehicle cards as "Fire Control" as "+N" where N is the number of non-range difficulty modifiers that the weapon can ignore. This allows the weapon to disregard increases to difficulty levels due to target speed or obscuration. This does not allow the weapon to decrease the base difficulty level due to range; only to disregard additional difficulty increases above that level.

Multiple Modifiers: All difficulty modifiers due to target size, target speed, and firing from a moving vehicle are cumulative.

Overhead Attacks: Some tactical missiles (such as Tank Breaker) are programmed to fly over the target and attack it from above, and all submunition (SM) direct hits are overhead attacks. For overhead hit locations, never add 1 to the die roll for a side shot, and treat all suspension hits as hull hits instead. All attacks are resolved using the vehicle's turret-side armor value (unless the vehicle has no turret, in which case use the hull side armor value).

Damage From Fire

Once a hit is scored, vehicle damage is determined by following the steps listed below.

Penetration: First, determine the penetration of the weapon. This is done differently for different classes of weapons. **Twilight: 2000** has three different classes of weapons: small arms, exploding rounds, and penetrators.

All these classes have a damage value and a penetration rating. The damage value quantifies how much damage a hit will do to personnel or animal targets, *not* vehicles. The penetration rating shows how effectively that damage is translated into armor penetration or vehicle damage. If the weapon's penetration rating is "Nil," the round has no penetration effect, regardless of its class.

Note that vehicles are not damaged by a weapons damage rating, but by its penetration rating, as explained below.

Small Arms: Small arms are intended to damage personnel, not vehicles, and have a penetration rating which indicates the number of damage dice expended per armor level penetrated. Small arms damage remains constant, but the penetration declines over range for penetration values of better than Nil. For attacks on vehicles, simply divide the number of damage dice by the correct penetration value for range and round down. The result is the weapon's *final penetration value* vs. vehicles.

Exploding Rounds: Rounds which explode always have only one penetration listed, which is either a number followed by the letter C (indicating that it is "constant" throughout its range) or the notation Nil. If the value is a number, and the round is being fired at a vehicle, roll 2D6 and add the total to the listed value, the result being the final penetration value. These rounds do damage to personnel via concussion, burst, and fragmentation as discussed under "Explosions" on page 207. For examples of these weapons, see the LAW, Armbrust antitank rockets and TOW 2 missiles on pages 118-125.

Note that some HE exploding rounds have negative penetrations which are used if the round (*not* its explosive blast effect) hits a vehicle. This means that the final penetration value after adding 2D6 might be less than zero.

Penetrators: The penetrators class consists of kinetic energy armor piercing rounds and includes *every* round on the page 258-259 firing charts that includes the abbreviation "AP," for "armor piercing" (i.e., APFSDS, API, and HVAP, see also page 54). When resolving hits against vehicles, the penetration value is used to resolve the damage done. These weapons each have either three or four different penetration values. If there are three values, the first is for both short and medium range, the second for long, and the third for extreme. If there are four values, they are for short, medium, long, and extreme, respectively. Roll 2D6 and add the total to the weapon's penetration rating. The result is the *final penetration value.* As with HE rounds, some small penetrator rounds have negative penetration values, and thus can yield final penetration values of less than zero.

The constant damage value listed for a penetrator is used when it hits personnel or creature targets only.

Special Types of Armor: Some special types of armor provide better resistance vs. penetration.

Composite Vehicle Armor: Vehicles which have composite armor are marked on their vehicle sheets with the notation "Cp" after the armor value. Composite armor is treated as normal armor for all purposes except hits by exploding shells (HE, SM, and HEAP). When composite armor is hit by an exploding shell or high energy weapon, the final penetration is half of the listed penetration (round fractions down) plus 1D6.

Spaced Vehicle Armor: Vehicles which have spaced armor are marked on their vehicle sheets with the notation "Sp" after the armor value. When spaced armor is hit by an exploding shell (HE, SM, and HEAP), the final penetration of the round is its listed penetration plus 1D6, not 2D6.

Reactive Armor Blocks: Reactive armor blocks are special explosive charges fitted to the outside of an AFV for additional armor protection. These blocks detonate when hit by a round larger than 35mm in diameter, and the explosion is directed outwards, interfering with HEAT type warheads on rockets, shells, missiles and grenades. Reactive armor has no effect on kinetic energy penetrators (those rounds with AP).

Reactive armor blocks may be applied to the turret front and sides, and the hull front of any AFV which has the appropriate attachment lugs installed. Installing these lugs takes welding equipment and 1 man/hour per unit of armor. Reactive armor adds 80 to the AV of the protected face. Some vehicles come with attachment lugs already installed (the vehicle card will say if this is the case).

Each unit covers one-tenth of an armor face, and is destroyed when activated. The number of units destroyed on any given face is the D10 roll to hit an unprotected part of the armor face.

Hit Location: Roll once per individual shot or burst and consult the Vehicle Hit Location Chart . Add one to the die roll if the shot was from the side of the vehicle. The four possible results for vehicles are small turret, turret, hull, and suspension. Vessels may be hit in the hull or superstructure.

Some vehicles are configured differently than others, and so treat different hit location rolls as different results. Vehicles with small or remote turrets treat "small turret" hits as turret hits and "turret" hits as hull hits. Vehicles with regular turrets treat "small turret" and "turret" hits as turret hits. Vehicles without turrets treat all "small turret" and "turret" hits as hull hits.

Vehicle Target Size Table

Size	Length: Grid Squares	Length: Meters	Difficulty Mod
1	1	19 or less	—
2	2-3	20-39	–1
3	4-8	40-89	–2
4	9-18	90-189	–3
5	19+	190+	–4

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A vehicle with both a regular turret and a small turret is a special case. If the vehicle is hidden with only the small turret raised, "small turret" hits always hit the elevated small turret, while other hit results are read normally. If the main turret is exposed as well, roll again on "small turret" results, with even rolls treated as small turret hits and odd rolls as main turret hits.

Cover: Often vehicles park with part or all of the vehicle concealed behind terrain features, such as walls, road embankments, or low hills. The referee must determine which vehicle locations are covered by the terrain and any hit location result in those areas hits the terrain instead.

Armor: Once the location is known, consult the vehicle's combat statistics on its vehicle card and note the armor value of that part. Hulls and turrets each have a front, side, and rear armor value. Tracked and grav vehicle suspensions have one armor value which is used when the suspension is hit from all angles. Wheeled and hovercraft suspensions do not have an armor value, but do have a critical damage value, which is listed in parentheses to differentiate it from armor values.

If covering terrain is hit, the referee should determine the armor value of the terrain as well. In many cases this will be enough to stop the round. If not, however, the armor value of the terrain is first subtracted from the final penetration of the round before applying it to the vehicle's armor. The armor value of terrain is calculated by multiplying the thickness of the terrain feature (in centimeters) by the armor toughness shown on the Armor Equivalency table, page 219.

For example, a vehicle is parked behind a low stone wall which the referee decides covers the vehicles's suspension. The stone wall is 30 centimeters thick. Stone has a toughness of 0.2, and so the wall has an armor value of 6.

Extent of Damage: Subtract the correct armor value of the target from the final penetration value of the gun and consult the Vehicle Damage Resolution Chart on page 218. If the result is 0 or a negative number, the shot had no effect. If it is a positive number, read the result from the chart. The result will read out as from one to three damage results and will indicate whether these damage results are minor or major.

For example, an M1A1 tank's 120mm APFSDS round has a damage value of 25 and a penetration rating of 110 at short range. The player rolls 7 on 2D6 giving the round a final penetration value of 117 (110+7). The round hits a vehicle armor face with a protection of 85, leaving 32 points of penetration left (117–85=32). Looking up 32 in the Pen-AV column of the Vehicle Damage Resolution chart, we see the result is 1 major damage.

(Note that the damage value of 25 was not used. Had the same round hit a person, that damage value would have been applied as 25D6 of damage to the person without worrying about armor.)

Damage Implementation: See the damage tables on the facing page. Find the correct section (minor or major damage, hull, or turret damage) and roll 1D6 once for each required damage result. For suspension hits, see Suspension Hits below.

Note also that some rolled results convert the damage into a different type. For example, if a minor turret hit is achieved against a turreted vehicle, but a 6 is rolled on the Turreted Minor Damage Table, the hit is converted into a major turret hit. In this case roll again on the Major Result subtable of the Turret Table. If a 6 is rolled on this table, the damage is converted to a minor hull hit. If a 6

Vehicle Hit Location

Die	*Vehicle*	*Vessel*
1	Hull	Hull
2	Hull	Hull
3	Hull	Hull
4	Small Turret	Superstructure
5	Turret	Superstructure
6	Suspension	Waterline
7	Suspension	Waterline

+1 to die roll for side shots.

Suspension Damage: Minor damage cuts speed in half; major damage immobilizes. Two minor damage results equal major damage.

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Vehicle Damage Resolution

Pen–AV	*Result*
0 or less	No effect
1 to 10	1 minor damage result
11 to 20	2 minor damage results
21 to 40	1 major damage result
41 to 60	2 major damage results
61 or more	3 major damage results

Pen–AV: Penetration minus Armor Value.

Vessel Damage

	Waterline		**Hull**		**Superstructure**
	Minor		*Minor*		*Minor*
Die	*Result*	*Die*	*Result*	*Die*	*Result*
1	Waterline hull	1	1 crewmember	1	1 crewmember
2	Waterline hull	2	1 crewmember	2	Radio/radar
3	Waterline hull	3	Auxiliary mach.	3	Sight/vision
4	Waterline hull	4	Auxiliary mach.	4	Secondary
5	Cargo	5	Secondary	5	Secondary
6	Major waterline	6	Major hull	6	Major s'structure
	Major		*Major*		*Major*
Die	*Result*	*Die*	*Result*	*Die*	*Result*
1	2 crewmembers	1	Main armament	1	2 crewmembers
2	Rudder/screw	2	Main armament	2	2 crewmembers
3	Engine	3	2 crewmembers	3	Fire
4	Fuel	4	2 crewmembers	4	Fire
5	Ammo	5	Ammo	5	Ammo
6	Minor hull	6	Fire	6	Major hull

Vehicle Damage

	Turret		**Hull**
	Minor		*Minor*
Die	*Result*	*Die*	*Result*
1	1 crewmember/loader*†	1	1 crewmember
2	1 crewmember/sensor†	2	Loader*
3	Sight/Vision	3	2 passengers**
4	Traverse	4	2 passengers**
5	Secondary	5	Radio
6	Major turret	6	Major hull
	Major		*Major*
Die	*Result*	*Die*	*Result*
1	2 crewmember/main arm.†	1	Engine
2	2 crewmember/main arm.†	2	Engine
3	Main armament	3	Fuel
4	Main armament	4	Fuel
5	Ammo	5	Ammo
6	Minor hull	6	Ammo

*Loader is either a hit on the auto-loader mechanism or the actual crewmember loading the gun. This becomes a driver hit if neither are present.

**2 passengers becomes a 1 crewmember hit if this is not a passenger-carrying vehicle. If it is a passenger-carrying vehicle but no passengers are present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

†If turret is an unmanned remote turret, use the result after the slash.

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is then rolled on that table, it is converted to a major hull hit. There is no possibility of any alteration to a major hull hit. The following results are possible:

1 Crewmember: This must be a crewmember stationed in the part of the vehicle or vessel which was hit. Which crewmember is hit is determined randomly. The crewmember suffers 1D6 hits, each of which does 1D6 damage. Determine a hit location separately for each hit.

2 Crewmembers: Exactly as above, but two crewmembers are hit, and they are selected randomly from the entire vehicle crew, not just those individuals in the area hit.

N Passengers: The indicated number of passengers are selected at random and are hit exactly as noted above under 1 Crewmember above. If this is not a passenger-carrying vehicle, then this is treated as an N crewmember hit. If this is a passenger-carrying vehicle but none are present, this becomes a no effect. (The referee may substitute a cargo destroyed result for this result at his or her discretion if cargo is present.)

Sight/Vision: Either the gun sight, range finder, night vision equipment, or some other vision or sighting equipment is damaged. (The referee will determine which, depending on the amount of equipment installed.)

Traverse: The turret traverse is jammed, and the turret will no longer turn. This makes it impossible to fire any fixed weapon (such as the main gun or coaxial gun) in the turret until it is unjammed. Repairing the traverse is a Difficult task using Mechanic skill. It takes half an hour and cannot be done from inside the vehicle. (See "Maintenance," pages 152-153.)

If the vessel or vehicle has several turrets, roll to determine randomly which was hit.

Secondary: One machinegun, grenade launcher, or similar light secondary weapon is destroyed.

Loader: Either the human loader is hit, as for a crewmember hit above, or the vehicle's autoloader is put out of action. This becomes a driver hit if neither are present in a vehicle and main armament hit if neither are present in a vessel.

Commo: One of the vehicle's radios is destroyed.

Main Armament: The vehicle's main armament is damaged and can no longer fire. If several such results are possible, roll to determine randomly which weapon is hit.

Ammo: The ammunition storage of the vehicle has been hit. The amount by which the final penetration exceeded the vehicle's armor value is the percentage of stored ammunition lost (rounding fractions up). If the vehicle is armed with any exploding rounds or large-caliber gun rounds, this number is also the percentage chance that the ammunition will explode. If the ammunition explodes, the vehicle is destroyed, and the crew is killed.

Armor Equivalency

Material	*Toughness*	*Centimeters per armor value of 1*
Armor Plate	2	0.5
Sheet Steel	1.7	0.6
Reinforced Concrete	0.4	2.5
Concrete and Bricks	0.3	3.3
Stone, Packed Dirt, Wood	0.2	5
Loose Dirt, Sand	0.04	25

In the case of a vessel, explosion of the ammunition will sink the vessel and each crewmember will escape death by rolling Formidable: Swimming. (If below decks when the explosion takes place, this becomes Impossible: Swimming.)

Engine: The engine is hit and rendered inoperable. The vehicle may not move. Vessels begin to decelerate at the maximum rate, until the vessel reaches a speed of 0. It will then begin to drift with the current, if any, or in a random direction, if there is no current.

Fuel: The fuel tank of the vehicle has been hit. The amount by which the final penetration exceeded the vehicle's armor is the percentage of fuel capacity lost (and fuel, if the tank was fuller than the new capacity). This number is also the percentage chance that the fuel will ignite. If the fuel ignites, the vehicle catches fire, and the crew must immediately bail out.

Suspension Hits: No damage tables are provided for suspension hits. One minor damage result to a vehicle's suspension halves its movement. A second minor damage result, or any major damage, immobilizes the vehicle.

Tracked vehicle suspensions are treated like any armored part of the vehicle using the armor rating listed. Wheeled and hovercraft suspensions do not have an armor value, but instead have a critical damage level (shown in parentheses). Each time a weapon hits the suspension, it inflicts damage equal to its final penetration. Once the cumulative damage reaches the critical damage level, the suspension suffers minor damage. Once it reaches twice the level it suffers major damage. (In most cases, any hit on a wheeled suspension will immobilize the vehicle. Only in the case of small arms fire is the cumulative damage on a wheeled vehicle likely to be important.)

Cargo: So many variations in cargo exist that it is not possible to give any concise rules for damage. The referee must use his or her own judgment in such situations.

Fire: Water vessels are usually quite succeptible to fire, as even steel-hulled boats tend to be full of combustible material. Whenever a fire result appears on the damage table, the boat has caught fire. The final penetration of the gun which caused the damage is the initial level of the fire. The fire will increase in level by 1 every combat turn.

Characters may attempt to put out the fire by spending a turn fighting it. Extinguishing a fire is Difficult task versus Constitution. For every successful task roll made by a character, the fire is reduced in level by 1. Outstanding Success reduces the fire by 2 levels. Catastrophic Failure results in a burn injury.

If the level of the fire exceeds the vessel's tonnage divided by 10, the fire will begin burning out of control and cannot be extinguished. Roll 1D6 at the start of each turn thereafter. The fuel and ammunition on board will detonate on a roll of 6, destroying the vessel.

Waterline Hull: Vessels which suffer waterline hull damage will begin to flood. Each vessel has three rows of flotation hit boxes, with boxes in each row equal to the vessel's tonnage (unless noted otherwise on the card). Subtract the vessel's armor from the final penetration value, and divide the result by 6. This is the number of flotation boxes marked off each turn. All flooding hits are marked in the top row of flotation boxes until the row is full, then in the second row, then in the third.

When the first row of boxes is full, the vessel's speed is halved. When the second row is full, the vessel is "dead in the water" and may not move under its own power. (It will drift with the current.) When the third row of boxes is full, the vessel will sink.

If a vessel has pumps, each point of pump rating will reverse 2 points of flooding per minute. A person who spends six consecutive turns bailing can bail 1 point of water.

Rudder/Screw: When a boat suffers a rudder/screw result, it must travel at half speed until the damage is repaired. On boats without a screw, this indicates that the rudder is jammed, and the boat cannot alter course until the damage is repaired.

Auxiliary Machinery: Auxiliary machinery is rendered inoperable until repaired. The choice of precisely which piece of equipment is damaged is up to the referee.

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Unarmored Vehicles: Unarmored vehicles have a slight armor protection provided by their metal bodies, but it is an incomplete cover. Whenever a shot hits an unarmored vehicle, there is a 50% chance of the shot hitting metal and a 50% chance of it going through the windows or canvas cargo covers. If it hits metal, the shot is resolved normally, and the vehicle receives the benefit of its armor. If it goes through the window or cargo area, the shot is always resolved as minor damage and any damage result is ignored except for crew or passenger (cargo) hits.

Motorcycles: All small arms hits on a motorcycle or bicycle result in damage. All hits by larger weapons result in destruction. A damaged cycle can no longer be ridden, and must stop immediately. Characters riding a cycle when it is hit must make a Formidable: Agility roll. Failure indicates they loose control and are thrown from the cycle, suffering damage according to the "Falls from Moving Vehicles/Animals" rule on page 210 if riding a motorcycle. If riding a bicycle, they suffer no damage but are knocked down.

Amphibious Vehicles: When in the water, any hull penetration causes the vehicle to begin sinking (see swamping effects on page 214, above). A hull hit on a vehicle noted as requiring preparation for amphibious movement is considered to have hit its flotation screen. Treat a flotation screen as having an armor value of 1. Any minor or greater hit on the flotation screen will cause the vehicle to sink (thus one of these vehicles can be sunk by small arms fire).

Collision Damage

It is entirely possible for vehicles to collide with one another in combat. The following general rules apply in those situations.

Damage done depends upon the size of the vehicle and the *net combat speed*. Net speed depends upon the relative direction and speed of the two colliding vehicles. Vehicles headed in opposite directions add their speeds together. Those travelling in the same direction subtract the slower's speed from the faster's. All others use the speed of the faster for determining collision damage.

Ground and Water Craft: For ground vehicles (including hovercraft) and water vessels, the damage value caused by a collision is equal to the tonnage of the object collided with, times the net speed of the collision, divided by 10. For ground vehicles, this number is used as a penetration value against a randomly rolled hit location. For water vessels, the hit location is automatically considered waterline hull, the collision value is divided by the armor value of the given location, and the resultant number is then applied as waterline hull damage, causing flooding.

Vehicle Collisions With Creatures: When a vehicle collides with a human or other figure, including those riding bicycles or motorcycles, severe injury can result. In order to calculate the effects of this injury, first multiply the collision speed times the vehicle tonnage. If the target character is riding a bike or motorcycle, this number is the percentage chance that the bike or motorcycle is damaged enough to become inoperable. Next, the number is divided by two and becomes damage applied to a randomly rolled hit location on the target. Target figures have a chance to leap out of the way of an oncoming vehicle, by succeeding at an Average check versus Agility. If they succeed, they take no damage; otherwise they are struck by the vehicle.

Examples: For instance, imagine that a 2½-ton truck going 45 and a civilian car going 35 were to collide head on. The collision speed in this case is 80. The truck weighs four tons, which means the car is hit with a value of (80×4)+10, or 32. Regardless of the hit location rolled, the car's armor is 1, which means that the 31 (32–1=31) is referenced on the Vehicle Damage Resolution Table, for "1 major damage result."

The truck takes less damage from the lighter car. The collision speed of 80, times the car's weight of 1, yields 80, which when divided by 10 results in 8. Again, regardless of hit location, the armor value is 1. As a result, the 7 points (8–1=7) are taken to the Vehicle Damage Results Table for a result of "one minor result." The referee must now roll the actual minor results and apply them.

In another example, a 20-ton PBR collides with a 200-ton tugboat, with a net collision speed of 5 (remember, boats are rated in ten-meter increments instead of meters). The tug suffers a waterline hull hit which is worth 10 [(20×5)+10=10] damage points, which will cause 10 flotation hits worth of flooding per combat turn until repaired. The PBR suffers a waterline hit worth 100 [(200×5)+10] damage points, enough to immediately sink it.

Finally, two characters on a tandem bicycle are being run down by a truck moving at 45. The vehicle's speed is 45, times four tons weight equals a 180% chance that the bicycle is ruined (a dead certainty). If the characters fail their Agility check, they will each take 90 (180+2=90) damage points to a random location.

Loss of Control: After all damage effects are calculated, operators of vehicles involved in collisions must immediately make a Difficult test of the *appropriate* vehicle skill in order to remain in control of their vehicle. Failure at this check means the vehicle goes out of control. Ground vehicles will skid to an uncontrolled stop, possibly colliding with something else and requiring a second damage check (at the referee's option).

Water vessels will drift with the current, spinning slowly until control is regained. The roll to regain control is made once per turn in which the driver is allowed an action. A Catastrophic Failure at the original test means the vehicle is damaged so severely that control cannot be regained.



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Other Combat-Related Issues

DEMOLITIONS

Explosives, in addition to providing the bang for high-explosive rounds, are used to demolish structures and breach barriers.

Types of Explosives: For simplicity, the game deals only with the two most common types of explosives: dynamite and plastic explosive. The units used in the game are the quarter-kilogram stick of dynamite and the one-kilogram block of plastic explosive. All demolition effects are resolved in terms of the number of demolition points (DP) used. A stick of dynamite has 1 DP; a block of plastic explosive has 6 DPs. Plastic explosive is flexible and may be molded to any shape desired or broken into smaller charges of 1 or more demolition points. Several sticks of dynamite and/or blocks of plastic explosive may be joined to form larger charges.

Setting Charges: Each demolitions charge takes 15 minutes to emplace. A demolition charge is defined as one or more sticks of dynamite and/or blocks of plastic explosive connected to each other (up to a maximum weight of 10 kilograms). Additional explosives may be attached as extra charges, but require additional time to emplace. If several larger charges are emplaced, several characters may work on emplacing them at once.

Setting a charge requires a detonator and may require fuses or electrical wire. A character must have a demolitions kit (see page 58) or must have improvised the required parts (see Combat Engineer skill, page 137). Improvised fuses/detonators will have a mishap on a D10 roll of 8+. Such a mishap is a hangfire (5-10 1D10) or a complete dud (1-4 on 1D10). A hangfire will detonate 1D10 turns later than expected; a dud will not detonate at all. The referee should make these rolls in secret.

Setting a charge is an Easy task using Combat Engineer skill, with failure indicating that the charge does not go off when triggered and with Catastrophic Failure indicating that the charge goes off while being set.

Tamping: Tamping consists of covering a charge so that the force of the explosion is contained and directed in toward a structure. Tamping must be done with dense or heavy material, such as rocks, sandbags, steel plates, etc. Tamping adds five minutes to the time required to set the charge. The referee may increase this time requirement for difficult tamping jobs. (It is very difficult, for example, to tamp a charge taped to the side of a freestanding girder.)

Effects: Like anything which blows up, explosives have a concussion, burst, and penetration value.

Concussion: It requires progressively larger quantities of explosives to produce a linear increase in concussion. To determine the concussion of a charge, consult the Demolitions Table on page 274. This lists demolition points and their corresponding concussions. In reading the chart, you will notice that there are several gaps in the listing of demolition points. The DP value listed for a given concussion is the minimum number of DPs required to achieve that value.

For more precise results, the following formulae can be used to calculate the concussion value of a given demolition charge and the size of charge needed to achieve a given concussion.

To determine the concussion of a charge, divide the DP value of the charge by 2, extract the square root of the result, and multiply by 5. To determine the number of demolition points needed to achieve a given concussion, divide the concussion by 5, square the result, and multiply it by 2.

$$C=5(\sqrt{DP+2}).$$

C: Concussion *DP:* Damage points.

$$DP=2[(C+5)^2].$$

C: Concussion *DP:* Number of damage points needed to arrive at a certain concussion.

Burst: Once the concussion of the explosion has been calculated, determine the maximum concussion radius of the explosion the same way as for a high-explosive round, as described on page 207. This maximum radius of concussion is also the primary burst radius of the explosion. The secondary burst radius is twice this.

Unlike a high-explosive artillery round, a demolition charge does not contain the material necessary to produce a large quantity of fragments. However, these are usually produced by the destruction of the object being demolished. If the demolitions charge is simply lying on the ground or is used to demolish an earthen or timber and earth fieldwork, it does not produce fragments.

Penetration: The base penetration of a demolition charge is the same as its concussion value, but is modified by its means of emplacement. If the charge is tamped, its penetration is doubled. If the charge is simply laying on top of or leaning against a structure (as in the case of a thrown satchel charge or stick of dynamite), its penetration is halved. Unlike other explosions, the listed penetration value of a demolition charge is its actual penetration; players do not add the roll of 2D6 to it.

Breaching Barriers: Breaching a barrier basically means blowing a hole in it. Demolitions charges can be used to breach walls, armor plate, embankments, etc.

To determine the size of the breach made by a demolition charge, first determine its maximum penetration. To do so, divide the penetration value of the charge by the toughness of the material of the barrier. This toughness is listed on the Armor Equivalency Table on page 219. The result is the number of centimeters penetrated by the charge.

For example, a charge with a penetration of 12 would penetrate 6 centimeters (12÷2) of armor plate, 40 centimeters (12÷0.3) of brick or concrete, and 60 centimeters (12÷0.2) of stone, packed dirt, or wood.

Now determine the actual diameter of the breach made. The diameter of the breach, in centimeters, is the penetration (in centimeters) of the charge minus the thickness (in centimeters) of the barrier.

For example, a character wishes to breach a 50-centimeter-thick (about a half yard) reinforced concrete wall. The character is using nine one-kilogram blocks of plastic explosive (total of 54 DP). Consulting the Demolition Table on page 274 he or she uses the 50 row for DPs and notes that this has a penetration of 25. The character spends an extra five minutes carefully placing and tamping the charge for maximum effect, thus doubling the penetration to 50.

The PC divides the penetration value of 50 by the reinforced concrete's toughness of 0.4, obtaining a total penetration of 125 centimeters.

Subtracting the thickness of the wall from this leaves a hole 75 centimeters (0.75 meter, or over two feet) across.

Characters should take cover from the blast as an explosion with a concussion value of 25 will injure characters within four 10-meter grid squares (40 meters) of the explosion, and it will throw concrete shards to twice this distance.

MINES

Mines are placed in the ground and are detonated when a human, animal, or vehicle passes over them. Antitank mines are detonated by vehicles.

Detonation: Minefields are always described in terms of their width and depth in 10-meter tactical grid squares, and their density of mines per grid square. Once this has been calculated, the chance of detonating a mine per grid square entered is determined. For personnel, multiply the density by 0.1; for vehicles, multiply the density by 0.5. The result is the percent chance per square that a vehicle or character will trigger a mine.

It is too time-consuming to roll for every square entered, so the referee should instead note how many squares of the minefield a character of vehicle moved through, multiply this by the detonation chance, and use the result as the chance that a mine was triggered at some point during the move. Since a good many variables are actually at work here other than simple density of the field and distance travelled, the referee is strongly encouraged to make a quick approximation of the chances, round to the nearest 10% (but never down to 0 or up to 100), and roll a few percentile dice. This is not an

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absolutely precise system to begin with, so speed of resolution is more important than precision.

For example, the referee determines that three characters are walking through an antipersonnel minefield with a density of .08 mines per square. One character walks through six squares of the field; one walks through five; and one walks through two. For personnel, the chance of detonation is 0.008 per square moved through. The referee decides that they have walked through an average of about four squares each, for a detonation chance of roughly 0.04 (4%) each. The referee makes a D100 (percentile) throw for each character, with a 4 or less indicating a mine was detonated. For more detail (and time), the referee could have rolled a D100 for each character for 5 or less, 4 or less, or 2 or less, respectively.

Damage: Detonation of a mine has the same effect as any other explosion, causing concussion and fragmentation. However, if a character triggers an antipersonnel mine, the full concussion value of the mine is only suffered by one leg (determine which one randomly), with the rest of the body parts suffering half concussion. Damage to a vehicle is resolved against the vehicle's suspension. If the mine has a penetration value, then an additional attack is made against the hull of the vehicle using the vehicle's hull rear armor value.

Detection: Detection of a minefield is an Average task using either Combat Engineer or Observation skill. It may only be attempted while crawling or walking, not while trotting, running, or mounted. Detection of a camouflaged minefield is a Difficult task, subject to the same restrictions. Conditions of reduced visibility (fog, night, smoke, etc.) raise the difficulty of the task by one level.

Marking and Removal: Once a minefield is discovered (either by detection or by setting off a mine), characters may either probe for the mines and mark their location or may attempt to remove them.

Probing and marking mines is an Average task using Combat Engineer skill and a Difficult task using Observation. Failure indicates that a mine present in the grid square has been missed, while Catastrophic Failure indicates the accidental detonation of a mine. It takes five minutes (60 combat turns) to probe and mark a five-meter wide path through one tactical grid square (10 meters).

If PCs wish to remove the mines from a field, they must first probe and mark the field as explained above. The referee will determine where the actual mines are in the marked part of the field, and each one must be removed. Removing a mine takes 10 minutes (120 combat turns) and is a Difficult task using Combat Engineering skill or a Formidable task using Observation. Failure indicates a complication in the removal which will take extra time. Spend another 10 minutes and roll the task again. Catastrophic Failure indicates accidental detonation of the mine.

Directional Mines: Directional antipersonnel mines are not buried. They instead are generally emplaced at or near ground level and detonated either by remote control or a 30-meter tripwire.

Personnel passing over the tripwire will detonate the mine on a D10 roll of 6 or less.

Anyone can detonate a directional mine by remote control at any time, provided he or she is in possession of the control (is connected to the mine by a wire). Concussion is resolved normally. Fragmentation, however, is suffered only in the direction of the blast (predetermined when the mine is emplaced). The burst area is a 30-degree cone, so at any given distance from the mine, the cone is half that distance wide. For example, at a distance of 50 meters, the cone is 25 meters wide; at 100 meters, it is 50 meters wide. Two burst templates are provided on page 257 for use with the tactical grid. The primary burst zone of the directional mine extends to 60 meters, and the secondary burst zone to 120 meters.

FASCAM: FASCAM (also known as RDM [remote-delivered mines]) may be fired by artillery. The two types of RDM rounds are antiarmor mines (RDAAM) and area denial mines (RDADM). The first type delivers antitank mines, while the second delivers antipersonnel mines. Because the antipersonnel mines are smaller, RDADM rounds provide for a higher minefield density than do RDAAM. The densities of the two types of fields are provided on the FASCAM Density Table. On the table, the unit of deliverable mines is equivalent to a medium-caliber artillery round. Larger artillery rounds will deliver more than one of these units.

For example, a round that was described as holding four RDAAM mine units would cover the area listed at a density of .04.

FASCAM Density Table

Type	*Density*	*Dimensions of Mined Area*
RDAAM	.01	250m (25 squares) by 250m
RDADM	.04	250m (25 squares) by 250m

Due to the low density of mines delivered by a single mine-unit round, it is common practice to fire more than one round to make a field. When emplacing a minefield using RDM, players should tell the referee how many mine-units they are firing into each 25 10-meter grid square by 25 10-meter grid square area (the area covered by the mines from one round). The density of the minefield is the density of one round times the number of mine units fired.

For example, each RDAAM round provides a density of 0.01 mines per grid square. A group of players has 12 one-unit RDAAM rounds and wants to mine an area roughly 500 meters across (roughly 50 grid squares). Each round covers an area 25 squares wide and 25 deep. The players tell the referee that they will fire six rounds into the middle of the left half of the area and six rounds to the right. This will give them a minefield 50 grid squares wide and 25 grid squares deep, with a mine density of 0.06 per square.

Standard Minefields: A standard antitank and standard antipersonnel minefields already in place (i.e., laid previously by NPCs) are assumed to have a density of 0.1. The referee can increase or decrease this, and determine widths and depths to fit the situation. The 0.1 density is an easy rule of thumb, however.

CHEMICAL WARFARE

Chemical bombs, missiles, artillery rounds, and grenades are filled with a chemical agent and are intended to do damage by dispersion of their contents rather than by their explosive power.

The listed burst radius of the round or grenade is the width of the chemical cloud it releases. The length of the chemical cloud is 4 times its width. The actual cloud starts at the point of impact of the round or grenade and extends downwind.

For example, a chemical grenade with a burst radius of 5 would have a chemical cloud five meters wide and 20 meters long.

Characters may suffer fragmentation damage if they are within the burst radius of the round or grenade, but since such weapons have only enough explosive force to scatter their contents, this is restricted to 1D6+2 damage with Nil penetration to a random location if hit by a fragment. Roll on the Human/Animal Hit Location Chart (pages 198, 252) for location.

A chemical round can contain one of five different chemical agents: smoke, irritant gas (such as tear gas or vomit gas), blood agent (such as phosgene), blister agent (such as lewisite or mustard gas), or nerve gas.

The cloud of gas from a smoke round does not form immediately. When the round hits, the referee should secretly roll 1D6 to see how many combat turns it will take the cloud to form. Once the cloud has formed, the effects below are instituted.

Smoke: Smoke causes no damage and is used to the obscure vision. The first 30 seconds of effect is thin smoke, followed by two minutes of dense smoke, then another turn of thin smoke, and then no smoke.

Irritant Gas: This category covers a variety of compounds usually known as tear gas or riot gas. The gas cloud lasts for four turns. Irritant gas causes no permanent damage, but can cause choking and temporary blindness.

When an unprotected character (one without a gas mask) first comes into contact with an irritant gas cloud, he or she must make a panic roll. Panic indicates that a character will

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flee the cloud and spend one turn recovering. In addition, for each minute that a character is in contact with an irritant gas cloud, the character must succeed at an Average check of Constitution to avoid being overcome by the gas.

If the character passes both the above rolls, he or she may function normally. If the PC fails the Constitution roll, he or she is temporarily blinded and incapacitated (disoriented, confused, and incapable of any movement other than crawling) by coughing.

A character who is incapacitated continues to suffer the effect for 10 minutes, during which time he or she need make no further rolls for panic or against Constitution.

Characters in gas masks or chemical defense suits are not affected by irritant gas.

Blood Agent: This category covers a variety of inhaled poisonous gases. The cloud lasts for 20 turns.

Each combat turn that a character is in the gas cloud of a blood agent, he or she receives 2D6 hits to the chest. A character in a blood agent cloud can hold his or her breath for six combat turns and only suffers 1D6 hits per combat turn while doing so. (The agent can enter the bloodstream through the eyes as well as through inhalation, but in less damaging concentrations.) Characters wearing gas masks are not affected by blood agents.

Blister Agent: The gas cloud of a blister agent is the same as for a blood agent. A blister agent has the same effect on masked characters as irritant gas does on unmasked characters. If a character is not wearing a gas mask, blister agent has the same effects as both irritant gas and blood agent. Characters chemical defense suits and gas masks are unaffected by blister agents (a gas mask alone is not protection).

Nerve Gas: Nerve gas attacks the central nervous system of the victim, eventually causing convulsions and respiratory failure. It can be inhaled or absorbed through the skin. The gas cloud of a nerve gas round is the same as for a blood agent round. Each three turns (15 seconds) that a character is in a nerve gas cloud, he or she receives 1D6 points of damage to the head and 1D6 to the chest (referees should prorate lower exposure times).

Characters wearing a gas mask suffer damage only to the chest. Those wearing a chemical defense suit but no gas mask suffer full damage. If wearing both a chemical defense suit and a gas mask, he or she is not affected.

Once a character's damage level reaches serious injury (equal to a serious wound) to either the head or chest, he or she continues to suffer damage from the gas, even if the character is no longer in the gas cloud. This damage will continue until the character either dies or receives an injection of atropine.

A character who has suffered serious injury to the chest requires one atropine injection to arrest the effects of the nerve gas. A character who has suffered a critical injury to the chest requires two atropine injections to arrest the effects. Once injected with atropine, the character is incapacitated (disoriented, confused, and incapable of any movement other than crawling) for four hours.

Residual Contamination: The ground covered by a cloud of blister, blood, or nerve gas will remain contaminated for several hours after the cloud disperses, and vehicles exposed to the cloud will remain contaminated for several days. Natural weathering will reduce this, and a rainstorm or thorough washing of the vehicle will remove the contamination. While an area or vehicle is contaminated, unmasked characters who walk through that area or stand near that vehicle suffer 1D6 hits to the chest every 12 turns (one minute).

TACTICAL VISIBILITY

Normal daylight visibility is effectively unlimited, restricted only by intervening terrain. Smoke, adverse weather, and night reduce visibility severely. Dense smoke blocks visibility completely. Light smoke obscures characters and vehicles in and beyond it. In poor weather (light fog, drizzle, and light snowfall), maximum visibility distance is 2000 meters for moving vehicles, and very large objects and structures (such as villages, woods, etc.). For stationary vehicles, small structures (such as bunkers), and moving people, the maximum spotting distance is 1000 meters. For stationary people, it is 500 meters. In very poor weather (dense fog, rain, and heavy snowfall), these distances are quartered.

Visibility at night varies considerably, depending on the amount of background light. The referee should assign a background light level of from 1 to 5, with 1 representing a cloud-covered, moonless night (in other words, pitch-black) and 5 a clear night with a full moon high in the sky. Visibility for large structures and moving vehicles is 200 meters times the background light level. Visibility for small structures, stationary vehicles, and moving people is 100 meters times the background light level. Visibility for stationary people is 50 meters times the background light level. Halve the distance for poor weather at night; quarter the distance for very poor weather at night.

Encounter Ranges: In poor weather, halve all encounter ranges (except in woods). In very poor weather, quarter all encounter ranges (except in woods). At night, multiply all encounter ranges (except in woods) by the background light level and divide by 10, then modify for poor or very poor weather. (Woods are unaffected by reduced visibility, as visibility is already so limited that encounter range depends as much on hearing the encounter as seeing it anyway.)

Encounter Ranges

Terrain	*Range*
Open	1D10×300m
Hill	1D10×100m
Swamp	1D10×30m
Woods	1D10×10m

Visibility-Enhancement Devices: A number of vision-enhancement devices are available. They have the following effects.

Binoculars: Binoculars are useful only during periods of good visibility (daylight and good weather). Characters who are equipped with binoculars and are in a good observation position (building roof, treetop, hill) have Observation skill increased by 1. If they spot a group before it spots them, double the range of the encounter.

Image Intensifier: An image intensifier has the same effect as binoculars, except that characters add 2 to their Observation skill. The device incorporates both telescopic and low-light intensification, and has a maximum range of 900 meters. The light-intensification features double characters' maximum visibility ranges at night. Image intensifiers have no effect in woods, smoke, or poor or very poor weather.

IR Goggles: Infrared goggles allow characters to see moving or stationary personnel or other heat sources at a distance of 300 meters at night. In addition, characters wearing infrared goggles can see the beam of an IR spotlight (see immediately below). IR goggles have no effect in woods, smoke or poor or very poor weather.

IR Spotlight: An infrared spotlight can illuminate an area 20 meters across at a range of up to 1000 meters. Only characters wearing IR goggles can see the light.

However, any character wearing IR goggles will see the searchlight if he or she is within 3000 meters of it. IR spotlights have no effect in woods, smoke, or poor or very poor weather.

White Light Spotlight: A white light spotlight will illuminate an area 20 meters across at ranges up to 2000 meters. The light itself can be seen by any character at any distance who has a clear line of sight to it. White light spotlights have no effect in woods, smoke, or poor or very poor weather.

Thermal Viewer: A thermal viewer is an advanced form of infrared imaging, sometimes called forward-looking infrared (FLIR), although this is a misnomer when the device allows all-around visibility. It allows characters to see vehicles out to 3000 meters and people out to 1500 meters through darkness, smoke, and fog. This range is halved in drizzle and rain, and the device has no effect in snowfall and woods.

Illumination Rounds: An ILLUM round will illuminate the area within its burst radius as if it were full daylight. ILLUM rounds have no effect in woods, smoke, or poor or very poor weather.

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THE WORLD IN AD 2000

This chapter details conditions in the year 2000. The discussion of nuclear strikes is limited to sites receiving over 0.5 megaton. Smaller strategic and tactical strikes are not discussed because of their tremendous numbers.

GENERAL CONDITIONS

Physically, there is little difference between the world of **Twilight: 2000** and today's world. The rivers, mountains, shorelines, and location of cities are the same. The difference lies not in the features of the land, but rather in the condition of those features. This is particularly true in Europe and other countries subjected to both conventional fighting and nuclear attacks. Here, many cities have been devastated and are abandoned ruins. Others are still inhabited, but with greatly reduced populations. Small towns and villages are beginning to resemble fortified towns of the middle ages, surrounded by low earthen ramparts with occasional bunkers and firing positions. Trade and commerce are greatly reduced since governments can no longer police the highways and countryside. Most manufacturing has ceased except for small cottage industries: weaving, carpentry, canning, etc.

In regions where there was no actual fighting, local conditions can run the gamut from good to abysmal. Throughout the world, cities are severely depopulated, factories are deserted, and the countryside is flooded with refugees, marauders, and displaced persons of all types. Countries that were totally untouched by the war fell victim to the global depression (of unprecedented proportions) that resulted. Some places weren't nuked, but no place was immune to the chaos that was the war's major aftershock.

Electricity is a memory in most areas of the globe. The coal and oil to generate it are no longer available more than a few miles from the production fields. Control circuitry and electronic components of all types (in every type of industrial facility) were fried by the EMP (electromagnetic pulses) of nuclear detonations thousands of miles away (prewar predictions of EMP proved to be underestimates, and even supposedly shielded equipment was damaged to some extent). Power transmission lines went down due to surge effects. Nuclear power plants were either shut down for safety when the nukes began to fall, or were abandoned by their operators in the ensuing civil disorder. Hydroelectric and geothermal power plants fell victim to one or more of the above. Electricity is simply not available in most areas, and not on any large scale anywhere.

Public health and sanitation measures are almost completely nonexistent. Fallout and famine have reduced the general level of health in the world's population, and modern medicines are increasingly scarce. In some areas, disease has killed more than nuclear or conventional warfare. Disease is an increasing problem worldwide, and some diseases that had almost been eliminated have returned.

The nuclear devastation was targeted primarily upon the substance that was the lifeblood of modern industry: oil. All of modern society depends on a free flow of oil for energy, lubrication, and petrochemical raw materials. Modern farming techniques depended on oil, not only to fuel and lubricate the machinery, but to provide the feedstock for most fertilizers and many herbicides.

Equipment Availability (1D10)

Location	*Very Common*	*Common*	*Scarce*	*Rare*
Major city	10–	10–	8–	4–
City	10–	8–	6–	2–
Town	10–	7–	4–	1–
Village	6–	3–	2–	—
Encounter	4–	2–	1–	—

TRADE AND COMMERCE

While organized trading and commercial activities go on in the world of **Twilight: 2000**, they are not extensive or economically sophisticated. Communities for the most part are self-sufficient, since the flow of trade is too uncertain to rely on. Surviving cities do trade for food, and merchant convoys from these cities are sometimes encountered. At first, cities often forcibly confiscated food from the countryside. However, this resulted in farmers moving away from the areas around cities, so instead in most areas a primitive economy has developed in which cities trade what goods they can produce for food.

Outside of the cities, the standard means of exchange is barter. Characters bargain and exchange items until both sides are satisfied with the trade. In barters between player characters and NPCs, the referee should be guided by the dollar prices of the items (as given on the Price List on page 248) in the barter, as these prices reflect the general perceived value of the items. However, the referee must also determine the items' actual perceived values for the NPCs involved in the barter. For example, a motorcycle broken beyond the local NPCs' abilities to repair isn't worth that much to them, while a farmer's only rifle will be of great value to him. Also, if the characters obviously need an item desperately, greedy NPCs will attempt to get many times their perceived value of the item. However, a friendly NPC is likely to offer a better deal than normal, or offer advice as to the going price for items locally and where the PCs might find a particular item they are looking for.

Gold: In cities, the basic medium of exchange is usually gold. Prices are determined in much the same way as before, but gold is paid and received for transactions. In a city, perceived values will tend to be closer to the listed prices than in the countryside, either because the items may be more plentiful or due to competition between merchants selling the items. Of course, there may be monopolies on certain items. Or perhaps the sale of all manufactured items (and/or food) is a city-controlled monopoly, in which case the prices of items may be artificially higher than their perceived value.

Gold generally is not used as a medium of

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exchange outside cities, as the inhabitants of the countryside have little use for gold while a plow, a gun, or whatever, can be of immediate use. Gold may be accepted as partial payment in some places, usually in relatively secure areas having a nearby city that trades extensively. Also, merchant convoys in the countryside will often accept gold.

Barter is possible in the city, particularly when both sides of the barter want the items being offered for exchange. However, gold is preferred, especially by merchants. If a merchant accepts items in barter that he is not very interested in, he will usually strike a harder bargain than he would if he were paid in gold.

Availability: All items on the Price List on page 248 have an availability rating. The four availability ratings are very common, common, scarce, and rare. The Equipment Availability Table indicates the likelihood that the item sought can be found in each of the four sizes of settlements. The encounter line gives the likelihood that an encountered party will have information about where a desired item is. In all cases, the likelihood is expressed as a number to roll under on 1D10. Considerable referee discretion is allowed for availability of items, as the table is meant as an aid to the referee, not as a rigid rule to limit his options.

In settlements, Scrounging skill can influence the chance of finding that an item is available.

The referee should treat the actual chance of an item being present as the average of the value on the chart and the character's Scrounging skill, provided the character's skill level is higher than the value on the chart.

Industry: Industrial production is very limited and is mostly confined to cities. The biggest business going is the distillation of alcohol. Most villages and every town, city, and major city have large alcohol stills that turn out methanol and ethanol for local use and trade. Another thriving local industry is ammunition reloading. Gunpowder and primers can be manufactured fairly easily, and bullets can be cast. Brass cartridges are more difficult to manufacture, however, so ammunition reloaders are almost always willing to give a 10% discount on ammunition if the buyer has a cartridge to trade, or to trade one round for 10 brass cartridges. Other light industry may be present, such as bicycle manufacturing, but will be very small scale (handcrafted rather than mass produced).

MILITARY/CIVILIAN RELATIONS

In some regions, the armed forces are the closest thing to a government that remains. Most military units have either broken down completely, disintegrating into smaller bands (some of which have turned to wholesale brigandage, others becoming local security forces) or have become effectively independent (few units would obey an instruction from higher echelons to resume hostilities, even if they could receive one).

Most military units have settled into a "cantonment" system, where they take shelter in a community (or a small number of communities), providing protection from roving marauder bands (and sometimes from rival communities) in return for food and shelter. Whether the inhabitants welcome the soldiers' presence or not depends on local conditions and how the soldiers behave. Sometimes the cantonment arrangement is beneficial for both sides; sometimes it is extremely one-sided. It is not at all uncommon for units of one nationality to contain soldiers from other nationalities (even those that were once the enemy) as well as increasing numbers of civilians (locals or refugees). A Soviet unit might contain Americans, Germans, Czechs, Poles, and even more exotic nationalities (depending on circumstances), all equipped with a mix of weapons from a variety of sources. Every possible "arsenal" has been exploited, from reserve armories and firearms factories to museums and sporting goods stores.

Periodically, army units are forced to move a considerable distance cross-country. When they move they live off the land, seizing the food and fuel they need from local inhabitants. Thus, the arrival of a military unit in an area, regardless of which side the unit is on, is dreaded by civilians. The soldiers descend like a swarm of locusts, consuming all the carefully hoarded supplies of a settlement, and then pass on, leaving starvation, disease, and misery in their wake.

As time passes, this sort of thing becomes less common. Major military forces are becoming increasingly scarce, and those that are left are no longer in a mood for large-scale moves.

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Global Conditions

The following section provides a brief overview of most of the regions of the world. In all cases, some suggestions have been made as to the types of encounter regions and where they are located. Referees should remember, however, that these are by no means exhaustive lists, only general guidelines. For example, a nation may not have any listing of terrorized regions, but the referee should feel free to place these anywhere that marauders are thick or where foreign military troops have recently moved in.

Europe

Europe was particularly hard hit by the war, in that much of the conventional fighting occurred there.

United Kingdom: As one of the major NATO allies, the UK was particularly hard hit. His Majesty's government has managed to retain control of an area in southeast Great Britain south of the Thames River and east of Southampton. This region counts as organized for the purposes of encounters, with the outer fringes being cantonments. Outside this region, the remainder of the communities not destroyed (per the list to the right) are independent of HM government control, under a variety of local governments ranging from remnants of local community councils (the prewar local government) to military and paramilitary dictators. The area around Folkestone and Hastings is disputed between HM government and the respective independent cities. HM government has managed to retain control of a small number of off-shore oil platforms in the North Sea, and thus has access to a trickle of petroleum products.

France: Although ostensibly neutral in the war, France was still subjected to nuclear attacks to deny its port and oil refining facilities to NATO. Damage was largely confined to the coasts, but the resulting casualties were severe. The riots and civil confusion caused by the war and by the hordes of refugees pouring across the borders forced the central government to close the borders, then occupy all territories west of the Rhine in order to prevent the country from being overwhelmed. The military, to enforce the restrictions, has established a free-fire zone within 50 kilometers east of the Rhine, commonly called *La Zone Morte* (the Dead Zone). The border is officially closed to non-French citizens (informally, bribes will get you in no matter what your origin if you have visible means of support).

The border with Spain is also closed, but is permeable to smugglers. Part of a thriving black market is dominated by the *Union Corse* (the Corsican criminal underworld). The central government has been forced to become increasingly repressive as conditions worsen, but life in most areas is onerous but tolerable.

Some areas (the mountains, especially) are in open rebellion against the central government, and martial law is in effect almost everywhere. The government of the southern departments is incredibly corrupt, largely because it is totally dominated by the *Union Corse*. Marseilles is the largest undamaged city, although it is in bad shape compared to its prewar condition. It represents the link between what remains of trade in Europe and the seaborne merchants of the eastern Mediterranean, and is totally under the control of the Corsicans.

Most of France is classified as organized (mostly by the French government/military, in some areas in the south by the *Union Corse)*, with a few areas in the mountains disputed or independent. The area west of the Rhine River and east of the old border is a combination of terrorized, insular and cantonments. *La Zone Morte* is devastated.

Scandinavia: While nothing in the Scandinavian countries was subjected to nuclear attacks, the peninsula saw considerable fighting during 1997-98 between NATO and Soviet forces. Cut off from world trade, life is becoming increasingly difficult for most Scandinavians. Most of the cities of Scandinavia are independent or insular, although broad regions in the south are organized. Areas in the north subjected to fighting during the war are either cantonments, devastated, or in anarchy.

Iberian Peninsula: Although neutral, Spain and Portugal suffered the fate handed out to France because of their ports and oil handling facilities. The central governments are both a shambles, now represented mostly by roving bands of *Guardia Civil* and army units which lead a semimarauder/extortionist existence. Gibraltar and the area within 20 kilometers of it are in anarchy; the rest of the peninsula is insular, terrorized, devastated, or independent.

Italy: Italy's oil refineries and industrial facilities were the subject of nuclear and conventional air attacks. Fighting in the Alps devastated that region, but other parts of the country are not as bad off. Although the central government continues to exist formally, in effect the army rules large sections of the country (under the authority of a martial law proclamation of 1998). There are several active insurgencies, including a royalist restoration movement.

In the north, the industrial cities are devastated or in anarchy. The more remote cities and towns are insular. Central and southern Italy consists of cantonments and independent cities.

Western Mediterranean Islands: Corsica is still nominally under the control of France, although the *Union Corse* (the Corsican criminal organization) is in complete *de facto* control of local affairs. Corsica is organized. Sardinia and Sicily are nominally governed by the central government in Rome (although in practice they are on their own). The communities of Sicily and Sardinia are insular or independent.

Smaller islands have been thrown upon their own resources (and are independent). A small seagoing trade between islands and with the European coast is threatened by the pirates operating out of the near-total anarchy that is the coast of North Africa.

Austria: The central government has vanished. Some portions of the country are occupied by foreign troops, mostly German and American, in cantonments. Other portions are under local strongmen (insular) or in anarchy.

Switzerland: Switzerland has proclaimed a state of national emergency, and has closed

British Nuclear Targets

The following British cities were subjected to nuclear attacks of greater than 0.5 Mt.

These regions are in anarchy: Aberdeen, Aldershot, Bantry Bay, Barnsley, Bedford, Birmingham, Blackburn, Bolton, Bradford, Bristol, Bury, Cardiff, Coventry, Derby, Dover, Dundee, Edinburgh, Folkestone, Glasgow, Gloucester, Grangemouth, Grimsby, Hereford, Hull, Leeds, Liverpool, London, Luton, Manchester, Milford Haven, Newport, Nottingham, Port Talbot, Rochdale, Rotherham, Sheffield, Southampton, Stockport, Swansea, Warrington, Wigan, Wolverhampton, Yeovil, York.

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its borders to refugees (although a thriving black market in manufactured goods for food is unofficially tolerated). Life for those fortunate enough to be Swiss citizens is hard, but not unbearable. Industry is still functioning on a very low level (mostly due to lack of raw materials). EMP damaged the country's hydroelectric generating capacity, and electricity is severely rationed but is still available (unlike in most of the rest of the world). The entire country is organized.

Germany: The central government has ceased to exist. Large areas are disorganized; others are controlled by foreign soldiers or local strongmen. Nevertheless, numerous German cantonments are scattered across the countryside as well, particularly along the Polish-German border.

British cantonments are concentrated around Hannover and Braunschweig, while American ones predominate in the south. The industrial regions around Augsburg and Nuremberg are devastated. The area for 50 kilometers east of the Rhine is either devastated or in anarchy. Many communities are independent or insular, especially those in the less devastated areas of the Schwarzwald, the Hartz and Jura mountains, and Rheinpfalz. The border areas with Poland and Czechoslovakia are disputed.

Poland: The central government has virtually vanished, and now controls only the city of Lublin and the surrounding area. Portions of the country are under the control of foreign military cantonments; other parts are in anarchy; and others have declared themselves to be independent. Regions between these islands of relative stability are terrorized or devastated. The industrial region in the Gliwice/Katowice/Bytom corridor is devastated. Warsaw is devastated in its core, but the suburbs are shifting to insular. Krakow is independent, as are certain cities in Silesia and Pomerania. The area in Silesia around Raciborz is organized. Pomerania is under the control of Polish military units, now largely independent of central command, and has settled into cantonments in the less damaged communities. Military presence in Poland is discussed in its own section, below.

Czechoslovakia: The central government has declared martial law and now rules through local military commanders, who have often ceased to obey orders from central authority (cantonments, with a few independent communities). Czech industry was hard-hit by the war, and portions of the border regions are occupied by foreign troops of several nationalities (disputed). Prague, Ostrava, and the industrial regions are devastated.

The Balkans

The Former Yugoslavia: The Balkan countries are in almost total anarchy. The mixed bag of cultures, languages, religions, and other divisions has yet to sort itself out and shows no sign of doing so for years. Yugoslavia in particular has ceased to exist as a nation. Serbia, Croatia, Bosnia-Hercegovenia (called Hercegovenia for short) and Slovenia are independent states and consist largely of independent, insular or cantonment regions.

Littoral communities not devastated by military action are insular, and areas around the various military cantonments are disputed. Macedonia is entirely devastated, insular, or disputed (mostly by the Greeks, Bulgarians, and Albanians).

Romania: The oil fields near Ploesti contain one of the few remaining refineries in the world, and are occupied by the last major tank force extant: the Soviet 3rd Guards Tank Army. The region counts as organized in the oil fields, cantonments around it, and disputed surrounding that.

The remainder of the country is under the control of local strongmen, resistance units, or marauder bands (independent, insular, terrorized, or devastated).

Bulgaria: Central government in Bulgaria retains control only by oppressive measures and military force (cantonments, organized). Wide bands of the country are in anarchy, nevertheless.

Hungary: The central government has declared martial law and now rules through local military commanders. The nation's borders have been formally closed to all outsiders, but a small black market trade is still carried out with the active cooperation of some military commanders. The country consists of cantonments and organized communities separated by devastated and terrorized regions.

Eastern Mediterranean Islands: Crete and Cyprus are under military occupation by the Greek and Turkish armies, respectively, although there are very strong anti-Turkish factions on Cyprus.

The communities of Cyprus are in cantonments of one side or the other, or are devastated, terrorized, or disputed. Crete has a subsistence economy; smaller islands are largely on their own.

Turkey: Central government has completely broken down in Turkey, and the primary form of government now is by local military units. Cantonments, insular, and independent regions predominate, with anarchy and devastated conditions prevailing in regions damaged during the war.



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The Military in Poland

There are still substantial, organized bodies of troops in Poland under varying degrees of central control. The following is a listing of major Eastbloc units in the area, along with their strength in combat troops and operational tanks and their approximate location. This information is provided as a general guide, and the referee should feel free to vary it as he sees fit. If more than one location is listed, the troops are spread between the two towns but are mostly concentrated in the first town mentioned. If an additional location is given in parentheses, that is the location of the unit's rear echelon (supply, medical, and maintenance services). Usually the rear echelon will have fewer than 10% of the unit's manpower.

The following abbreviations are used throughout this list: *BGB:* Border guard brigade *CD:* Cavalry division *(C):* Cavalry *GCD:* Guards cavalry division *GMRD:* Guards motorized rifle division *GTD:* Guards tank division *MarD:* Marine division *MRD:* Motorized rifle division *Pol:* Polish *Sov:* Soviet *TD:* Tank division.

NORTHERN POLAND

Baltic Front HQ: Malbork.

1st Polish Army, HQ: Gdynia.

Pol 2nd CD (200 men): Gdynia.

Pol 3rd CD (1000 men): Slupsk, Ustka (Lebork).

Pol 9th MRD (2500 men, 10 tanks): Palanow, Miastko (Bytow).

Pol 12th CD (1500 men): Koscierzyna, Gniew (Tczew).

Pol 19th CD (600 men): Malbork.

Pol 3 BGB (300 men): Gdynia.

Pol 12th BGB (400 men): Dabrowka.

2nd Polish Army, HQ: Czarnkow.

Pol 1st MRD (2500 men, 7 tanks): Czaplinek, Miroslawiec (Rusinowo).

Pol 7th MarDiv (600 men): Walcz.

Pol 17th CD (2000 men): Dobiegniew, Strzelce (Wronki).

Pol 4th BGB(C) (400 men): Walcz.

Pol 5th BGB (400 men): Czlopa.

1st Polish Tank Army, HQ: Pila.

Pol 5th TD (3500 men, 16 tanks): Podgaje, Jastrowie (Pila).

Pol 13th CD (1000 men): Chojnice, Czluchow (Sepolno).

Pol 7th BGB (100 men): Chodziez.

22nd Soviet Cavalry Army, HQ: Torun.

Sov 43rd CD (2000 men): Grudziadz, Tuchola (Chelmza).

Sov 96th CD (1400 men): Torun, Krosniewice, (Wloclawek).

Sov 89th CD (300 men): Konin, Kolo, (Sompolno).

Pol 8th BGB (200 men): Sroda, Wrzesnia.

CENTRAL POLAND

Reserve Front HQ: Lublin.

4th Soviet Guards Tank Army, HQ: Piotrkow.

Sov 20th TD (1000 men): Szadel, Uniejow (Lodz).

Sov 21st MRD (3000 men, 8 tanks): Kalisz, Ostrow (Wielun).

Sov 124th MRD (3000 men, 6 tanks): Sieradz, Zloczew (Piotrkow).

Sov 12th GTD (500 men): South of Kalisz.

Pol 10th TD (2000 men, 5 tanks): Pleszew, Kalisz.

Pol 6th BGB (400 men): Lodz, Zgierz.

Pol 11th BGB(C) (400 men): Lask.

3rd Soviet Shock Army, HQ: Legnica.

Sov 127th CD (2000 men): Glogow, Nowa Sol (Lubin).

Sov 129th MRD (3000 men, 5 tanks): Opole, Olesnica (Wroclaw).

WEST CENTRAL POLAND

1st Western Front HQ: Poznan.

1st Soviet Guards Tank Army, HQ: Skwierzyna.

Sov 9th GTD (4000 men, 24 tanks): Mysliborz.

Sov 11th GTD (500 men, 3 tanks): Gorzow Wielkop.

Sov 25th TD (1000 men, 4 tanks): Mieszkowice.

Sov 1st TD (3000 men, 9 tanks): Witnica.

8th Soviet Guards Army, HQ: Swiebodzin.

Sov 39th GMRD (3000 men, 27 tanks): Kostrzyn.

Sov 20th GCD (1000 men): Rzepin.

Sov 131st MRD (2000 men, 16 tanks): Swiecko.

SOUTHWEST POLAND

2nd Western Front HQ: Legnica.

2nd Soviet Guards Army, HQ: Gorlitz, Germany.

Sov 21st GMRD (1000 men, 5 tanks): Bautzen, Germany (Lobau, Germany).

Sov 103rd MRD (4000 men, 28 tanks): Cottbus, Germany.

Sov 117th MRD(C) (100 men): Niesky, Germany.

Sov 157th MRD (1000 men, 7 tanks): Hoverswerda, Germany.

20th Soviet Guards Army, HQ: Zielona Gora.

Sov 132nd CD (3000 men): Gubin, Krosno Orczanskie.

Sov 12th GMRD (4000 men, 32 tanks): Nowogrod.

Sov 94th CD (1000 men): Peitz, Germany.

Notes: The above listing gives rough strength in terms of numbers of men and operational tanks.

Tanks are included to roughly indicate how well equipped the unit is. A unit will also average one or two howitzers per 1000 men, although this will vary widely. Infantry will be mounted in a variety of vehicles (see the Encounters chapter).

OTHER ARMED COMBATANT FORCES

Polish 14th Motorized Rifle Division: 1500 former soldiers augmented by about 5000 local militia. The militia are purely local defense in towns and villages. Commander of the division, Colonel Julian Filipowicz, has set up an autonomous state in southern Poland which includes the territory south and west of the deserted and devastated Katowice area. There has been some skirmishing with Soviet troops and loyalist militia in Opole, but most of the 14th Division's efforts have been concentrated on increasing agricultural output.

The region was subjugated by force of arms, but there has been little internal resistance as Filipowicz has at least exterminated the marauders and kept other armed bodies from intruding. Filipowicz is brilliant but mad, a ruthless paranoid who has killed all emissaries from both sides who have attempted to open negotiations.

He has now styled himself the markgraf of Silesia and plans to increase the territory he holds north toward Czestochowa. For the moment, he will not push much to the east as he recognizes that he is not strong enough to attack Krakow, and the appearance of Soviet regulars to the west has stalled him in that direction. He knows that sooner or later the Soviets will go away, however, and is willing to wait.

Polish 1st Free Legion (Formerly 1st Border Guard Brigade): A large guerrilla force of 450 men commanded by a former sergeant in the Polish Army, S. I. Mastelarz. Mastelarz's base of operations is the town of Leszno, which is well fortified and has withstood several small assaults by Soviet regulars.

It is well protected by woods on three sides, and the approaches from the west are heavily mined. Mastelarz's guerrillas control the roads between Poznan and Glogow. He is an ardent supporter of the Polish government in exile and is intensely anticommunist. He has actively cooperated with the U.S. military government and its intelligence arm, the Defense Intelligence Agency.

The DIA has partially supplied his unit, when practical, but the grounding of the last cargo aircraft ended airdrops to him. Having recently lost his last long-range radio he is out of contact but will try to resume contact as soon as possible.

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Polish 2nd Free Legion (Formerly 10th Border Guard Brigade): The commander, Major M. K. Sikorski, is a conservative democrat who supports the Polish government in exile. He is professional and conscientious, but is rather stiff and formal and not a great inspirer of men. His nominal second in command is Major W. Anders, a former air force officer. Anders is a young firebrand, a charismatic leader who is actually Sikorski's rival for leadership in the unit. Anders is personally ambitious but lacks Sikorski's professional competence in military matters. He is repeatedly agitating for bigger actions, while Sikorski's concerns center around limiting casualties and conserving the group's resources. The men are more and more in sympathy with Anders. Anders is secretly very ambitious and hopes to carve out a feudal kingdom in west central Poland. He has no loyalties other than to himself. The group has 200 regulars but has been joined by another 100 civilian guerrillas, who are almost all loyal to Anders. The group briefly linked up with the 5th Division, and several of the best men in the unit (all Sikorski loyalists) went with 5th Division as guides. When the 22nd Soviet Cavalry Army counterattacked, the group was pushed back and is now hiding in the large forest between the towns of Czerk and Nowe, midway between Chojnice and Malbork.

Polish 8th Motorized Division: This unit no longer exists, having formed the core of the defense force of the free city of Krakow. The former division commander, Major General Zygmunt Bohusz-Szyszko, is now the city's police prefect, which gives him total responsibility for the city's impressive defenses. The 2000 regulars of the division have been broken up to form the cadres of a militia force which has a mobilized strength of 8000 men. Only about 500 men are usually active at any one time, but the rest can be called up on short notice. Krakow has about a dozen old tanks dug in around the city and has extensive minefields, barbed wire barriers, and sensing devices. It would cost the Poles and Soviets several divisions to take the city, and so far it just hasn't been worth the price.

Soviet 10th Guards Tank Division: Commanded by Major General M. Koronev, the 10th defected en masse to the western alliance three months ago. At the time, it was in a reserve position and has since been unable to effect a linkup with NATO forces. When the German 3rd Army broke through on the Baltic front, the division began moving west, but it was hit from behind by elements of the 22nd Soviet Cavalry Army. The group is now down to 300 men on foot in the forest just northwest of Warsaw. Koronev and his men defected to the civilian government of the United States, and are now accompanied by Captain B. A. Johnstone of the Central Intelligence Agency. Johnstone has convinced Koronev and his men to attempt the march south to link up with pro-U.S. (civilian government) forces in the Balkans.

Soviet 6th Guards Motorized Rifle Division: Commanded by Colonel Ya. N. Chekanov, the 6th GMRD's current strength is 1700 men and three operational tanks. An outstanding combat unit, three months ago it withdrew from the lines in the area between Frankfurt and Gorlitz, apparently without orders, and has not answered numerous radio communications from Eastbloc command. Colonel Chekanov, a competent combat officer dedicated to his troops, became sickened by the apparently endless and pointless slaughter, and has decided that his only responsibility is to save as many of his men as he can. The division is now at Walbrzych and controls the city and the surrounding forest. Chekanov passed his unit off as a regular unit of the Red Army for several weeks after arriving in the city, and by the time the local militia realized the truth, it was too late to resist. The Walbrzych militia probably could have done little in any event. Chekanov is now organizing the local inhabitants and preparing for the coming winter. He believes that there is little point in attempting to march east this year while there are so many troop movements going on, but hopes things will be easier in the spring. His troops are mostly Ukrainian, and his ultimate goal is to return to the Ukraine.

Soviet 9th Tank Division: In September of 1999, this division mutinied and killed its senior officers. The entire area between Lodz and Czestochowa is now saturated with small bands of marauders, former soldiers of the division, who spend most of their time fighting each other. Most of the towns and settlements are controlled by small bands of deserters who have set themselves up as feudal overlords. The Piotrkow militia has fought off several attacks by well armed bands, and there is little or no civilian travel through the area. The recent passage of the 4th Soviet Guards Tank Army through the northern part of the region cleaned out the marauders in Opoczno, Szczercow, and Wielun, but those towns are now weakly defended by the local militia and are ripe for raiding by bands from further south. There are a total of about 1000 marauders in the area, but they are broken up in groups of less than 100, with usually no more than approximately 10 or 20 appearing.

Soviet 38th Tank Division: Mostly a Ukrainian division with a strong anti-Russian feeling, the 38th Tank Division was the fourth division of the 4th Soviet Guards Tank Army to cross the frontier from the Lvov area to crush the 5th U.S. Division. Along the march it mutinied and murdered its senior officers. The leaders of the mutiny intended for the division to march back to the Ukraine and join the Ukrainian separatist armies there. However, once the bonds of authority were broken, the murders went on, and soon the original ringleaders were dead as well. The division broke up into bands of marauders and for the last month has been looting, pillaging, and terrorizing the triangle formed by Przemysl, Krakow, and Lublin. The Krakow defense forces have had several bloody encounters with them. Their strength at the time of the mutiny was 3000 men and 27 operational tanks. There are still probably 2500 men and a dozen tanks, although they have mostly broken up into small bands of 100 or less. One group of 300 men with eight tanks seized the city of Stalowa Wola and now holds it under a reign of terror. Many of the leading citizens and officials have been executed, and both rape and murder are commonplace.

Soviet 207th Motorized Rifle Division: There are about 300 survivors of the division in the area between Pila and Bydgoszcz. A few have turned to marauding, but most have taken refuge in the towns and villages in the area. These towns now have somewhat stronger defensive forces and are very well equipped.



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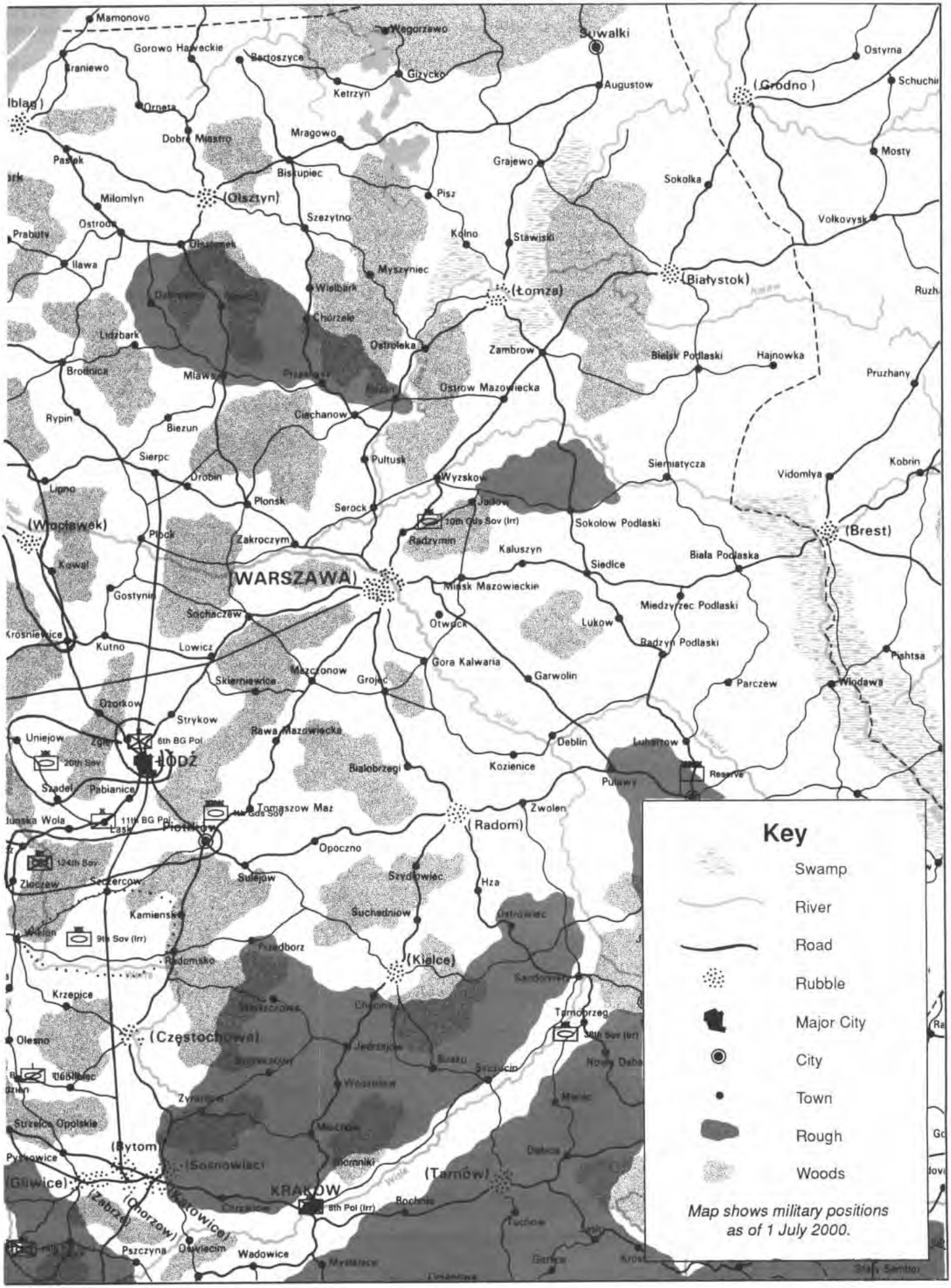

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North America

"This land called Texas is not to my liking. The summers are too dry, the insects carry pistols, and the inhabitants (human and animal alike) are uniformly hostile. I have found the purgatory Babushka used to threaten me with when I was naughty."

Diary entry of Colonel Vasily I. Sergov, Soviet Division Cuba, San Antonio, Texas

USA: The United States of America was heavily damaged by nuclear and conventional attack and was subjected to invasion by two foreign powers.

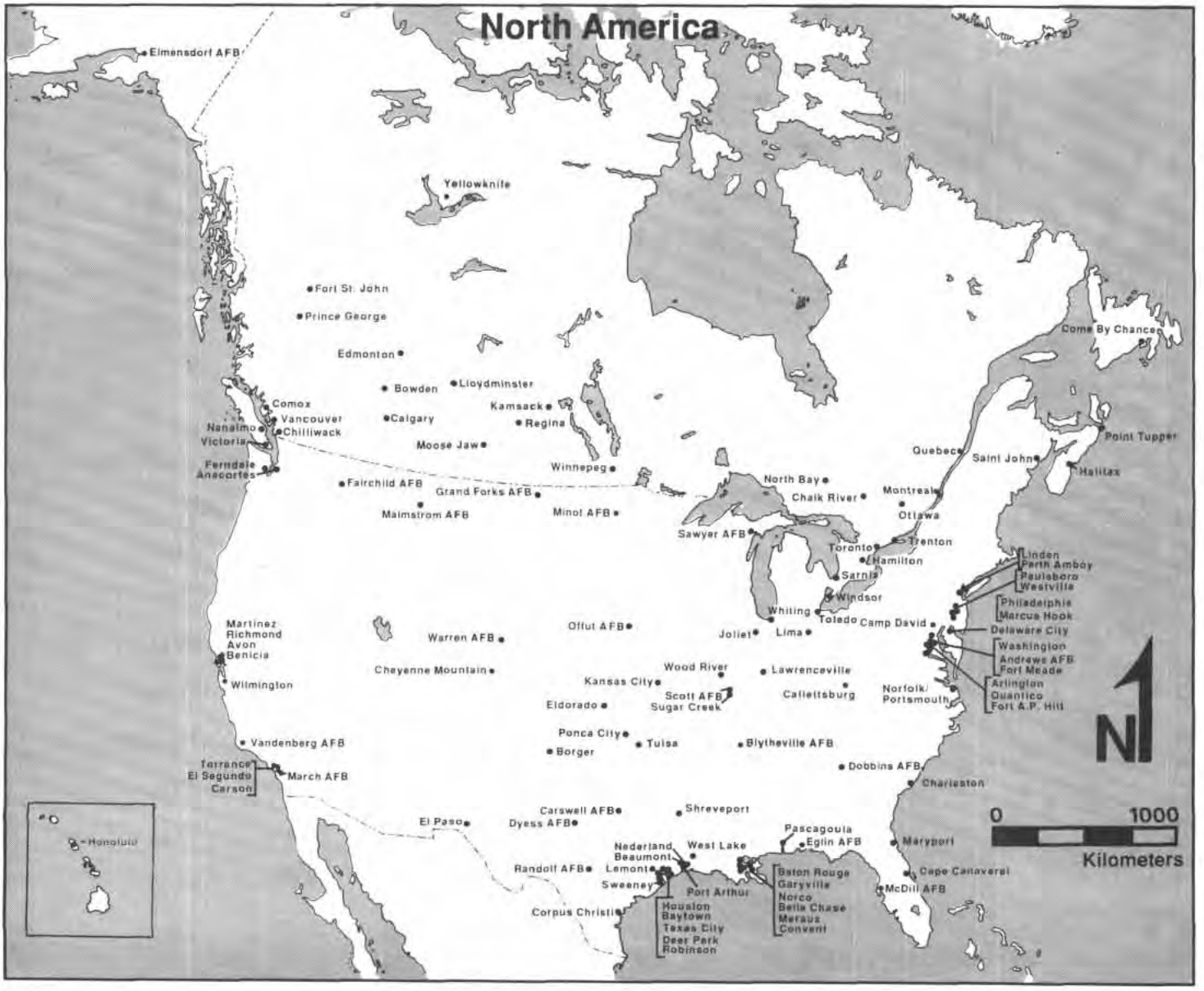
Total casualties in the nuclear attack were 135.2 million, or 52% of the population of the United States in 1997. This includes initial fatalities and subsequent deaths from injuries, in addition to deaths from disease, starvation, and civil unrest up to July 2000.

The main effect of the attack was the destruction of over 60% of the country's oil refining capacity. This, in combination with the other ensuing destruction, effectively eliminated electrical power generation and industrial facilities. Food shortages, disease, and civil unrest following the strikes destroyed American society as it existed before the war.

The federal government has split into a military and a civilian faction (called Milgov and Civgov). Milgov controls organized enclaves in the pacific Northwest, central and south-central California, Colorado, Oklahoma, the lower Mississippi River, Eastern Virginia, New Jersey, and western Massachusetts, with its capital at Colorado Springs, Colorado. These areas are fringed by cantonments and disputed regions. All nuclear target sites are ringed by devastated regions.

Civgov controls organized enclaves in Southern Georgia, the Carolinas, Iowa, the Dakotas, and northern Virginia, with its temporary capital at Omaha, Nebraska.

Numerous minor separatist movements have sprung up, particularly in the west. Vast regions of the country are under no effective central control at all, being independent, insular, organized, or even in anarchy. Soviet forces are in cantonment in parts of Alaska (south of Anchorage and in the islands southeast of Juneau) and in San Antonio, Texas. Mexican troops are in cantonments in areas of California and Texas, mixed in with American and former American military forces cantonments. The areas between these foreign military cantonments and U.S. cantonments are disputed.



Conny Delshagen (order #3265201)

U.S. Nuclear Targets

Geographic locations are given in terms of the nearest large city or the place most commonly associated with a particular target. Ground zero can be quite some distance from the center of the community listed. State abbreviations are conventional; AFB stands for air force base.

Elmensdorf AFB, AK: Alaskan Air Command Headquarters (1 Mt).

Blytheville AFB, AR: 42nd Air Division Headquarters, 97th Strategic Bombing Wing (1 Mt).

El Segundo, CA: Oil refining and storage facilities (1.75 Mt).

Richmond, CA: Oil refining and storage facilities (1.5 Mt).

Carson, CA: Oil refining and storage facilities (.75 Kt).

Avon, CA: Oil refining and storage facilities (.5 Mt).

Torrance, CA: Oil refining and storage facilities (.5 Mt).

Wilmington, CA: Oil refining and storage facilities (1.25 Mt).

Benicia, CA: Oil refining and storage facilities (.5 Mt).

Martinez, CA: Oil refining and storage facilities (.5 Mt).

Vandenberg AFB, CA: Recon satellite launch facilities (1 Mt, ground burst).

March AFB, CA: 15th Air Force Headquarters (1 Mt).

Cheyenne Mountain, CO: North American Air Defense Command (NORAD) Headquarters (3 Mt, ground burst).

Delaware City, DE: Oil refining and storage facilities (.75 Mt).

Dobbins AFB, GA: Air Force Reserve Headquarters (.5 Mt).

McDill AFB, FL: Central Command Headquarters (1 Mt).

Eglin AFB, FL: 1st Special Operations Wing (1 Mt).

Kennedy Spaceflight Center, Cape Canaveral, FL: Recon satellite launch facilities (1 Mt, ground burst).

Maryport, FL: Port facilities severely damaged by near miss (.5 Mt, offshore).

Honolulu, HI: Pacific Command Headquarters (1 Mt).

Scott AFB, IL: Military Airlift Command (MAC) Headquarters (.5 Mt).

Wood River, IL: Oil refining and storage facilities (1.5 Mt).

Joliet, IL: Oil refining and storage facilities (1 Mt). The army munitions plant near ground zero also took severe damage.

Lawrenceville, IL: Oil refining and storage facilities (.5 Mt).

Whiting, IN: Oil refining and storage facilities (1.75 Mt).

Catlettsburg, KY: Oil refining and storage facilities (.75 Mt).

Eldorado, KS: Oil refining and storage facilities (.5 Mt).

Kansas City, KS: Oil refining and storage facilities (.5 Mt).

Baton Rouge, LA: Oil refining and storage facilities (1.5 Mt).

Garyville, LA: Oil refining and storage facilities (.75 Mt).

Norco, LA: Oil refining and storage facilities (1 Mt).

Belle Chase, LA: Oil refining and storage facilities (.75 Mt).

Convent, LA: Oil refining and storage facilities (.75 Mt).

West Lake, LA: Oil refining and storage facilities (.5 Mt).

Meraux, LA: Oil refining and storage facilities (.25 Mt).

Shreveport, LA: Industrial facilities (250 Kt).

Washington, DC: Presidential shelter at the White House (.25 Mt, ground burst).

Andrews AFB, MD: Presidential Emergency Facility (.5 Mt, ground burst).

Fort Meade, MD: Presidential Emergency Facility (.5 Mt, ground burst).

Camp David, MD: Presidential Emergency Facility (.5 Mt, ground burst).

Sawyer AFB, MI: 40th Air Division Headquarters (.5 Mt).

Pascagoula, MS: Oil refining and storage facilities (1.25 Mt).

Sugar Creek, MO: Oil refining and storage facilities (.5 Mt).

Malmstrom AFB, MT: 341st Strategic Missile Wing (1.25 Mt).

Offut AFB, NB: Strategic Air Command (SAC) Headquarters, 95th Strategic Recon Wing (SR71), 544th Aerospace Recon Technical Wing (1.5 Mt).

Linden, NJ: Oil refining and storage facilities (1.25 Mt).

Perth Amboy, NJ: Oil refining and storage facilities (1 Mt).

Paulsboro, NJ: Oil refining and storage facilities (.5 Mt).

Westville, NJ: Oil refining and storage facilities (.5 Mt).

Grand Forks AFB, ND 321st Strategic Missile Wing, 319th Strategic Bombing Wing (1.25 Mt).

Minot AFB, ND: 57th Air Division Headquarters, 91st Strategic Missile Wing, 5th Strategic Bombing Wing (1.5 Mt, some ground bursts).

Lima, OH: Oil refining and storage facilities (.75 Mt).

Toledo, OH: Oil refining and storage facilities (1.75 Mt).

Ponca City, OK: Oil refining and storage facilities (.5 Mt).

Tulsa, OK: Oil refining and storage facilities (.5 Mt).

Philadelphia, PA: Oil refining and storage facilities (1.75 Mt).

Marcus Hook, PA: Oil refining and storage facilities (1.5 Mt).

Charleston, SC: SSBN support base and port facilities (.5 Mt).

Baytown, TX: Oil refining and storage facilities (2 Mt).

Port Arthur, TX: Oil refining and storage facilities (3 Mt).

Texas City, TX: Oil refining and storage facilities (1.5 Mt).

Beaumont, TX: Oil refining and storage facilities (1.5 Mt).

Houston, TX: Oil refining and storage facilities (1.5 Mt).

Deer Park, TX: Oil refining and storage facilities (1.25 Mt).

Robinson, TX: Oil refining and storage facilities (.75 Mt).

Corpus Christi, TX: Oil refining and storage facilities (1 Mt).

Lemont, TX: Oil refining and storage facilities (.75 Mt).

Nederland, TX: Oil refining and storage facilities (.5 Mt).

Sweeney, TX: Oil refining and storage facilities (.5 Mt).

Borger, TX: Oil refining and storage facilities (.5 Mt).

El Paso, TX: Oil refining and storage facilities (.25 Mt).

Carswell AFB, TX: 7th Strategic Bombing Wing (.5 Mt).

Dyess AFB, TX: 12th Air Division Headquarters (.5 Mt).

Randolf AFB, TX: Air Training Command Headquarters (.25 Mt).

Arlington, VA: The Pentagon (.5 Mt, ground burst).

Quantico, VA: Presidential Emergency Facility (.5 Mt, ground burst).

Fort A. P. Hill, VA: Presidential Emergency Facility (.5 Mt, ground burst).

Norfolk/Portsmouth, VA: Atlantic Command Headquarters, port and facilities (1 Mt).

Ferndale, WA: Oil refining and storage facilities (.5 Mt).

Anacortes, WA: Oil refining and storage facilities (.5 Mt).

Fairchild AFB, WA: 47th Air Division Headquarters (.5 Mt).

Warren AFB, WY: 4th Air Division Headquarters (1 Mt).

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Canada: Canada suffered 13.1 million fatalities (or 45% of Canada's population in 1997) due to the nuclear attack. This total includes both initial fatalities and those caused by injuries received in the attack, received as a result of various disease epidemics which started shortly after the attack, and those incurred in the widespread anarchy in Canada up to November 2000.

A major part of Canada's petroleum refining capability was destroyed in the attack. This, in addition to attack-related damage and civil dislocation, effectively destroyed electrical power generation, the electrical distribution net, and food production and distribution. Food shortages, disease, and the anarchy created by the attack destroyed Canadian society and tore the country apart. Martial law is in effect nationwide, although it is far from being in force. Various warlords and self-appointed "governments" reign in many areas.

The province of Quebec formally declared its independence from the Ottawa government after the nuclear strikes and established a provisional capital at Sherbrook. The capital was relocated to Quebec City shortly thereafter.

Much of southern Quebec is now in cantonment or is insular, with a small areas around Quebec City being organized. Northern Quebec is not under any government control, and local villages have been thrown back on their own devices (independent, insular). Areas along the border between Quebec and Ontario are in dispute.

Canadian Nuclear Targets

The following areas were subjected to nuclear strikes (provincial abbreviations are standard):

Bowden, Alta: Oil refining and storage facilities (500 Kt).
Calgary, Alta: Oil refining and storage facilities (1 Mt).
Edmonton, Alta: Oil refining and storage facilities (1 Mt).
CFB Chilliwack, BC: Staging area for Canadian and American troops (750 Kt).
CFB Comox, BC: Staging area for Canadian and American aircraft (750 Kt).
Fort St. John, BC: Oil refining and storage facilities (750 Kt).
Nanaimo, BC: Parliamentary Emergency Facility (500 Kt, ground burst).
Prince George, BC: Oil refining and storage facilities (500 Kt).
Vancouver, BC: Oil refining and storage facilities (1 Mt).
Victoria, BC: Provincial capital/Maritime Forces Pacific Headquarters (1.5 Mt).
Winnipeg, Man: Training Command Headquarters (750 Kt).
Saint John, NB: Oil refining and storage facilities (1 Mt).
Come By Chance, NFLD: Oil refining and storage facilities (750 Kt).
Halifax, NS: Oil refining and storage facilities/Maritime Command Headquarters (1.5 Mt).
Point Tupper, NS: Oil refining and storage facilities (750 Kt).
Chalk River, Ont: Nuclear electrical power plant (500 Kt).
Hamilton, Ont: Industrial facilities (1 Mt).
North Bay, Ont: Air Defense Command Headquarters (750 Kt).
Ottawa, Ont: Canadian Forces Headquarters/Communications Command Headquarters (1.5 Mt).
Toronto, Ont: Oil refining and storage facilities (2 Mt).
Trenton, Ont: Air Transport Command Headquarters (750 Kt).
Sarnia, Ont: Oil refining and storage facilities (1.75 Mt).
Windsor, Ont: Industrial facilities (1 Mt).
Montreal, PQ: Oil refining and storage facilities/Mobile Command Headquarters (2 Mt).
Quebec, PQ: Oil refining and storage facilities (1 Mt).
Kamsack, Sask: Oil refining and storage facilities (750 Kt).
Lloydminster, Sask: Oil refining and storage facilities (750 Kt).
Moose Jaw, Sask: Oil refining and storage facilities (1 Mt).
Regina, Sask: Oil refining and storage facilities (1 Mt).
Yellowknife, YT: Northern Region Headquarters (500 Kt).



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The Canadian military controls most of Ontario and various cantonments scattered throughout the rest of the country under authority of a proclamation of martial law. Alberta is effectively independent, and Saskatchewan is in disorder, being infested with marauders and split into insular communities.

Soviet troops control Princess Charlotte Island, to the dismay of the local inhabitants (the islands count as terrorized).

Mexico: Pemex refineries were among the first to be hit by nukes (as part of the destruction of neutral nations' refining capacities, to deny their use to the enemy). In an attempt to distract domestic critics from internal problems, the ruling PRI (*el Partido Revolicionario Institucional*, the Institutional Revolution Party) and PPS (*el Partido Popular Socialista*, Popular Socialist Party) coalition in Mexico took advantage of the alleged American mistreatment of Mexican refugees as an excuse to start a war with the *gringos.* The intended distraction did not work, and as the war ground to a standstill, the army and internal opposition revolted against the coalition in Mexico City.

Mexico is now divided into various regions, each loyal to one of four different contenders in the Mexican Civil War of 1999. The large cities, the mountain regions, and the jungles are in a state of anarchy. Army units of mixed (or no) political loyalty occupy cantonments in Mexico and in the United States, surrounded by disputed regions. Insular communities are strung out along the Pacific and Caribbean coasts, eking out a sparse existence by subsistence agriculture and deep-sea fishing.

Asia

China: China was subjected to nuclear and conventional attacks by the Soviet Union, and central government has ceased to exist. Local government is now largely in the hands of warlords, some of them former military commanders (and most of them Chinese). Soviet troops have established numerous quasi-independent cantonments in the area from Manchuria west to the Gobi Desert. Tibet is effectively independent and is largely organized under local warlords. The industrial cities of the east and the coastal ports were also heavily damaged, and are destroyed or in anarchy. The fertile river valleys are organized; the mountain and nomadic communities of the west are independent or insular.

Japan: The war with the Soviets over Sakhalin Island and the Kuriles brought Japan under nuclear attack in late 1997. Japanese industry was heavily damaged, and Tokyo was all but destroyed. Martial law was never formally proclaimed, but most areas are governed by military officers who hold both civil and military positions. Each community counts as insular or independent, although they all are nominally under central control. The large cities are devastated, mostly from the civil unrest that followed the breakdown of the world economy and the cessation of foreign imports.

India/Pakistan: The war between India and Pakistan resulted in an exchange of nuclear devices which effectively destroyed central government in both nations. Massive civilian casualties and the total breakdown of government and society have resulted in what is perhaps the most devastated area on earth. Local despots rule the remaining areas of agricultural potential, and life is nasty, brutish and short in the less damaged regions—it is nonexistent in the war zones.

Korea: The newly reunified Republic of Korea came to the assistance of the Chinese early in the war and was subjected to limited nuclear attacks by the Soviets. Although the capital at Seoul was destroyed and several ports were severely damaged (they are now devastated), most of the rest of the country is organized under martial law, and is an island of stability in a sea of disorganization. Resuming its reputation as the "Hermit Kingdom," Korea is now extremely xenophobic and distrustful of strangers.

Indochina: Indochina was invaded by the Chinese as it became apparent that the Soviets planned to use Cam Ranh Bay as a base against them, but they were rapidly thrown back by the Vietnamese Army (which took considerable casualties). Cam Ranh Bay and Haiphong were the targets of nuclear attacks and were devastated. Most of the coastal communities are independent or insular under local warlords. A resurgent Khmer Rouge is active in Cambodia against the remnants of the Vietnamese Army (the country is mostly cantonments and disputed, with areas recently under Khmer Rouge in a terrorized state). Thailand was largely untouched by the war and remains militarily strong, but incredibly corrupt (organized).

Afghanistan: Afghanistan is in civil disorder, and any central government has ceased to exist. Local strongmen rule the country from local cantonments, enforcing their will with brute force. The countryside is made up of a scattering of insular communities in a sea of devastation and chaos.

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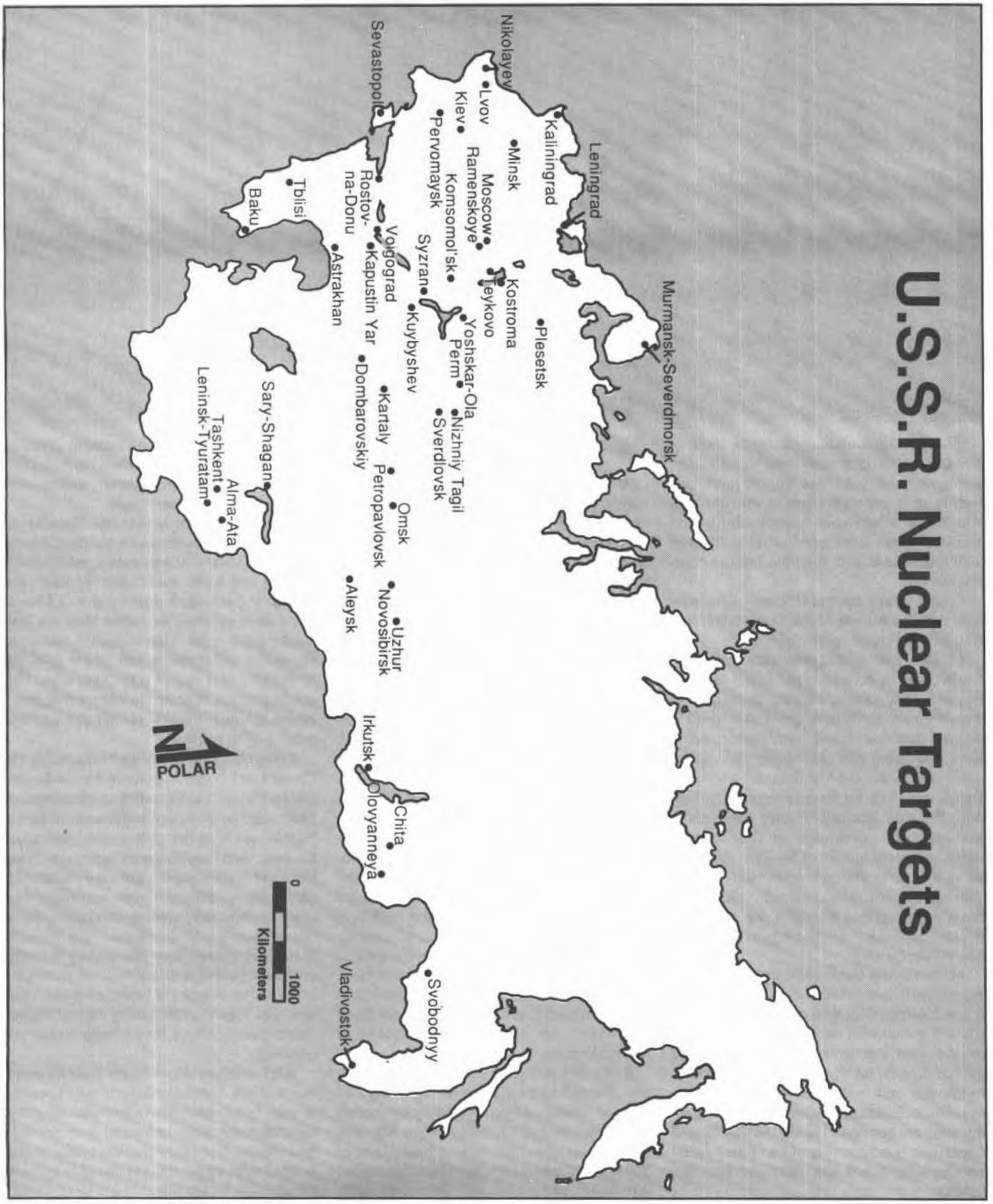

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U.S.S.R. Nuclear Targets

Moscow, RSFSR: Moscow Military District HQ, Moscow Air Defense District HQ (6×500 Kt).

Leningrad, RSFSR: Leningrad Military District HQ, Leningrad Military Production Center (900 Kt).

Kiev, UkSSR: Kiev Military District HQ, Kiev Military Production Center (500 Kt).

Sverdlovsk, RSFSR: Ural Military District HQ, Ural Military Production Center (1 Mt).

Tblisi, GSSR: Transcaucasus Military District HQ, petroleum production and refining facilities, Su-25 airframe plant (900 Kt).

Baku, ASSR: Baku Air Defense District HQ, petroleum production and refining facilities (1.8 Mt).

Minsk, BSSR: Byelorussian Military District HQ, Byelorussian Military Production Center (900 Kt).

Tashkent, UzSSR: Turkestan Military District HQ, Southern TVD HQ (500 Kt).

L'vov, UkSSR: Carpathian Military District HQ (600 Kt).

Alma-Ata, KSSR: Central Asian Military District (500 Kt).

Rostov-na-Donu, RSFSR: North Caucasus Military District HQ, North Caucasus Military Production Center (1 Mt).

Novosibirsk, RSFSR: Siberian Military District (500 Kt).

Chita, RSFSR: Transbaikal Military District HQ, Transbaikal Military Production Center (500 Kt).

Kuybyshev RSFSR: Volga Military District HQ, Volga Military Production Center, petroleum production and refining facilities (3 Mt).

Plesetsk, RSFSR: Recon satellite launching facilities (1 Mt).

Leninsk-Tyuratam, KSSR: Recon satellite launching facilities (2 Mt).

Kapustin Yar, RSFSR: Secondary satellite launching facilities (500 Kt).

Ramenskoye, RSFSR: Aircraft test facilities (300 Kt).

Sary-Shagan, KSSR: Advanced weapons research facility (2 Mt).

Murmansk-Severdmorsk, RSFSR: Red Banner Northern Fleet HQ, SLBM storage center, naval storage base (1.5 Mt).

Kaliningrad RSFSR: Baltic Fleet HQ (300 Kt).

Sevastopol, UkSSR: Black Sea Fleet HQ, port and warship construction facilities (1 Mt).

Nikolayev, UkSSR: Port and warship construction facilities (1 Mt).

Vladivostok, RSFSR: Pacific Fleet HQ (1.8 Mt).

Komsomol'sk, RSFSR: Komsomol'sk Military Production Center (1 Mt).

Petropavlovsk, RSFSR: Submarine base SLBM storage center (2 Mt, ground burst).

Pervomaysk, UkSSR: SS-19 ICBM Complex HQ (2 Mt, ground burst).

Teykovo, RSFSR: SS-27 ICBM Complex HQ (2 Mt, ground burst).

Kostroma, RSFSR: SS-17 ICBM Complex HQ (2 Mt, ground burst).

Dombarovskiy, RSFSR: SS-18 ICBM Complex HQ (2 Mt, ground burst).

Kartaly, RSFSR: SS-18 ICBM Complex HQ (2 Mt, ground burst).

Aleysk, RSFSR: SS-18 ICBM Complex HQ (2 Mt, ground burst).

Uzhur, RSFSR: SS-18 ICBM Complex HQ (2 Mt, ground burst).

Olovyanneya, RSFSR: SS-26 ICBM Complex HQ (2 Mt, ground burst).

Svobodnyy, RSFSR: SS-26 ICBM Complex HQ (2 Mt, ground burst).

Yoshskar-Ola, RSFSR: SS-25 ICBM Complex HQ (2 Mt, ground burst).

Perm, RSFSR: SS-26 ICBM Complex HQ (2 Mt, ground burst).

Volgograd, RSFSR: Petroleum production and refining facilities, Volgograd military production center (1.5 Mt).

Astrakhan, RSFSR: Petroleum production and refining facilities (900 Kt).

Nizhniy Tagil, RSFSR: Military production center (1 Mt).

Syzran, RSFSR: Petroleum production and refining facilities (1 Mt).

Omsk, RSFSR: Transportation hub (500 Kt).

Irkutsk, RSFSR: Petroleum production and refining facilities (1.5 Mt).

Abbreviations: *RSFSR:* Russian Soviet Federated Socialist Republic *UkSSR, KSSR, GSSR, ASSR, BSSR, UzSSR:* Ukrainian, Kazakh, Georgian, Azerbaijan, Byelorussian, and Uzbek Soviet Socialist Republic, respectively.

USSR: The war completed a process of disintegration which had begun almost a decade before. The vast distances involved made it almost impossible for a central government to remain in control after the nuclear strikes of late 1997.

The areas in the list above were subjected to nuclear attacks in excess of 0.5 Mt.

The whole of the Caucasus is effectively independent of Moscow, as are the Central Asian republics and the Baltic states. No government above the local community level exists more than a couple of hundred kilometers east of the Urals. Local industrial centers in Siberia such as Novosibirsk remain organized; the rest of Siberia is wide open. In the Ukraine, the city of Kiev is still loyal to Moscow, as are numerous smaller cantonment communities, but they are submerged in a sea of antigovernment activity (most of the rest of the Ukraine is disputed or terrorized).

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Middle East

Iran: The Kurds, Baluchis, and Armenians are effectively independent. The remainder of the country is in anarchy because of military activity involving the U.S. and the Soviets (who retain cantonments and small organized regions in the south and north respectively).

Israel: A central government remains in control (organized, cantonments), but the shaky peace between various factions (both religious and political) is beginning to fall apart under the strain of the postwar chaos.

Arabia: Although many of the oil refineries of the Arabian Peninsula are destroyed, a few remain operational (although at less than 10% of their prewar capacity). The coastal cities are organized; the inland deserts are in anarchy.

The governments of other nations in the region have been placed under severe strain, and several have lost effective control. In all cases, governments have been forced to take extreme measures to remain in power, and it is an open question how long this situation can continue before something cracks.

Africa

Except for petroleum-producing areas, the bulk of the continent escaped the war, but prewar events combined with global chaos have taken their toll. The artificial borders imposed on tribal and cultural groups by colonial powers over a century before have largely vanished, and subsaharan Africa has split into myriad small feuding tribal and quasi-tribal groups. These areas are a mixture of organized, independent, insular and anarchy, with areas between them disputed, terrorized, or devastated.

The nations of the Mediterranean coast have submerged into almost complete devastation and anarchy. The closest things to government in this area are the small city-state groups clustered around harbors, which serve as cantonments/bases for the merchants-cum-pirates who have begun to infest the western Mediterranean. A few oil wells in north Africa are still producing a trickle of oil, but no one is really in a position to exploit them, and no sizable refinery exists closer than Romania.

Central And South America

The oil-producing areas of the Caribbean were severely damaged by nuclear and/or conventional attacks, largely in an effort to deny them to the enemy. The war and the global depression have removed all outside influences in the region, and civil wars have been the result in practically every country. Guerrilla organizations such as the Shining Path in Peru have taken advantage of the chaos to attempt coups in their respective countries—some with success.

Cuba: Upon the retirement from office of Fidel Castro in the mid-1990s, the more moderate Miguel Hernandez took his place. When the Sino-Soviet War began, Hernandez gave his verbal support to the U.S.S.R. When German troops entered Poland, the Cubans became increasingly nervous and began to fear that Soviet troops remaining on the island might make them a target for the United States' wrath. In 1998, with the election of a partly Marxist PRI/PPS coalition in Mexico, the opportunity for the Cubans to get rid of their guests and the opportunity for the



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Soviet "Division Cuba" (as it had come to be called) arrived. The PPS offered Division Cuba passage back home in return for a short detour, and the Cubans happily consented.

Cuba's ports and oil processing centers were the subject of military action in 1998-1999, but the worst internal problems came with the desertion of the cities by the panicking urban populace in 1998. After a period of chaos, Cuba reorganized itself into a repressive, but functional, regime bent upon national survival. The country is organized, except for the cities, which are devastated or in anarchy. As a point of minor interest, Guantanamo was evacuated by U.S. troops in 1999, and reclaimed by the Cuban military within days. It remains a major military cantonment.

Nicaragua: Nicaragua escaped the war undamaged, but the economic chaos has taken its toll. Although the central government is a westward-leaning democracy, it has been forced into increasingly repressive measures to keep order (organized, with small areas in anarchy or disputed in the mountains).

Argentina/Brazil: The Argentineans attempted to reoccupy the Falklands/Malvinas after 1996, and the British were unable to spare more than a token force for the islands' defense. Argentina itself withdrew when war broke out with Brazil in 1998, and a small-scale exchange of low-yield nuclear weapons between the two countries completed their slide into chaos. Central government in both countries has broken down, and both are now divided into semifeudal territories ruled by military juntas or local community governments.

Other Nations: The interior of the Amazon is total anarchy, the coastal communities are largely insular, and the industrial cities are devastated. Peru is under martial law (cantonments/insular/terrorized) or the control of the Shining Path (cantonments/disputed, terrorized). Columbia, Equador, Chile, and the other nations are a mixture of organized, insular, terrorized, disputed, and anarchy.

Australia

Australia was largely untouched by the nuclear exchange, but the global panic which followed left its mark on both the cities and outback. Large parts of the countryside are now in anarchy, terrorized, or insular, but the major cities are organized and controlled by the central government. A short war was fought with Indonesia after it invaded Australia's ally, Papua New Guinea. The Indonesian offensive quickly halted, mostly due to logistical collapse, but not before a majority of Australia's and Indonesia's modern aircraft and naval vessels had been damaged or destroyed in a series of running aeronaval actions.

Pacific Islands

Aside from the strike on the Hawaiian Islands and one or two targets of strategic importance, the Pacific islands were not directly damaged by the war. Conditions on most islands aren't bad, but several are severely overpopulated for their food production capacity, and a demographic shakeout of massive proportions is in the offing (although the actual numbers are small on a global scale). Most islands are organized (Carolines, Marshalls), terrorized (Hawaii, Tahiti), or in anarchy (Oahu, where Honolulu was near a nuclear strike) depending on the prewar demographics.



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Environmental Hazards

Given the fact that the world has gone through a major nuclear exchange and a total breakdown of sanitation and public health, just walking around can be dangerous, even when nobody is shooting at you.

RADIATION

Nature has a way of repairing itself, and two years after a major nuclear exchange most of the severe radiation hazards will be gone. The most dangerous areas are the actual blast craters of warheads that, by accident or design, detonated following a ground strike. Since most weapons achieve their best destructive effects from air bursts, ground strikes would be rare if not for the sheer volume of warheads exchanged.

On a D10 roll of 5 or less, a major city will contain 1D6 impact craters. On a D10 roll of two or less, a city will contain one impact crater. Occasionally, craters are found in the countryside, the site of a tactical strike against an army unit, and the crater may have derelict (and radioactive) vehicles and equipment nearby. Most craters are due to tactical and small strategic nuclear weapons, although an occasional crater, usually in a major city, is due to a larger strategic nuclear weapon.

For tactical and small strategic weapons with yields ranging from 100 to 750 kilotons, the apparent impact crater is about 100 to 400 meters in diameter and is 20 to 70 meters deep. For larger strategic devices with yields ranging from one to 10 megatons, the apparent crater is from 200 to 800 meters in diameter and from 50 to 150 meters in depth. The term "apparent" is used deliberately; it refers to the diameter of the apparent (visible) crater. An area of about twice the visible diameter has been completely shifted and disrupted and is as radioactively dangerous as the visible crater itself.

In the two years following the strikes, erosion has reduced the apparent diameter to some extent and has reduced the depth considerably. Many smaller craters are shallow depressions in the ground, but the lack of vegetation should alert characters to the potential danger if they do not have Geiger counters or other radiation-monitoring equipment.

Every impact crater had an initial radiation level of about 6000 rads, an immediately fatal dosage. However, most radioactive contamination quickly falls off over time, and the main danger from the impact crater will be from heavily irradiated metal remaining in the crater area. A character in a crater area suffers 1D6 rads per minute. If he is riding in an open vehicle, this is reduced by half, and if he is riding in an enclosed armored vehicle, it is reduced by a factor of 10. If he is travelling in a radiologically shielded vehicle, it is reduced by a factor of 100. The type of NBC protection a vehicle provides (Open, Enclosed or Radiologically Shielded) is noted on that vehicle's data card. The referee may choose to ignore the accumulation of fractional rads.

Effects of Exposure: Exposure to lower levels of radiation will produce temporary illness, while higher levels can kill. All exposure is cumulative. When a character's accumulated rads reach or surpass 50, he must be checked for radiation illness. Thereafter, each time the character accumulates one or more rads he must be checked for radiation illness. However, the character is checked for radiation illness only once per day on each day that he accumulates additional rads.

The Radiation Illness Chart on page 243 gives the multipliers used to determine the chances of illness and death from exposure



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to radiation. The character uses the rad level on the chart that is closest to (without exceeding) his accumulated rad level. For example, characters with rad levels of 75 and 99 use the 50 line, while a character at 802 uses the 800 line. Possible effects are checked for in the following order: death, serious illness, slight illness. There is no need to roll for a lesser effect if a more serious effect is achieved. A dash (—) on the chart means the effect does not apply at that rad level.

"Auto" means that this effect automatically applies if the character manages to avoid a higher effect.

Radiation Illness

Rads	*Slight Illness*	*Serious Illness*	*Death*
50	1.0	—	—
100	0.5	1.0	—
300	0.2	0.5	1.0
400	Auto	0.2	0.5
600	Auto	Auto	0.2
800	Auto	Auto	Auto

Multiply the character's Constitution by the multiplier to determine his target number (round fractions up). Roll 1D10. If the number rolled is equal to or less than the chance, the character avoids the effect. Otherwise, he is affected.

For example, a character (Constitution of 6) has a rad level of 75 and must check for radiation illness. The 50 rads line is used, and there is no chance for death or serious illness at this level.

However, slight illness is possible, and the character must roll 6 (1×6) or less to avoid it. On another day, however, the same character receives an additional 400 rads and must roll again. His total rads now equals 475, and he uses the 400 line. Checking first for death, he must roll 3 (0.5×6) or less. He rolls a 2, and escapes the effect. To avoid a serious illness, he must roll 2 or less (0.2×6=1.2, rounds up to 2). He rolls a 7, and fails. Note that he could not have avoided slight illness.

The referee checks for radiation illness for the character but does not inform the player of the result. Instead, the referee informs the player of his character's symptoms as they occur.

Slight Illness: The character suffers nausea, vomiting, and headaches. Onset is 1D6 hours after exposure. The character has Strength, Agility, and Intelligence halved for the duration of illness. Symptoms will last for one day at lower exposure levels, two days if exposure is 600 rads or higher.

Serious Illness: The character first suffers slight radiation illness, as described above. Then he suffers serious radiation illness and is incapacitated, with severe vomiting and diarrhea, spotting on the body caused by bleeding under the skin, and blood in the stool and vomit. Onset of serious illness is 2D6 days after exposure at levels of 300 rads or less, 1D6 days at levels above that. (Note that the character usually will recover from slight radiation illness before suffering from serious radiation illness.)

Incapacitation lasts 1D6 days, plus one day for every two days spent without bed rest and medical care. The amount of medical care required is the same as for a character with a serious wound to two body parts—or two additional body parts if the character is already wounded (see page 211). General illness, approximating the effects of slight illness listed above, will persist for 1D6 weeks.

Death: The character first suffers from slight radiation illness and then from serious radiation illness (both as described above). During the incapacitation period (and usually within 30 days of exposure) the character dies.



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DISEASE

One of the most important scenario generators in **Twilight: 2000** is the prospect of serious disease. Villagers seeking a doctor for some epidemic ravaging them, a character with bubonic plague looking for antibiotics, a child cured of disease by a character, thus gaining that character respect and trust among the locals—all of these can provide a starting point for an adventure or serve as a subplot to an existing one. For this reason, we present diseases in a fair amount of detail.

The three ways to contract diseases in **Twilight** are as a result of an encounter with people, as a result of an animal encounter, and as a result of drinking contaminated water.

Each time one of the above is encountered, roll 2D6. The disease tables define the required die roll, or higher, which indicates the presence of a disease in the various encounter situations. The referee may dispense with checking for disease as circumstances dictate. A brief encounter with a pair of hunters is usually too short to allow disease to spread.

People: Most diseases occurring through contact with people are spread through contaminated food and water or by close contact with a carrier (who may not necessarily show symptoms of the disease). In some cases, individual communities of people may develop partial or total immunities to one or more diseases which do not then affect them, but which have devastating effects on strangers who have not built up such immunities.

For the purposes of disease, there are two types of people: those who live in settlements and those who do not. People in settlements usually use preventative sanitation, while people living in encampments are less likely to have good sanitation procedures. The referee determines which type of people are met for each encounter, according to his judgment. Refugees and stragglers usually use the Encampment Diseases Table on page 274, while merchants and army groups usually use the Settlement Diseases Table on page 274. Marauders and hunters have good chances of being from either. Also, people receiving good medical or biological advice tend to take care of health and sanitation matters. If such advice is judged present, an encampment may be treated as a settlement and a settlement may be treated as disease-free.

If the characters notice the presence of disease in people in time, they can avoid contact and thus chance of catching the disease. Noticing is Average: Medical (Diagnosis) or Biology.

Example: The characters spend eight hours in a village, dickering over the purchase of supplies. The referee rolls 2D6 to determine if disease is present (getting a 12, indicating that it is). The referee rolls a D10 to see what disease is present, and gets a 6, indicating cholera.

Animals: Contact with diseased animals can come from acquiring draft animals or through hunting. If the presence of disease is noted in time, contact and thus disease may be avoided—Average: Medical (Diagnosis) or Biology. When hunting this task is Average: Tracking. Consult the Animal Diseases Table on page 274.

Water: This encounter includes only water consumed away from a settlement. It encompasses water from rivers, streams, lakes, springs, abandoned wells, and so on. If contamination is noticed, the characters may choose not to drink the water (or may boil it before doing so) and thus avoid disease. This task is Average: Survival or Medical (Diagnosis) or Biology.

If the characters do not avoid contact with the disease, the referee uses the Contaminated Water Table on page 274 to determine which disease it is.

Infection: Once the disease has been determined, the referee must decide who among the PCs' group is vulnerable to the disease and whether any character contracts the disease. The referee should consult the de-

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scription of the disease to determine how it is spread and compare this with the group's particular vulnerabilities. A disease spread by tainted food is not spread to those who don't eat the food, and one spread by contact doesn't affect those who do not make contact with the victim. A disease spread through the air places all characters within range at risk. In the example indicated on page 244, if none of the characters eat or drink while in the village, they will not be exposed.

The characters must roll Average: Constitution to avoid contracting the disease. The success roll is modified as follows: One is subtracted for each fatigue point at the time of exposure, and the disease's infection number is also subtracted.

If a character contracts a disease, the referee then informs the character (after the correct incubation period has passed) of the symptoms of the disease. The character (or another character) may then attempt to diagnose and treat the disease.

Example: Monk, during one of his scouting missions, comes across a spring which the referee has previously determined is contaminated by dysentery. Monk fails his roll to notice the presence of the disease and fills his canteen. During the next few days, he shares his water with no one else, and thus does not infect anyone but himself. Monk's Constitution is 6, his fatigue level at the time is 2 (–2), and the infection number is 3, making the chance to avoid infection 1 (6–2–3). He rolls 4 and is infected. The incubation period is two days, and symptoms appear then.

Diagnosis: Diagnosis is a task, using Medical (Diagnosis) skill. The difficulty depends on the disease. This difficulty given is for Phase I of the disease; Phase II is one level easier (since the symptoms are more advanced). Failure to diagnose a disease properly results in a misdiagnosis. The referee does not tell the players the difficulty or success/failure of the task, only the disease diagnosed or misdiagnosed.

Example: Monk complains to Wood of abdominal pain and diarrhea. The referee rolls for Wood's diagnosis of Monk's disease. The result of 20 indicates an automatic failure, and a misdiagnosis of cholera. Wood initiates the appropriate treatment for cholera (see the cholera entry).

Recovery: To recover from a disease, a character must make a *D10* roll greater than the disease's base recovery number. This roll is modified by the treatment received (+), the Medical (Diagnosis) skill of the person administering that treatment (+), and the Constitution of the diseased character (+). Negative modifiers should be assigned for inadequate diet as described under Food Requirements on page 148 (–1) and inadequate shelter (–1). The description of each disease indicates what the preferred treatment is and the modifier such treatment gives to the D10 recovery roll.

If treatment is begun during Phase I of the disease, the character rolls for recovery at the end of Phase I, using a D10. If he fails the D10 roll, he rolls again for recovery at the end of Phase II. If treatment is not begun until after the end of Phase I or if no treatment is administered at all, the character only rolls for recovery at the end of Phase II.

Treatment which begins during Phase II of the disease has its overall effectiveness halved (total all performed treatment modifiers, then halve the sum). If a character fails his recovery roll, he has a chance of dying (a D10 roll for the indicated number or less). If he avoids dying, he then suffers the post-recovery disability associated with nontreatment (whether he was treated or not). If a character recovers as a result of treatment, he suffers the treated postrecovery disability.

A character may have his fatigue base level increased while recovering from disease. In such cases, his fatigue level may not be decreased below his base level, regardless of the amount of rest or sleep he gets.

Example: At the end of three days (the length of dysentery's Phase I) the referee rolls a D10 for Monk's recovery. The roll to recover from dysentery is 19. The treatment administered to Monk for cholera also has an effect on dysentery, adding three for intravenous fluids and one for pain relief (with no deductions for inadequate diet or shelter). Wood's Medical (Diagnosis) skill of 8 is used. Monk's roll of 8 is modified by +3, +1, and +8, for a total of 20, which is over 19, and thus Monk recovers.

His base fatigue level is 1 for seven days (dysentery's postrecovery debility). Monk receives no other ill effects, and the rest of the group members, aware of his disease, take steps to guard themselves against infection (especially since they believe he has cholera, which is much more dangerous).



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DISEASE DESCRIPTIONS

Understanding diseases is very important. The following section details diseases, including their transmission, symptoms, diagnosis, misdiagnosis, treatment, course, failed recovery death probability, and postrecovery debility.

Dysentery

Transmission: Contaminated food and/or water. Infection Number 3.

Symptoms: Abdominal pain, diarrhea.

Diagnosis: Difficult.

Misdiagnosed As: Cholera, or minor disease.

Treatment: Replace fluids (+3), relieve pain (+1).

Course of the Disease:

Incubation: 1-3 days (1D6+2).

Phase I: 3 days.

Phase II: 7 days.

Base Recovery Number: 19.

Failed Recovery Death Probability: 1

Postrecovery Debility: 7 days. With treatment, fatigue at level 1 base; without, level 2.

Cholera

Transmission: Contaminated food and/or water. Infection Number 5.

Symptoms: Abdominal pain, fever, diarrhea.

Diagnosis: Difficult.

Misdiagnosed As: Dysentery.

Treatment: Intravenous fluids (+3); antibiotic– (+2); relieve pain and fever (+2); antibiotic+ (no effect); antibiotic± (+1).

Course of the Disease:

Incubation: 1 day.

Phase I: 3 days.

Phase II: 3 days.

Base Recovery Number: 21.

Failed Recovery Death Probability: 2

Postrecovery Debility: 4 weeks. With treatment, fatigue at level 2; without, fatigue at level 3.

Hepatitis-A

Transmission: Contact, contaminated food and/or water. Infection Number 4.

Symptoms: General body pain, fever, malaise.

Diagnosis: Formidable.

Misdiagnosed As: Minor disease.

Treatment: Relieve pain and fever (+2).

Course of the Disease:

Incubation: 1D6 weeks.

Phase I: 3 days.

Phase II: 5 days.

Base Recovery Number: 18.

Failed Recovery Death Probability: 1

Postrecovery Debility: 2 weeks. With treatment, fatigue at level 1; without, at level 2.

Food Poisoning

Transmission: Contaminated food. Infection Number 4.

Symptoms: Severe abdominal pain, abdominal cramps, slight fever.

Diagnosis: Difficult.

Misdiagnosed As: Cholera.

Treatment: Relieve symptoms (+2). To determine further treatment, roll 1D10: 1-2=specific antitoxin (+6); 3-5=antibiotic+; 6-8=antibiotic– (both at +3); 9-10=no other measures have any effect (but symptom relief has +4). If antibiotics have effect, antibiotic± has effect at +2.

Course of the Disease:

Incubation: 1 day.

Phase I: 2 days.

Phase II: 7 days.

Base Recovery Number: 24.

Failed Recovery Death Probability: 5

Postrecovery Debility: 2 weeks. With treatment, fatigue at level 1; without, level 2.

Pneumonia

Transmission: Contact, airborne (particles coughed or sneezed into the air). Infection Number 5.

Symptoms: Cough, fluid-filled lungs, fever, chest pain, general discomfort.

Diagnosis: Difficult.

Misdiagnosed As: Minor disease, plague.

Treatment: There are many different sorts of pneumonia, and treatments vary. Pain and fever relief (+2). To determine further treatment, roll 1D10: 1-2=antibiotic+; 3-5=antibiotic– (both at +3); 6-10=no other measures have any effect (but symptom relief has +3). If antibiotics have effect, antibiotic± is +2.

Course of the Disease:

Incubation: 1D6 days.

Phase I: 5 days.

Phase II: 9 days.

Base Recovery Number: 21.

Failed Recovery Death Probability: 1

Postrecovery Debility: With treatment, none; without, level 1 fatigue for 1 week.

Typhoid Fever

Transmission: Contact, contaminated food and/or water. Infection Number 4.

Symptoms: Severe fever, pain, cough, apathy.

Diagnosis: Formidable.

Misdiagnosed As: Pneumonia, plague.

Treatment: Antibiotic– (+4); antibiotic± (+2); antibiotic+ (no effect).

Course of the Disease:

Incubation: 1D6+2 days.



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Phase I: 1 week.
Phase II: 1D6+3 weeks.
Base Recovery Number: 20.
Failed Recovery Death Penalty: 1
Postrecovery Debility: 6 weeks. With treatment, fatigue at level 2; without, fatigue at level 3.

Typhus

Transmission: Carried by body lice. Infection Number 4.
Symptoms: Fever, headache, rash.
Diagnosis: Average.
Misdiagnosed As: Minor disease.
Treatment: All antibiotics (+3).
Course of the Disease:
Incubation: 1 day.
Phase I: 5 days.
Phase II: 10 days.
Base Recovery Number: 20.
Failed Recovery Death Probability: 2
Postrecovery Debility: With treatment, none; without, fatigue at level 2 for 2 weeks.

Rabies

Transmission: Contact with infected blood or saliva, normally through an animal bite. Infection Number 3.
Symptoms: Phase I: fever, malaise, sore throat. Phase II: severe pain, excessive salivation, sweating and other fluid loss.
Diagnosis: Difficult.
Misdiagnosed as: Minor disease.
Treatment: The 14-day DE Vaccine Series (+8 in phase I, +1 in phase II). (Preexposure vaccination will prevent infection but must be repeated at two-year intervals.)
Course of the Disease:
Incubation: 1D6 weeks.
Phase I: 2 weeks.
Phase II: 1 week.
Base Recovery Number: 26.
Failed Recovery Death Probability: 10
Postrecovery Debility: Fatigue at level 2 for 20 weeks.

Plague (Bubonic And Pneumonic)

Transmission: The bubonic form is spread by ratborne fleas. The pneumonic form is spread by contact or by airborne particles. Infection Number 4, bubonic; 6, pneumonic.
Symptoms: Bubonic: fever, swollen lymph nodes, severe abdominal pain. Pneumonic: same, with severe cough and chills.
Diagnosis: Difficult.
Misdiagnosed As: Pneumonia, minor disease.
Treatment: Bubonic: Antibiotic– (+4 phase I, +2 phase II); relieve pain and fever (+1). Pneumonic: Antibiotic– (+3 phase I, +10% phase II); relieve pain and fever (+1); antibiotic± (same as –); antibiotic+ (no effect).
Course of the Disease:
Incubation: 1D6 days.
Phase I: Bubonic, 5 days; pneumonic, 3 days.
Phase II: Bubonic, 10 days; pneumonic, 7 days.
Base Recovery Number: Bubonic, 21; Pneumonic, 23.
Failed Recovery Death Probability: 10
Postrecovery Debility: Fatigue at level 2 for 15 weeks.

Minor Disease

Transmission: This represents a number of minor (but debilitating) diseases too numerous to detail specifically.
Symptoms and treatment may be adapted at the referee's discretion. Infection Number 1-4 (referee's choice).
Symptoms: Fever, general body pain, vomiting, discoloration.
Diagnosis: Average, Difficult, or Formidable at referee's discretion.
Misdiagnosed As: Any other disease, but usually a minor one.
Treatment: Referee's choice, usually including relief of symptoms (+2), antibiotic +, –, or ± (+0-4, referee's discretion), or specific antitoxin (+6). The availability of the specific antitoxin is up to the referee.
Course of the Disease:
Incubation: 1D6+2 days.
Phase I: 1D6 days.
Phase II: 2D10 days.
Base Recovery Number: 18 to 22.
Failed Recovery Death Probability: None.
Postrecovery Debility: With treatment, none; without, fatigue at level 1 for 1D6 days.

DESCRIPTION OF TREATMENTS

In all cases, a unit of a drug is enough to treat one person for one day.
Relief of Pain: This is done by administering pain-relief drugs. The mild forms are used for normal conditions and strong forms (sedatives) for conditions described as severe.
Relief of Fever: This is done by administering antifever drugs.
Antibiotic+: Administration of a gram positive antibiotic.
Antibiotic–: Administration of a gram negative antibiotic.
Antibiotic±: Administration of a broad spectrum (both gram positive and gram negative) antibiotic. These do not always work as well as a positive or negative antibiotic alone.

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PRICE LIST

This listing is for the referee and players when purchasing equipment. It shows only the price and availability codes. Items are grouped by broad categories (melee weapons, pistols, etc), and are arranged alphabetically within category.

MELEE WEAPONS

Axe: *Price:* $50 (V/V).
Bayonet: *Price:* $20 (C/C).
Club: *Price:* Usually free for the taking (V/V).
Hatchet: *Price:* $20 (V/V).
Knife: *Price:* $5 (V/V).
Machete: *Price:* $50 (C/C).
Spear: *Price:* $10 (V/V).
Garotte: *Price:* Usually improvised (V/V).

BOWS

Crossbow: *Price:* $350 (C/C).
Hunting bow: *Price:* $300 (C/C).

REVOLVERS AND SINGLE-SHOT PISTOLS

.38 Special (Revolver): *Price:* $450 (C/S).
.38 Special Snubnose (Revolver): *Price:* $375 (C/C).
.44 Magnum (Revolver): *Price:* $1250 (R/—).
.357 Magnum (Revolver): *Price:* $450 (C/R).
Black Powder Pistol: *Price:* $125 (S/S).
Zip Gun: *Price:* $75 (V/V).

AUTOMATIC PISTOLS

.22 (Automatic): *Price:* $50 (C/C).
.380 (Automatic): *Price:* $100 (C/S).
HP-35: *Price:* $150 (S/R).
M9 (M92S): *Price:* $150 (V/S).
M1911A1: *Price:* $100 (C/S).
M1933 Tokarev: *Price:* $100 (R/C).
P-64: *Price:* $170 (R/S).
P7 M13: *Price:* $150 (V/S).
PA-15: *Price:* $150 (S/R).
PM Makarov: *Price:* $150 (S/V).
Vz-52: *Price:* $100 (R/S).

BATTLE RIFLES

FN-FAL: *Price:* $600 (S/R).
G3: *Price:* $500 (C/R).
L1A1 (FN-LAR): *Price:* $600 (S/R).

SUBMACHINEGUNS

AKR: *Price:* $300 (S/C).
AMD-65: *Price:* $300 (R/S).
G11: *Price:* $400 (S/R).
L2A3 Sterling: *Price:* $600 (C/S).
M3A1: *Price:* $300 (S/R).
M12: *Price:* $400 (R/—).
M177: *Price:* $750 (S/R).
M231: *Price:* $300 (V/C).
MAT-49: *Price:* $300 (S/R).
MP-5: *Price:* $400 (C/S).
PPSh-41: *Price:* $300 (—/S).
Uzi: *Price:* $500 (V/C).
Vz-24: *Price:* $300 (R/S).
Vz-61/62 Skorpion: *Price:* $250 (R/S).

ASSAULT RIFLES

AK-74: *Price:* $300 (C/C).
AKM: *Price:* $300 (C/V).
AKMR: *Price:* $300 (C/V).
AR-70: *Price:* $500 (R/—).
FA-MAS: *Price:* $500 (R/—).
FN-FNC: *Price:* $500 (C/S).
L85 (IW): *Price:* $1500 (R/R).
M16A2: *Price:* $400 (V/C).
M71: *Price:* $450 (R/—).

SPORTING RIFLES

.22 Bolt Action: *Price:* $150 (C/C).
.22 Semiauto: *Price:* $100 (C/C).
.30-06: *Price:* $300 (C/S).
.30-30: *Price:* $250 (C/S).
Mauser Bolt Action: *Price:* $150 (C/C).

SNIPER RIFLES

C3 (Parker-Hale): *Price:* $400 (R/R).
FR-F1: *Price:* $900 (R/—).
L42: *Price:* $400 (R/R).
M21: *Price:* $400 (S/R).
M40: *Price:* $700 (R/R).
PSG1: *Price:* $600 (R/R).
SVD: *Price:* $500 (R/S).
Vz-54: *Price:* $300 (R/R).

SHOTGUNS

Double: *Price:* $200 (V/V).
H&K Combat Assault Weapon: *Price:* $800 (C/R).
Pump: *Price:* $300 (V/C).
Semiautomatic: *Price:* $300 (V/C).

AUTOMATIC RIFLES

L86A1 LSW: *Price:* $1500 (R/R).
M249: *Price:* $1500 (S/R).
RPK-74: *Price:* $1000 (S/C).
RPK: *Price:* $1000 (S/C).

MACHINEGUNS

AAT-52: *Price:* $400 (R/R).
MAG (M240, L7A2 GPMG): *Price:* $1500 (S/R).
M60: *Price:* $1500 (S/R).
M214: *Price:* $10,000 (R/R).
MG3: *Price:* $1500 (S/R).
PK: *Price:* $2000 (R/S).
Vz-59: *Price:* $1500 (R/R).

HEAVY MACHINEGUNS

DShK: *Price:* $2000 (C/V).
KPV: *Price:* $3000 (S/C).
M2HB: *Price:* $1600 (V/C).

GRENADE LAUNCHERS

AGS-17: *Price:* $3000 (R/S).
BG-15: *Price:* $700 (—/S).
HK-69: *Price:* $500 (S/R).
M203: *Price:* $500 (C/S).
Mk-19: *Price:* $5000 (S/R).

ROCKET LAUNCHERS

Armbrust: *Price:* $200 (S/R).
Carl Gustav: *Price:* $800 (C/S).
Folgore: *Price:* $1200 (C/S).
LAW 80: *Price:* $300 (R/—).
LRAC F1: *Price:* $4500 (R/—).
M12 SMAW: *Price:* $3000 (R/R).
M72A1 LAW: *Price:* $180 (S/R).
M136: *Price:* $200 (C/S).
RPG-16: *Price:* $1000 (S/C).
RPG-18: *Price:* $1000 (S/C).
RPG-75: *Price:* $300 (—/R).

ANTITANK MISSILE LAUNCHERS

AT-3 "Sagger": *Price:* $6000 (R/S).
AT-4 "Spigot": *Price:* $3000 (S/C).
AT-5 "Spandrel": *Price:* $6000 (R/S).
AT-7 "Saxhorn": *Price:* $1200 (—/R).
Dragon PIP: *Price:* $1200 (R/—).
HOT: *Price:* $4500 (S/R).
MILAN II: *Price:* $6000 (R/S).
Swingfire: *Price:* $3000 (S/R).
Tank Breaker: *Price:* $5000 (S/R).
TOW 2: *Price:* $10,000 (S/R).

LARGE-CALIBER GUNS AND HOWITZERS

122mm D-30 Howitzer: *Price:* $50,000 (S/C).
125mm Gun (Rapira-3): *Price:* $50,000 (R/S).

MORTARS

60mm: *Price:* $5000 (C/S).
81mm: *Price:* $10,000 (C/S).
82mm Vasilek: *Price:* $20,000 (R/S).
60/81/82mm Wojo Combo: *Price:* $8000 (C/C).
M120 120mm: *Price:* $12,000 (C/S).
120mm: *Price:* $15,000 (C/C).

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TRIPODS

NHT (NATO Heavy Tripod): *Price:* $350 (C/S).
NLT (NATO Light Tripod): *Price:* $200 (C/S).
NMT (NATO Medium Tripod): *Price:* $200 (S/R).
PHC (Pact Heavy Carriage): *Price:* $1000 (R/S).
PLT (Pact Light Tripod): *Price:* $250 (S/C).
PMT (Pact Medium Tripod): *Price:* $300 (S/C).

AMMUNITION

Magazines are purchased separately and cost $1 per three rounds of capacity, except the 1000-round drum for 5.56mm N, which costs $200.

SMALL ARMS AND MACHINEGUNS

Longbow Arrow: *Price:* $50 per 24 (C/C).
Crossbow Bolt: *Price:* $30 per 24 (C/C).
Loose Black Powder and Ball: *Price:* $25 per 40 (C/C).
4.7mm Cls (4.7×21mm Caseless): *Price:* $1300 per case (S/R).
5.45mm B (5.45×39mm Bloc): *Price:* $100 per case (C/V).
5.56mm N (5.56×45mm NATO): *Price:* $100 per case, $200 per empty drum (V/C).
.22 LR (5.7×17mmR Long Rifle): *Price:* $225 per case (C/S).
7.5mm MAS (7.5×54mm MAS): *Price:* $30 per case (R/R).
7.62mm T (7.62×25mm Tokarev): *Price:* $250 per case (R/S).
7.62mm S (7.62×39mm Short): *Price:* $80 per case (S/C).
.30-30 (7.62×51mmR): *Price:* $170 per case (C/S).
7.62mm N (7.62×51mm NATO): *Price:* $65 per case (C/S).
7.62mm L (7.62×54mmR Long): *Price:* $70 per case (S/C).
.30-06 (7.62×63mm): *Price:* $80 per case (S/R).
.32 ACP (7.65×17mmSR): *Price:* $150 per case (S/S).
8mm M (7.92×57mm Mauser): *Price:* $30 per case (S/S).
.380 ACP (9×17mm): *Price:* $125 per case (C/S).
9mm M (9×18mm Makarov): *Price:* $200 per case (S/C).
9mm P (9×19mm Parabellum): *Price:* $225 per case (V/C).
.38 Special (9×29mmR): *Price:* $175 per case (S/R).
.357 Magnum (9×33mmR): *Price:* $500 per case (R/—).
10mm (10×24mm): *Price:* $85 per case (R/—).
.44 Magnum (11.2×32.8mmR): *Price:* $550 per case (R/—).
.45 ACP (11.43×23mm): *Price:* $63 per case (S/R).
12.7mm B (12.7×83mmR Bloc): *Price:* $35 per case (S/C).
.50 BMG (12.7×99mm Browning Machine-gun): *Price:* $35 per case (C/S).
.50 SLAP (12.7×99mm Saboted Light Armor Piercing): *Price:* $60 per case (S/R).
14.5mm B (14.5×114mm Bloc): *Price:* $30 per case (S/C).
12 Gauge (12-Gauge All-Brass): *Price:* $100 per case (C/C).

HAND GRENADES

Fragmentation: *Price:* $4 each, $100 per case (C/C).
Chemical: *Price:* $3 each, $40 per case for smoke, double prices for irritant (smoke, C/S; irritant, S/R).
Antitank: *Price:* $10 each, $120 per case (R/S).
Concussion: *Price:* $4 each, $70 per case (C/S).
Thermite: *Price:* $10 each, $140 per case (S/R).
WP (White Phosphorus): *Price:* $20 each, $280 per case (S/S).

GRENADE LAUNCHER ROUNDS

30mm HE: *Price:* $3 each, $75 per drum (R/C).
40mm HE: *Price:* $4 each, $200 per case (C/S).
40mm HEDP: *Price:* $5 each, $250 per case (S/R).
40mm CHEM: *Price:* $4 each, $150 per case, (S/R).
40mm ILLUM: *Price:* $6 each, $225 per case (S/R).
40mm HVHE: *Price:* $6 each, $250 per case (S/R).
40mm HVHEDP: *Price:* $10 each, $400 per case (S/R).
40mm Flechette: *Price:* $5 each, $720 per case (R/—).

ROCKETS

Folgore HEAT: *Price:* $120 (C/S).
58.3mm HEAT: *Price:* $50 each, $125 per case (R/S).
82mm SMAW HE: *Price:* $75 each, $350 per case (S/—).
82mm SMAW HEAT: *Price:* $75 each, $350 per case (S/—).
84mm HEAT: *Price:* $120 (C/S).
89mm HEAT: *Price:* $175 (R/—).

RIFLE GRENADES

HEAT: *Price:* $12 each, $100 per case (S/R).
WP: *Price:* $25 each, $200 per case (S/R).
140mm RAW (Rifle Assault Weapon) HE: *Price:* $50 each (S/R).
140mm RAW (Rifle Assault Weapon) HEAT: *Price:* $100 each (S/R).

ANTITANK MISSILES

152mm HEAT (Tank Breaker): *Price:* $1000 each (S/R).
152mm HEAT (TOW 2A): *Price:* $1500 (S/R).
152mm HEAT (TOW 2B): *Price:* $2100 (R/—).
AT-3 "Sagger": *Price:* $1200 (R/S).
AT-4 "Spigot": *Price:* $750 (R/S).
AT-5 "Spandrel": *Price:* $1200 (R/S).
AT-7 "Saxhorn": *Price:* $1200 (—/R).
AT-8 "Songster": *Price:* $2000 (S/C).
AT-10 ATGM: *Price:* $2000 (—/R).
***Reflecks* ATGM:** *Price:* $2500 (R/S).
MILAN II: *Price:* $3000 (C/S).
MILAN II-T: *Price:* $4500 (C/S).
HOT: *Price:* $5500 (S/R).
Swingfire: *Price:* $3000 (S/R).
127mm HEAT (Dragon PIP): *Price:* $1200 (R/—).

AUTOCANNON ROUNDS

23mm API: *Price:* $500 per case (S/C).
23mm HE: *Price:* $500 per case (S/C).
25mm API: *Price:* $650 per case (C/S).
25mm HE: *Price:* $650 per case (C/S).
25mm APDU: *Price:* $2500 per case (S/R).
30mm API: *Price:* $750 per case (S/C).
30mm HE: *Price:* $750 per case (S/C).
40mm HE: *Price:* $6000 per case (C/S).

LARGE-CALIBER ROUNDS

100mm APDS-T: *Price:* $750 (—/R)
100mm APHE: *Price:* $650 (—/S)
100mm HEAT: *Price:* $650 (—/S)
100mm WP: *Price:* $700 (—/S)
105mm HEAT: *Price:* $600 (C/S).
105mm APFSDS: *Price:* $600 (S/R).
105mm APDU: *Price:* $1000 (R/R).
105mm WP: *Price:* $1000 (R/R).
105mm Flech(LC): *Price:* $700 (S/—)
120mm HEAT: *Price:* $800 (C/S).
120mm APFSDS: *Price:* $800 (S/R).
120mm APDU: *Price:* $1500 (R/R).
120mm WP: *Price:* $1000 (R/R).
125mm HE: *Price:* $800 (S/C).
125mm HEAT: *Price:* $800 (R/S).
125mm APFSDS: *Price:* $800 (S/R).
125mm APDU: *Price:* $1500 (R/R).
125mm Powder Charge: *Price:* $80 (S/C).

HOWITZER ROUNDS

122mm HE: *Price:* $350 (S/C).
122mm HEAT: *Price:* $500 (R/S).
122mm ICM: *Price:* $2000 (R/R).
122mm WP: *Price:* $700 (R/S).
122mm CHEM: *Price:* $350 (R/S).
122mm ILLUM: *Price:* $350 (R/R).
122mm Powder Charge: *Price:* $40 (C/V).
152mm HE: *Price:* $500 (S/C).
152mm HEAT: *Price:* $750 (R/S).
152mm ICM: *Price:* $3000 (R/R).
152mm WP: *Price:* $1000 (R/S).

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152mm CHEM: *Price:* $500 (R/S).
152mm ILLUM: *Price:* $500 (R/R).
152mm Powder Charge: *Price:* $60 (C/V).
155mm HE: *Price:* $500 (C/S).
155mm HEAT: *Price:* $750 (C/S).
155mm ICM-DP: *Price:* $3000 (R/R).
155mm WP: *Price:* $1000 (S/R).
155mm CHEM: *Price:* $500 (S/R).
155mm ILLUM: *Price:* $500 (S/R).
155mm FASCAM: *Price:* $5000 (R/R).
155mm Powder Charge: *Price:* $60 (V/C).

MORTAR ROUNDS

60mm HE: *Price:* $300 per case (C/S).
60mm WP: *Price:* $600 per case (S/R).
60mm ILLUM: *Price:* $300 per case (S/R).
81mm HE: *Price:* $150 per case (C/S).
81mm WP: *Price:* $300 per case (S/R).
81mm ILLUM: *Price:* $150 (S/R).
82mm HE: *Price:* $300 per clip (S/C).
82mm HEDP: *Price:* $600 per clip (R/S).
82mm WP: *Price:* $300 per case (R/S).
82mm ILLUM: *Price:* $150 per case (R/S).
120mm ICMDP: *Price:* $2000 per case (R/—).
120mm HE: *Price:* $200 per case (V/V).
120mm WP: *Price:* $400 per case (S/S).
120mm CHEM: *Price:* $250 per case (S/S).
120mm ILLUM: *Price:* $200 per case (S/R).

Miscellaneous

EXPLOSIVES

Dynamite Stick: *Price:* $10 per quarter-kilogram stick, $750 per case of 100 sticks (C/C).
Engineer Demolitions Kit: *Price:* $750 (C/C).
Mine, Antipersonnel: *Price:* $50, $200 per case (C/C).
Mine, Antitank: *Price:* $100, $200 per case (S/S).
Mine, Directional: *Price:* $250, $800 per case (S/R).
Plastic Explosive: *Price:* $30 per one kilogram block, $650 per case of 20 blocks (S/R).

GENERATORS

1.5 kilowatt: *Price:* $200 (C/C).
5 kilowatt: *Price:* $700 (C/C).
10 kilowatt: *Price:* $1200 (S/S).
60 kilowatt: *Price:* $8000 (S/S).
100 kilowatt: *Price:* $15,000 (R/R).
500 kilowatt: *Price:* $50,000 (R/R).

STILLS

Small: *Price:* $500 (V/V).
Medium: *Price:* $2500 (V/V).
Large: *Price:* $200,000 (C/C).

HEATERS AND COOLERS

150-Liter Water Heater: *Price:* $1500 (C/C).
Field Cooker, Military: *Price:* $1000 (C/C).
Freezer, Large: *Price:* $1000 (S/S).
Freezer, Small: *Price:* $100 (S/S).
Portable Heater: *Price:* $200 (C/C).
Refrigerator, large: *Price:* $1000 (S/S).
Refrigerator, small: *Price:* $100 (C/C).

HAND TOOLS

Aircraft Tools: *Price:* $2000 (R/R).
Arc Welder: *Price:* $500 (S/S).
Basic Tool Kit: *Price:* $200 (V/V).
Construction Tools: *Price:* $500 (C/C).
Electrical Repair: *Price:* $500 (C/C).
Electronic Repair: *Price:* $1000 (S/S).
Excavating Tools: *Price:* $300 (V/V).
Heavy Ordnance Tools: *Price:* $750 (S/S).
Lockpick Tools: *Price:* $20 (V/V).
Portable Machine Shop: *Price:* $75,000 (R/R).
Power Hand Tools: *Price:* $500 (C/C).
Small Arms Tools: *Price:* $200 (S/S).
Tracked Vehicle Tools: *Price:* $1000 (S/S).
Wheeled Vehicle Tools: *Price:* $500 (C/C).

RADIOS

0.5km Hand: *Price:* $250 (C/C).
1/6km Manpack/Vehicular: *Price:* $500 (S/S).
1/6km Secure Manpack/Vehicular: *Price:* $1500 (S/S).
13km Vehicle: *Price:* $1500 (S?S).
13km Secure Vehicle: *Price:* $6000 (R/R).

VISION DEVICES

4× Binoculars: *Price:* $100 (V/V).
25× Image Intensifier: *Price:* $2500 (S/S).
IR Goggles: *Price:* $250 (C/C).
IR Spotlight: *Price:* $150 (C/C).
Starlight Scope: *Price:* $1000 (R/R).



Telescopic Rifle Sight: *Price:* $500 (V/V).
Thermal Sight: *Price:* $5000 (R/R).
White Light Spotlight: *Price:* $100 (V/V).

RADARS

Artillery Counterbattery: *Price:* $200,000 (R/R).
Ground Surveillance: *Price:* $40,000 (S/R).
Mortar Counterbattery: *Price:* $100,000 (S/R).

LASER DESIGNATORS

Man Portable: *Price:* $1000 (S/R).
Vehicle Mounted: *Price:* $2000 (S/R).

NBC EQUIPMENT

Chemical Defense Suit: *Price:* $1000 (S/C).
Chemical Sniffer: *Price:* $500 (C/C).
Gas Mask: *Price:* $150 (V/V).
Geiger Counter: *Price:* $500 (C/C).
M256 Chemical Detector Kit: *Price:* $20 (S/R).
Optical Chemical Sensor: *Price:* $2000 (S/R).
Steam Decontamination Trailer: *Price:* $5000 (S/C).

MEDICAL SUPPLIES

Anesthetic, Local (100 Units): *Price:* $1000 (R/R).
Anesthetic, Total (100 Units): *Price:* $1000 (R/R).
Antibiotic (100 Units); +, −, & ± Varieties: *Price:* Liquid, $500; oral, $750 (R/R).
Antifever (100 Units): *Price:* $500 (R/R).
Atropine (100 Units): *Price:* $500 (R/R).
Atropine (Autoinjector): *Price:* $75 per kit of 10 (R/R).
Blood, Whole (1 Unit): *Price:* $25 (S/S).
Pain-Reliever, Mild (100 Units): *Price:* $500 (R/R).
Personal Medical Kit: *Price:* $1000 (S/S).
Plasma (1 Unit): *Price:* $10 (S/S).
Sedative, Mild (100 Units): *Price:* $500 (R/R).
Sedative, Strong (100 Units): *Price:* $500 (R/R).
Surgical Instruments: *Price:* $2500 (R/R).

BODY ARMOR

Kevlar (Ballistic Nylon) Helmet: *Price:* $100 (C/S).
Kevlar (Ballistic Nylon) Vest: *Price:* $800 (C/S).
Flak Jacket: *Price:* $400 (C/C).
Steel Helmet: *Price:* $50 (C/C).

PERSONAL GEAR

Basic Load: Free upon creation of character.
Combat Webbing: *Price:* $10 (V/V).
Fatigues: *Price:* $50 (V/V).
Flashlight: *Price:* $20 (C/C).
Pack: *Price:* $20 (V/V).
Parka: *Price:* $150 (C/C).
Shelter Half: *Price:* $25 (C/C).
Sleeping Bag: *Price:* $50 (C/C).
Thermal Fatigues: *Price:* $100 (S/S).

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OTHER EQUIPMENT

20-Liter Jerrycan: *Price:* $25 (V/V).
Air Compressor: *Price:* $200 (R/R).
Air Tank, Aqualung: *Price:* $100 (C/C).
Aqualung: *Price:* $300 (C/C).
Food, Domestic: *Price:* $4 per kg (V/V).
Food, MRE or Equivalent: *Price:* $8 per kg (S/S).
Food, Wild: *Price:* $2 per kg (V/V).
Horse Tack: *Price:* $50 (C/C).
Pack Saddle: *Price:* $40 (C/C).
Raft, Inflatable: *Price:* $500 (C/C).
Rebreather Recharge Kit: *Price:* $100 (R/R).
Rebreather: *Price:* $400 (R/R).
Skis, Cross-Country: *Price:* $250 (C/C).
Tent, 4-man: *Price:* $100 (C/C).
Tent, 10-man: *Price:* $250 (S/S).
Reactive Armor Block: *Price:* $5000 each (R/R).

FUEL

Avgas: *Price:* $60 per liter (R/R).
Gasoline: *Price:* $48 per liter (R/R).
Diesel: *Price:* $40 per liter (R/R).
Ethanol: *Price:* $8 per liter (V/V).
Methanol: *Price:* $4 per liter (V/V).
Coal: *Price:* $18 per kg (S/S).
Wood: *Price:* $4 per kg (V/V), or free if in woods.

UNARMORED CARGO VEHICLES

1-ton Cargo Trailer: *Price:* $1000 (V/V).
2½-Ton Truck: *Price:* $15,000 (C/C).
¾-Ton Truck: *Price:* $10,000 (S/S).
5-Ton Truck: *Price:* $20,000 (S/S).
M977 HEMTT: *Price:* $25,000 (S/S).
1000-Liter (1-Ton) Tank Trailer: *Price:* $1000 (V/V).
5000-liter (5-ton) Tank Truck: *Price:* $15,000 (C/C).
10,000-Liter (10-Ton) Tank Truck: *Price:* $25,000 (S/S).
Bicycle: *Price:* $100 (V/V).
Cart: *Price:* $500 (V/V).
Civilian Car: *Price:* $6000 (V/V).
HMMWV (Hum-Vee): *Price:* $20,000 (C/S).
Motorcycle: *Price:* $5000 (V/V).
UAZ-469: *Price:* $8000 (S/C).
Wagon: *Price:* $1000 (V/V).

INFANTRY FIGHTING VEHICLES

AIFV: *Price:* $80,000 (R/—).
AMX-10P: *Price:* $100,000 (S/R).
BMP-2: *Price:* $150,000 (R/S).
BMP-3: *Price:* $175,000 (R/S).
Warrior (MCV-80): *Price:* $250,000 (S/R).
M2A2 Bradley: *Price:* $200,000 (S/R).
M113A3: *Price:* $75,000 (S/R).
Marder: *Price:* $200,000 (S/R).

ARMORED PERSONNEL CARRIERS

BTR-80: *Price:* $75,000 (S/C).
OT-64: *Price:* $80,000 (S/C).

LIGHT COMBAT VEHICLES

BRDM-4: *Price:* $50,000 (S/C).
LAV-25: *Price:* $100,000 (S/R).
M8 AGS: *Price:* $250,000 (R/R).
OT-65 FUG: *Price:* $45,000 (S/C).

MAIN BATTLE TANKS

C-1 "Ariete": *Price:* $700,000 (S/R).
EPC "LeClerc": *Price:* $700,000 (S/R).
Challenger 2: *Price:* $850,000 (R/—).
Leopard I: *Price:* $420,000 (S/R).
Leopard 2 (I): *Price:* $650,000 (S/R).
M1: *Price:* $600,000 (R/R).
M1A1: *Price:* $650,000 (R/R).
M1A2: *Price:* $700,000 (R/R).
M48A5: *Price:* $350,000(S/R).
M60A3: *Price:* $350,000(S/R).
T-72: *Price:* $400,000 (R/R).
T-80: *Price:* $500,000 (R/R).
T-90: *Price:* $600,000 (R/R).
T-55: *Price:* $300,000 (R/S).

SELF-PROPELLED ARTILLERY

M109A2/A3: *Price:* $300,000 (R/R).
SO-122: *Price:* $200,000 (R/R).
SO-152: *Price:* $250,000 (R/R).
ZSO-30-4: *Price:* $100,000 (R/R).

ANIMALS

Camel: *Price:* $1200 (S/C).
Elephant: *Price:* $20,000 (R/S).
Horse (Broken): *Price:* $2000 (S/S).
Horse: *Price:* $1000 (S/S).
Mule: *Price:* $600 (S/S).
Ox: *Price:* $600 (C/C).

BOATS

Barge: *Price:* $50,000 (C/C).
Medium Motorboat: *Price:* $20,000 (C/C).
PBR: *Price:* $40,000 (R/R).
River Tug: *Price:* $200,000 (S/S).
Small Motorboat: *Price:* $10,000 (C/C).
Small Sailing Boat: *Price:* $5000 (C/C).
Torpedo Boat: *Price:* $100,000 (R/R).
Very Small Open Boat: *Price:* $100 (C/C).

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Human/Animal Hit Location

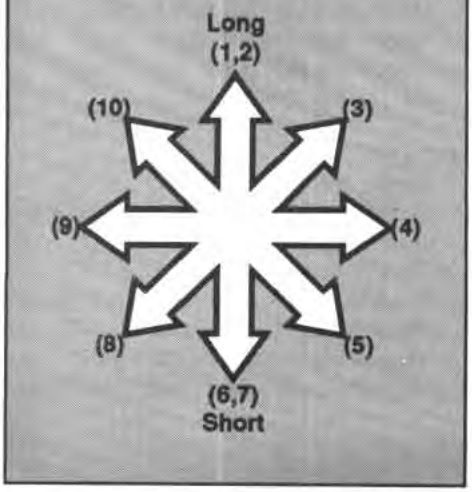
Die	Biped	Quadruped
1	Head	Head
2	Right arm	Forequarter
3	Left arm	Forequarter
4	Chest	Forequarter
5	Abdomen	Chest
6	Abdomen	Chest
7	Right leg	Abdomen
8	Right leg	Hindquarter
9	Left leg	Hindquarter
10	Left leg	Hindquarter

Biped: Table assumes front/rear shot.
Side Shot: Far side hit equals near side hit.
Prone Biped: Table assumes top shot.
Side Shot: Far side hit equals near side hit.
Front Shot: Leg or abdomen hit equals miss.
Rear Shot: Head, arm, or chest shot equals miss.
Quadruped: Table assumes side shot.
Front Shot: Hindquarters or abdomen hit equals miss.
Rear Shot: Head or forequarters hit equals miss.

Body Armor Protection

Type	AV	Head	Chest/Abd.
Flak jacket	1	No	Yes
Kevlar vest	1	No	Yes
Steel helmet	1	1-3	No
Kevlar helmet	1	1-4	No

Scatter Diagram



Melee Weapons

Weapon	Range	Hit Mod.	Damage Value
Bottle	S	—	1D6+2
Knife*	S	+2	1D6
Hatchet	S	—	1D6+(Strength÷2)
Club	S	–1	1D6+(Strength÷2)
Bayonet†	L	+1	1D6+(Strength÷2)
Spear	L	—	1D6+(Strength÷2)
Axe	L	–2	1D6+Strength
Machete	L	+1	1D6
Garotte	S	+1	Special**

*Including bayonet, when not on rifle.
†When on rifle. **Unarmed Combat Damage ×2.

Combat Movement

Animals	Walk/Trot/Run
Bear, Bison, & Camel	10/20/40
Boar	6/10/30
Dog, other canines	15/30/60
Elephant	10/20/30
Fowl	6/20/80*
Game, Wild Cattle	10/20/40
Grazer	10/20/60
Horse	10/30/60
Large Cat	15/30/60
Mule	10/20/40
Ox	10/20/30
Rhino	6/15/30
Tiger	10/20/40

*Walk/Trot/Fly

Humans	Crawl/Walk/Trot/Run
Human	2/10/20/30

Vehicles	On/Off Road/Water
2½-ton truck	40/8
¾-ton truck	45/8
5-ton tank truck	40/8
5-ton truck	40/8
10-ton tank truck	40/15
AIFV	30/20/4
AMX-10P	30/20/4
BRDM-4	45/20/6
Bicycle	15/4
BMP-3	30/20/6
BMP-2	30/20/4
BTR-80	35/15/6
C-1 "Ariete"	30/25

Vehicles	On/Off Road/Water
Challenger 2	30/25
Civilian car	50/8
EPC "Leclerc"	35/30
HMMWV	50/20
KvP-92	55/45
LAV-25	45/20/6
Leopard I	30/20
Leopard II	35/25
M1	35/30
M1A1	30/25
M1A2	30/25
M8 AGS	35/30
M109A2/A3	25/15
M113A3	30/20/4
M2A2 Bradley	30/25/4
M48A5	25/15
M60A3	25/15
M977 HEMTT	40/15
Marder	35/25
Motorcycle	45/20
OT-64	45/20/6
OT-65 FUG	40/15/6
SK-25	55/45
SO-122 *Akatsiya*	30/20/2
SO-152 *Gvozdika*	25/15
T-55	25/15
T-72	35/25
T-80	35/25
T-90	35/25
UAZ-469	50/10
Warrior	35/25
ZSO-30-4	25/15

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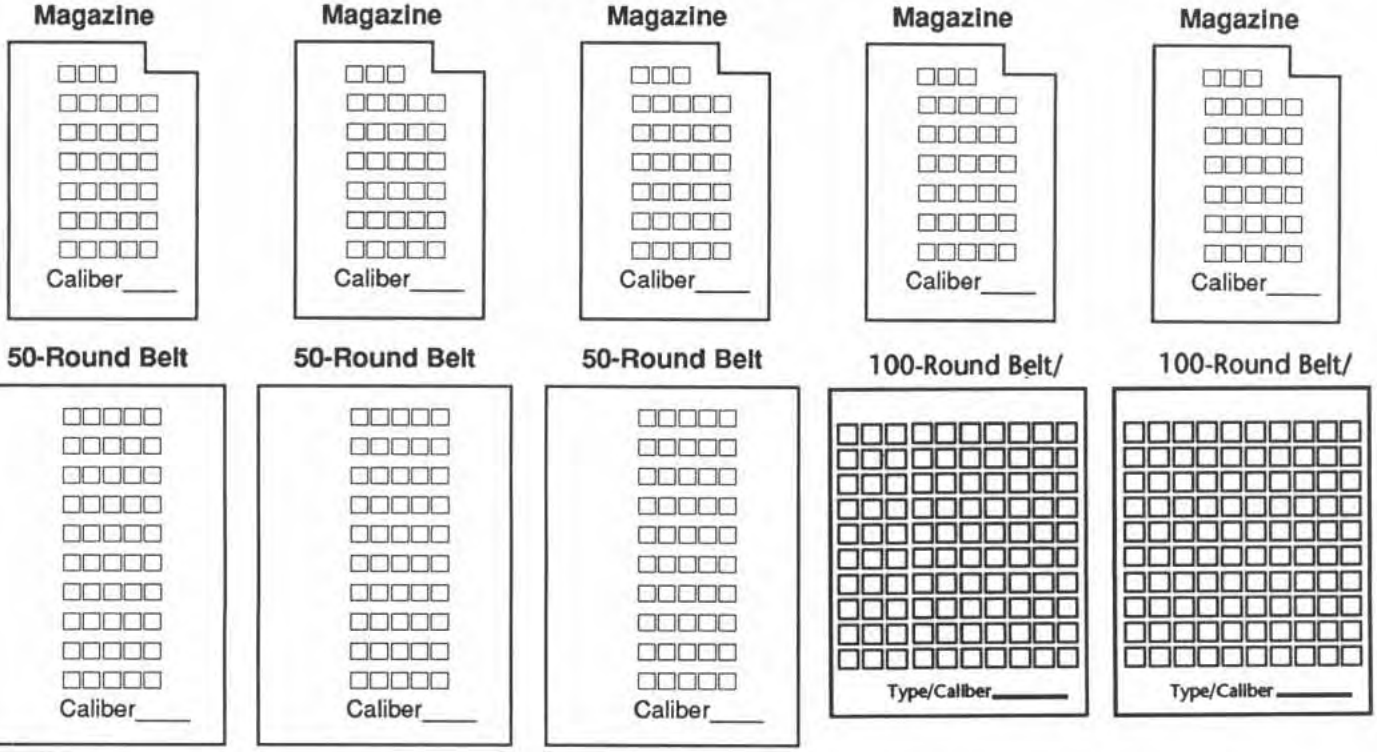
AMMO RECORD FORMS



NPC RECORD FORMS

NPC#: _____
Experience: _____
Physical Attributes: _____
Combat Assets _____
Other Assets _____
Skills: _____
Initiative: _____
Weapon: _____
Magazines: _____
Special: _____

In Weapon

Wounds

NPC#: _____
Experience: _____
Physical Attributes: _____
Combat Assets _____
Other Assets _____
Skills: _____
Initiative: _____
Weapon: _____
Magazines: _____
Special: _____

In Weapon

Wounds

NPC#: _____
Experience: _____
Physical Attributes: _____
Combat Assets _____
Other Assets _____
Skills: _____
Initiative: _____
Weapon: _____
Magazines: _____
Special: _____

In Weapon

Wounds

NPC#: _____
Experience: _____
Physical Attributes: _____
Combat Assets _____
Other Assets _____
Skills: _____
Initiative: _____
Weapon: _____
Magazines: _____
Special: _____

In Weapon

Wounds

TWILIGHT: 2000

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Automatic Pistols

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
M1911A1	SA	2	Nil	1	7	3	—	12
10mm	SA	2	1-Nil	1	6	3	—	15
M9 (M92S)	SA	1	Nil	1	15	3	—	12
HP-35	SA	1	Nil	1	13	2	—	12
P7 M13	SA	1	Nil	1	13	3	—	12
P-64	SA	1	Nil	1	6	2	—	10
PM Makarov	SA	1	Nil	1	8	3	—	10
PA-15	SA	1	Nil	1	15	2	—	12
M1933 Tokarev	SA	1	Nil	1	8	4	—	12
Vz-52	SA	1	Nil	1	8	4	—	12
.380 Auto	SA	1	Nil	1	7	3	—	10
.22 Auto	SA	–1	Nil	0	6	2	—	10

Revolvers

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
.38 Special	DAR	1	Nil	1	6R	3	—	10
.38 Snub	DAR	1	Nil	1	6R	4	—	4
.357 Mag	DAR	2	1-Nil	1	6R	3	—	10
.44 Mag	DAR	3	2-Nil	2	6R	4	—	16

Assault Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
M16A2	3	3	1-Nil	5	20/30	3	5	55
AKMR	5	3	1-Nil	5	30	3	6	45
AK-74	5	3	1-Nil	5	30	3	6	50
L85 (IW)	5	3	1-Nil	4	20	3	6	50
AKM	5	3	2-Nil	5	30	3	7	50
FN-FNC	3	3	1-Nil	5	30	3	6	50
FA-MAS	5	3	1-Nil	4	25	3	7	50
AR-70	5	3	1-Nil	5	30	3	7	55
M71	SA	3	1-Nil	4	15/30	3	—	50

Battle Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
L1A1 (FN-LAR)	SA	4	2-3-Nil	5	20	4	—	65
FN-FAL	5	4	2-3-Nil	5	20	4	8	65
G3	5	4	2-3-Nil	5	20	4	7	65

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Single-Shot Pistols

Weapon	ROF/Rld	Dam	Pen	Rld	Blk	Mag	Recoil SS	Recoil Brst	Rng
Zip Gun	SS/1	–1	Nil	1	1	1i	2	—	6
Black Powder Pistol	SS/2	1	Nil	2	2	1i	3	—	8

Bows

Weapon	ROF	Dam	Pen	Rld	Blk	Recoil SS	Recoil Brst	Rng
Crossbow	SS	1	Nil	4	6	4	—	20
Hunting bow	SS	–1	Nil	1	5	10	—	15

Submachineguns

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Recoil Brst	Rng
L2A3 Sterling	5	2	Nil	2/3	34	2	5	30
Uzi	5	2	Nil	2/3	25/32	2	5	30
M231	5	2	1-Nil	3/4	20/30	1	4	25
M177 Carbine	5	3	1-Nil	3/4	20/30	3	7	40
MP-5	5	2	Nil	4	15/30	2	5	20
PPSh-41	5	2	1-Nil	4	35/71	1	4	30
AKR	5	2	1-Nil	2/3	30	1	4	30
M3A1	5	2	Nil	3/4	30	2	4	30
Vz-24	5	2	1-Nil	3	32	1	3	30
AMD-65	5	2	1-Nil	3/4	30	1	4	40
Vz-61/62	5	1	Nil	1	10/20	3	6	4
w/stock	5	1	Nil	3	10/20	1	4	12
MAT-49	5	2	Nil	3/4	32	1	4	30
M12	5	1	Nil	2/3	20/40	1	2	40
G11	3	3	1-Nil	4	50	2	3	55

Sniper Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Recoil Brst	Rng
M40	BA	4	2-3-Nil	5	5i	6	—	75
SVD	SA	4	2-3-Nil	6	10	4	—	75
M21	SA	4	2-3-Nil	6	20	4	—	65
bipod	SA	4	2-3-Nil	6	20	2	—	75
PSG1	SA	4	2-3-Nil	6	20	5	—	75
L42	BA	4	2-3-Nil	5	5	4	—	75
Vz-54	BA	4	2-3-Nil	5	5i	5	—	65
C3	BA	4	2-3-Nil	5	3i	5	—	75
FR-F1	SA	4	2-Nil	6	10	3	—	75

All sniper rifles come with a scope. With the scope, add 15 meters to the basic range for *aimed shots*. If the scope is later damaged or lost (or for quick shots), this modifier is not added.

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Sporting Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Recoil Brst	Rng
.30-30	LA	3	2-Nil	5	6i	3	—	50
.30-06	BA	4	2-3-Nil	5	5i	3	—	75
.22 BA	BA	–1	Nil	4	5i	2	—	50
.22 SA	SA	–1	Nil	4	10i	2	—	50
Mauser BA	BA	4	2-3-Nil	5	5i	4	—	65

If a scope is fitted, add 15 meters to the basic range for *aimed* shots.

Automatic Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Recoil Brst	Rng
M249 SAW	10	2	1-Nil	5	30/200B	1	3	60
bipod	10	2	1-Nil	5	30/200B	1	3	75
L86A1 LSW	10	3	1-Nil	5	30/100B	2	10	50
bipod	10	3	1-Nil	5	30/100B	1	5	65
RPK-74	10	2	1-Nil	5	30/40	1	5	50
bipod	10	2	1-Nil	5	30/40	1	3	75
RPK	10	3	2-Nil	5	30/40/75	1	5	60
bipod	10	3	2-Nil	5	30/40/75	1	3	75

If a scope is fitted, add 15 meters to the basic range for *aimed* shots (scopes have no effect on automatic fire).

Heavy Machineguns

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Recoil Brst	Rng
M2HB	5	8	2-2-3*	8	105B	3	13	65
tripod	5	8	2-2-3*	8	105B	2	6	150
DShK	5	9	2-2-3	8	50B	7	15	65
tripod	5	9	2-2-3	8	50B	3	7	150
KPV	5	12	2-2-3	10	100B	**	**	150

*.50 SLAP ammunition has a penetration of 1-1-2.

**The KPV is always mounted on a vehicle or field carriage, and has negligible recoil.

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Machineguns

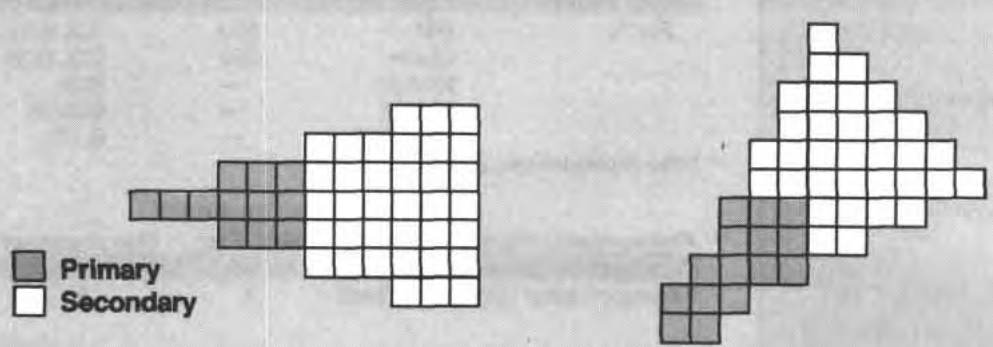
Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
M60	5	4	2-3-Nil	6	100B	1	4	65
bipod	5	4	2-3-Nil	6	100B	1	2	90
tripod	5	4	2-3-Nil	6	100B	1	1	125
MG3	5	4	2-3-Nil	6	100B	1	4	65
bipod	5	4	2-3-Nil	6	100B	1	2	90
tripod	5	4	2-3-Nil	6	100B	1	1	125
L7A2 (MAG)	10	4	2-3-Nil	6	100B	1	6	65
bipod	10	4	2-3-Nil	6	100B	1	4	90
tripod	10	4	2-3-Nil	6	100B	1	2	125
PK	5	4	2-3-Nil	6	50B	2	5	65
bipod	5	4	2-3-Nil	6	50B	1	3	90
tripod	5	4	2-3-Nil	6	50B	1	2	125
Vz-59	10	4	2-3-Nil	6	50B	2	8	65
bipod	10	4	2-3-Nil	6	50B	1	5	90
tripod	10	4	2-3-Nil	6	50B	1	4	125
M214 6-Pac	5	3	1-Nil	4	1000	1	5	60
tripod	50	3	1-Nil	4	1000	1	5	90
AAT-52	10	4	2-3-Nil	5	50B	1	7	65
bipod	10	4	2-3-Nil	5	50B	1	4	90
tripod	10	4	2-3-Nil	5	50B	1	2	125

Shotguns

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
Double	SA	4*	3-4-Nil	5	2i	5	—	40
Pump	PA	4*	3-4-Nil	4	8i	4	—	40
Semiauto	SA	4*	3-4-Nil	5	5i	3	—	40
H&K CAW	5**	4*	3-4-Nil	4	10	3	7	40

*Buckshot damage is 9D6 at short range. At medium range, each shot is treated as a 10-round burst of automatic fire (reduced immediately to 7D6 for being at medium range). Buckshot has Nil penetration at all ranges.

**See page 205 for special CAW rule.



Directional Mine Burst Templates

Conny Delshagen (order #3265201)

Hand Grenades

Type	Damage	Pen
Frag	C:3, B:15	Nil
Antitank	C:3, B:5	18C
Concussion	C:5	Nil
Thermite	C:1, B:5	Nil
Chemical	C:1, B:15	Nil
WP	C:1, B:15	Nil

Rifle Grenades

Type	Rng	IFR	Damage	Pen
RAW HE	100	2000	C:10,B:30	1C
RAW HEAT	100	2000	C:8, B:25	75C
HEAT	15	200	C:7, B:15	30C
WP	25	200	C:1, B:15	Nil

Mortars

Type	Round	Damage	Pen
60mm	HE	C:5, B:25	Nil
IFR: 4 km	WP	C:2, B:15	Nil
Mag: 1i	ILLUM	B:505	Nil
81mm	HE	C:8, B:30	–4C
IFR: 4.5 km	WP	C:2, B:25	Nil
Mag: 1i	ILLUM	B:1255	Nil
120mm US	HE	C:16, B:55	–2C
IFR: 7 km	WP	C:3, B:45	Nil
Mag: 1i	ILLUM	B:1875	Nil
	ICMDP	B:45	Grenade*
	CHEM	C:3, B:15	Nil
120mm	HE	C:16, B:55	0C
IFR: 6 km	WP	C:3, B:45	Nil
Mag: 1i	ILLUM	B:1875	Nil
	CHEM	C:3, B:15	Nil

*See Submunitions (ICM), page 207.

FASCAM Density Table

Type	Density	Dimensions of Mined Area
RDAAM	.01	250m (25 squares) by 250m
RDADM	.04	250m (25 squares) by 250m

Density is in mines per 10-meter grid square.

Burn Damage

Source	Damage
WP	2D6
Thermite	2D6
Fuel	1D6
Structure/ grass fire	1D6

All damage dice are *per second*, except for structure/grass fire, which is *per turn.*

Autocannon

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
20mm	10	100B	250	API	10	3/–2/–5
			250	HE	C:1, B:3	–8C
23mm	10	100B	250	API	10	–2/–4/–6
			250	HE	C:1, B:3	–8C
25mm	5	100B	250	APFSDSDU	14	13/9/3
			250	API	14	4/0/–2
			250	HE	C:1, B:3	–8C
30mm	5	100B	250	API	16	5/1/–2
			250	HE	C:1, B:3	–6C
30mm Rarden	5	100B	250	APDS	16	8/3/–2
			250	HE	C:1, B:3	–6C
82mm Vasilek*	5	5	200	HE	C:8, B:35	–4C
IFR: 3km			200	HEDP	C:7, B:25	15C
			200	WP	C:2, B:25	Nil
			—	ILLUM	B:1255	Nil

*The Vasilek is normally labeled a mortar.

Grenade Launchers

Type	ROF	Rng	IFR	Rnd	Dam	Pen
M203/	1	100	400	HE	C:3, B:15	Nil
HK-69	1	100	400	HEDP	C:3, B:15	4C
		30	—	Flechette	12*	1-Nil
		100	400	CHEM	C:1, B:5	Nil
		100	400	ILLUM	B:125	Nil
BG-15	1	100	300	HE	C:3, B:15	Nil
		100	300	HEDP	C:3, B:15	4C
		100	300	CHEM	C:1, B:5	Nil
		100	300	ILLUM	B:125	Nil
Mk-19	5	200	3 km	HVHE	C:3, B:15	Nil
		200	3 km	HVHEDP	C:3, B:15	4C
AGS-17	5	150	1700	HE	C:2, B:15	Nil

*At short range. See Shotguns and Flechettes, page 204.

Howitzers

Type	Round	Rng	Damage	Pen
122mm	HE	300	C:16, B:35	1C
IFR: 15 km	HEAT	300	C:10, B:25	100C
Rld: 1	WP	300	C:3, B:45	Nil
	Chem	300	C:3, B:15	Nil
	ICM	—	B:45	Grenade*
	ILLUM	—	B:1875	Nil
152mm	HE	300	C:24, B:45	3C
IFR: 19 km	APHE	350	C:8, B:15	80C
Rld: 2	WP	300	C:3, B:55	Nil
	Chem	300	C:3, B:35	Nil
	ICM	—	B:75	Grenade*
	ILLUM	—	B:2505	Nil
155mm	HE	350	C:30, B:45	3C
IFR: 24 km	HEAT	350	C:20, B:35	110C
Rld: 2	WP	350	C:3, B:55	Nil
	Chem	350	C:3, B:35	Nil
	ICMDP	—	B:75	Grenade*
	ILLUM	—	B:2505	Nil
	FASCAM	—	B:155	Mine

*See Submunitions (ICM), page 207.

Fragmentation Attack

Fragmentation Radius	Range	Mult. Frag.	One Fragment	Miss	Dam	Pen
Primary burst radius	1×Burst	1–3	4–6	7–10	2D6	1
Secondary burst radius	2×Burst	1	2	3–10	1D6	Nil

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Antitank Missiles

Type	Rld	Max. Rng	Damage	Pen
Tank Breaker	2	2000	C:6, B:5	90C
TOW 2A	2	3500	C:12, B:15	220C/180C*
TOW 2B	2	3500	C:12, B:15	120C×2
AT-3 "Sagger"	2	3000	C:6, B:5	70C
AT-5 "Spandrel"	2	3500	C:12, B:15	140C
AT-4 "Spigot"	3	2000	C:6, B:5	90C
AT-7 "Saxhorn"	2	1000	C:12, B:15	100C
AT-8 "Songster"	6	5000	C:12, B:15	130C
AT-10	6	3000	C:6, B:5	80C
Reflecks (AT-11 "Sniper")	6	5000	C:12, B:15	170C/130C*
Dragon PIP	2	1000	C:12, B:15	135C
MILAN II	3	2000	C:12, B:15	145C
MILAN II-T	3	2000	C:12, B:15	110C
HOT	2	4000	C:12, B:15	155C
Swingfire	2	4000	C:12, B:15	140C

*vs. reactive armor/vs. other armor

Large-Caliber Guns

Type	Round	Rng	Damage	Pen
100mm	APDS-T	350	26	70/60/50/30
Rld: 1	APHE	300	C:6, B:15	55/45/35/25
	HEAT	250	C:4, B: 5	60C
	WP	250	C:3, B:25	Nil
105mm	APFSDS	500	26	80/70/60/40
Rld: 1	APFSDSDU	500	26	100/90/80/60
	HEAT	400	C:6, B:15	80C
	WP	400	C:3, B:25	Nil
	Flech (LC)	500	*	1-Nil
120mm Smth	APFSDS	500	28	110/100/90/70
Rld: 1	APFSDSDU	500	28	150/140/130/110
	HEAT	400	C:10, B:25	110C
	WP	400	C:3, B:45	Nil
120 Rfld L30	APFSDS	600	28	110/100/90/70
Rld: 1	APFSDSDU	600	28	150/140/130/110
	HESH	450	C:14, B:25	100C
125mm	APFSDS	450	28	100/90/80/60
Rld: 2	APFSDSDU	450	28	110/100/90/70
	HEAT	400	C:10, B:25	110C
	HE	400	C:14, B:35	1C

*See Shotguns and Flechettes, page 204.

Rocket Launchers

Type	ROF	Rld	Rng	Round	Damage	Pen
RPG-16	1	2	100	HEAT	C:6, B:5	65C
Armbrust	1	*	75	HEAT	C:4, B:5	55C
RPG-18	1	*	75	HEAT	C:4, B:5	60C
RPG-75	1	*	100	HEAT	C:4, B:5	55C
LRAC F1	1	2	125	HEAT	C:4, B:5	70C
M72A1 LAW	1	*	50	HEAT	C:3, B:5	55C
LAW 80	1	*	125	HEAT	C:6, B:5	100C
Carl Gustav	1	2	150	HEAT	C:4, B:5	70C
M136	1	2	75	HEAT	C:4, B:5	70C
Folgore	1	2	100	HEAT	C:4, B:5	70C
M12 SMAW	1	2	100	HEAT	C:4, B:5	55C
			125	HE	C:12, B:15	5C

*Single-shot disposable; cannot be reloaded.

Submunition (ICM) Attack

Round	Close	Adjacent	Concussion	Burst	Pen
120mm ICMDP	1-2	1-2	3	15	4C
122mm ICM	1-3	1-2	3	15	Nil
152mm ICM	1-4	1-3	3	15	Nil
155mm ICMDP	1-4	1-3	3	15	4C
203mm ICMDP	1-5	1-4	3	15	4C

ICM Direct Hit Chance: Personnel, 1; vehicle, 1-5 on 1D10.

Sample Burst Diagrams (10-Meter Grid)

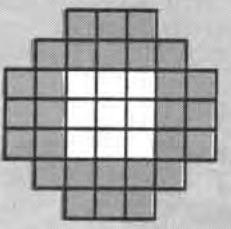
Primary

Secondary

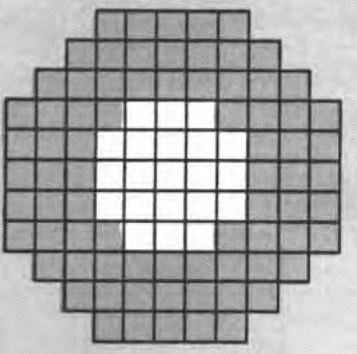
Five-Meter Burst



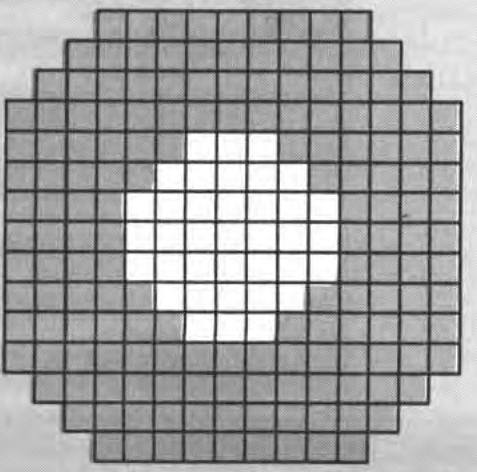
15-Meter Burst



25-Meter Burst



35-Meter Burst



Conny Delshagen (order #3265201)

Vehicle Damage Resolution

Pen–AV	*Result*
0 or less	No effect
1 to 10	1 minor damage result
11 to 20	2 minor damage results
21 to 40	1 major damage result
41 to 60	2 major damage results
61 or more	3 major damage results

Pen–AV: Penetration minus Armor Value.

Vessel Damage

Waterline

Die	*Minor Result*
1	Waterline hull
2	Waterline hull
3	Waterline hull
4	Waterline hull
5	Cargo
6	Major waterline

Die	*Major Result*
1	2 crewmembers
2	Rudder/screw
3	Engine
4	Fuel
5	Ammo
6	Minor hull

Hull

Die	*Minor Result*
1	1 crewmember
2	1 crewmember
3	Auxiliary mach.
4	Auxiliary mach.
5	Secondary
6	Major hull

Die	*Major Result*
1	Main armament
2	Main armament
3	2 crewmembers
4	2 crewmembers
5	Ammo
6	Fire

Superstructure

Die	*Minor Result*
1	1 crewmember
2	Radio/radar
3	Sight/vision
4	Secondary
5	Secondary
6	Major s'structure

Die	*Major Result*
1	2 crewmembers
2	2 crewmembers
3	Fire
4	Fire
5	Ammo
6	Major hull

Vehicle Damage

Turret

Die	*Minor Result*
1	1 crewmember/loader*†
2	1 crewmember/sensor†
3	Sight/Vision
4	Traverse
5	Secondary
6	Major turret

Die	*Major Result*
1	2 crewmember/main arm.†
2	2 crewmember/main arm.†
3	Main armament
4	Main armament
5	Ammo
6	Minor hull

Hull

Die	*Minor Result*
1	1 crewmember
2	Loader*
3	2 passengers**
4	2 passengers**
5	Radio
6	Major hull

Die	*Major Result*
1	Engine
2	Engine
3	Fuel
4	Fuel
5	Ammo
6	Ammo

*Loader is either a hit on the auto-loader mechanism or the actual crewmember loading the gun. This becomes a driver hit if neither are present.

**2 passengers becomes a 1 crewmember hit if this is not a passenger-carrying vehicle. If it is a passenger-carrying vehicle but no passengers are present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

†If turret is an unmanned remote turret, use the result after the slash.

Conny Delshagen (order #3265201)

Language List

Family	Group	Language
Germanic	Anglic	English
	West Germanic	German
		Dutch
		Yiddish
		Flemish
	North Germanic	Danish
		Swedish
		Norwegian
Romance	East Romance	Italian
		Romanian*
	West Romance	Spanish
		French
		Portuguese
	E & W Romance	Latin
Celtic	Goidelic	Scots Gaelic
	Brythonic	Welsh
		Gaelic
Greek	Greek	Greek
Balto-Slavic	Baltic	Lithuanian*
		Latvian*
	East Slavic	Russian*
	West Slavic	Polish*
		Czech*
		Slovak*
	South Slavic	Serbo-Croat
		Bulgarian*
		Slovenian
		Macedonian
Albanian	Albanian	Albanian
Armenian	Armenian	Armenian*
Indo-Iranian	Indic	Hindi-Urdu
		Bengali
		Romany (Gypsy)
	Iranian	Taijik*
		Parsi (Persian)

Family	Group	Language
Caucasian	South Caucasian	Georgian*
Sino-Tibetan	Sinitic	Mandarin†
		Cantonese†
	Tibeto-Burman	Thai
		Burmese
Semito-Hamitic	Semitic	Arabic
		Hebrew
	Hamitic	Berber
		Hausa
Dravidian	Dravidian	Tamil
Japanese	Japanese	Japanese
Altaic	Turkic	Turkish
		Azerbaijani*
		Uzbek*
		Kazakh*
		Tartar*
		Chuvash*
		Kirzig*
		Turkoman*
	Ugric	Hungarian*
	Finnic	Finnish
		Estonian*
		Mordvinian*
Vietnamese	Vietnamese	Vietnamese
Mon-Khmer	Mon-Khmer	Cambodian
Korean	Korean	Korean
Bantu	Bantu	Swahili
Mayalo-Polynesian	W. Mayalo-Polynesian	Malay-Indonesian
Amerindian	South Amerindian	Maya
	Athabascan	Navaho
	Uto-Aztecan	Nahuati

*Eastern Bloc language.

†These two languages (Mandarin and Cantonese) are mutually unintelligible in their spoken form, but they are 100% intelligible in their written form.

Conny Delshagen (order #3265201)

Equivalent Ground Forces Ranks in Selected Armies

U.S. Army	*British Army*	*German Army*	*Czech Army*
Private	Private	Soldat	Vojin
Spec 4	Lance corporal	Gefreiter	Svobodnik
Sergeant	Corporal	Unteroffizier	Desatnik
Staff sergeant	Sergeant	Feldwebel	Cetar
Platoon sergeant	Staff sergeant	Oberfeldwebel	Rotny
Master sergeant	Sergeant major	Stabsfeldwebel	Rotmistr
Sergeant major	Regt. sergeant major	Hauptfeldwebel	Nadrotmistr
2nd lieutenant	2nd lieutenant	Leutnant	Porucik
1st lieutenant	1st lieutenant	Oberleutnant	Nadporucik
Captain	Captain	Hauptmann	Kapitan
Major	Major	Major	Major
Lieutenant colonel	Lieutenant colonel	Oberstleutnant	Podplukovnik
Colonel	Brigadier	Oberst	Plukovnik

U.S. Army	*Bulgarian Army*	*Hungarian Army*	*Polish Army*
Private	Rednik	Honved	Szeregowiec
Spec 4	Efreytor	Örvezetö	Starszy szeregowiec
Sergeant	Mladshi serzhant	Tizedes	Plutunowy
Staff sergeant	Serzhant	Szakaszvezetö	Sierzant
Platoon sergeant	Starshi serzhant	Örmester	Starszy sierzant
Master sergeant	Starshina	Törzsörmester	Sierzant sztabowy
Sergeant major	—	Fötörzsörmester	Starszy sierzant sztabowy
2nd lieutenant	Leytenant	Hadnagy	Podporucznik
1st lieutenant	Starshi leytenant	Föhadnagy	Porucznik
Captain	Kapitan	Szazados	Kapitan
Major	Mayor	Örnagy	Major
Lieutenant colonel	Podpolkovnik	Alezredes	Podpulkownik
Colonel	Polkovnik	Ezredes	Pulkownik

U.S. Army	*Romanian Army*	*French Army*	*Soviet Army*
Private	Soldat	Soldat	Armeyets
Spec 4	Soldat-fruntas	Caporal	Yefreytor
Sergeant	Sergeant	Sergent	Serzhant
Staff sergeant	Sergeant major	Sergent	Serzhant
Platoon sergeant	Plutonier	Sergent	Starshiy serzhant
Master sergeant	Plutonier major	Sergent	Starshina
Sergeant major	Plutonier adjutant	Sergent-chef	Starshina
2nd lieutenant	Locotenent	Sous-lieutenant	Mladshiy leytenant
1st lieutenant	Locotenent major	Lieutenant	Starshiy leytenant
Captain	Captain	Captaine	Kapitan
Major	Major	Major	Major
Lieutenant colonel	Locotenent colonel	Lieutenant colonel	Podpolkovnik
Colonel	Colonel	Colonel	Polkovnik

Conny Delshagen (order #3265201)

U.S. Enlisted and NCO Ranks

Army	*Marines*	*Navy*	*Air Force*
Private	Private	Seaman	Airman
Spec 4	Lance corporal	Petty officer 3rd class	Senior airman
Sergeant	Sergeant	Petty officer 2nd class	Sergeant
Staff sergeant	Staff sergeant	Petty officer 1st class	Staff sergeant
Platoon sergeant	Gunnery sergeant	Chief petty officer	Technical sergeant
Master sergeant	Master sergeant	Senior CPO	Master sergeant
Sergeant major	Sergeant major	Master CPO	First sergeant

Army/Nationality/Native Language

U.S.	*Language*
American	English
	(2 Spanish)
	(1 German)
	(1 Italian)
	(1 Polish)
	(1 Yiddish)
British	
English	English
Welsh	English
	(2 Welsh)
Scottish	English
	(3 Scots Gaelic)
Irish	English
	(2 Gaelic)
Canadian	
Anglo-Canadian	English
	(3 French)
French-Canadian	French
	(3 English)

German	*Language*
German	German
Danish	
Danish	Danish
Polish (Eastbloc army)	
Polish	Polish
Hungarian (Eastbloc army)	
Hungarian	Hungarian
	(1 German)
	(1 Romany)
Czech (Eastbloc army)	
Czech	Czech
	(2 Slovak)
	(1 Hungarian)
	(1 Romany)
Slovak	Czech
	(8 Slovak)
	(1 Hungarian)
	(1 Romany)
Soviet (Eastbloc army)	
See Soviet Nationalities List.	

Vehicles

Die	Vehicle
1	3/4-ton truck
2	3/4-ton truck
3	HMMWV
4	HMMWV
5	HMMWV
6	2 1/2-ton truck
7	2 1/2-ton truck
8	5-ton truck
9	5-ton tank truck
10	LAV-25
11	M113A3
12	M977 HEMTT
13	M2A2 Bradley
14	M2A2 Bradley
15	M1
16	M8 AGS
17	M1A1
18	M1A2

This table is for US personnel. The referee may substitute equivalent vehicles for other nationalities as necessary.

Soviet Nationalities

Russian	Kazakh
Azerbaijani	Chuvash
Ukrainian*	Armenian
Byelorussian*	Estonian
Georgian	Kirgiz
Uzbek	Tartar
Lithuanian	Mordvinian
Romanian	Taijik
Latvian	Turkoman

*Ukrainians and Byelorussians also speak Russian.

U.S. Commissioned Officer Ranks

Navy	*Others*
Ensign	2nd lieutenant
Lt. junior grade	1st lieutenant
Lieutenant	Captain
Lt. commander	Major
Commander	Lt. colonel
Captain	Colonel

NCO Skills

Leadership
Instruction
Persuasion

Secondary Activities

Acrobatics (dance or gymnastics)
Archery
Climbing (rock climbing)
CON +1 (jogging)
Disguise (neighborhood theater)
Early Firearms (historical re-enactment)
EDU +1 (adult education/night school)
Ground Vehicle (Motorcycle)
Ground Vehicle (Wheeled)
Language
Medical (Trauma Aid) (CPR and first aid lessons)
Observation (bird watching)
Parachute (skydiving)
Pilot (flying lessons)
Riding
Scuba (skindiving)
Small Arms (target shooting)
Small Watercraft (boating)
Snow Skiing
STR +1 (weight lifting)
Survival (camping)
Swimming
Tracking (hunting)
Unarmed Martial Arts

Conny Delshagen (order #3265201)

Skill List

Skill	*Controlling Attribute*	*Definition*
Acrobatics	AGL	Ability to precisely control body motions and actions.
Aircraft Mechanic	STR	Ability to repair and maintain aircraft.
Archery	STR	Ability to use a bow.
Armed Martial Arts	STR	Ability to use various melee weapons in combat.
Autogun	STR	Ability to fire autocannons (automatic cannons), automatic grenade launchers, and machineguns.
Biology	EDU	Knowledge of plant and animal biology.
Chemistry	EDU	Knowledge of chemical interactions and compounds.
Climbing	CON	Ability to climb building walls, steep slopes, and sheer cliffs.
Combat Engineer	CON	Ability to perform tasks such as emplacing demolitions, building fortifications, and camouflaging emplacements.
Computer	EDU	Ability to operate and program a computer.
Construction	EDU	Ability to plan/supervise construction of buildings, roads, and bridges.
Disguise	CHR	Ability to alter appearance to avoid recognition.
Electronics	EDU	Ability to repair electronic devices.
Excavation	EDU	Ability to supervise the excavation of safe and stable large holes in the ground, such as mines.
Farming	INT	General knowledge of growing food crops and raising livestock.
Forgery	AGL	Ability to forge a signature or document and have it accepted as genuine.
Forward Observer	INT	Ability to communicate fire data for indirect fire weapons.
Geology	EDU	Knowledge of rock formations and minerals.
Grenade Launcher	STR	Ability to fire non-automatic grenade launchers, mortars, and unguided antitank rockets.
Ground Vehicle	AGL	Ability to operate a vehicle that moves by means of wheels or tracks. Cascade skill: (*Wheeled*, *Tracked*, *Motorcycle*).
Gunsmith	AGL	Ability to construct and repair weapons.
Heavy Artillery	STR	Ability to fire large-caliber indirect-fire guns, including mortars, howitzers, and multiple-rocket launchers.
Heavy Gun	STR	Ability to fire large-caliber direct-fire guns, including AFV guns.
Hovercraft	AGL	Ability to operate a hovercraft.
Instruction	CHR	Ability to teach skills.
Interrogation	CHR	Ability to persuade or force a prisoner to reveal information.
Intrusion	AGL	Ability to open a lock, including key locks, combination locks, and electronic locks.
Language	CHR	Ability to speak and understand a given language. A specific language must be chosen.

Conny Delshagen (order #3265201)

Skill List

Skill	*Controlling Attribute*	*Definition*
Leadership	CHR	Ability to inspire followers.
Machinist	AGL	Ability to use machine tools (such as lathes, punch presses, etc.) to fabricate other machinery.
Mechanic	STR	Ability to maintain and repair vehicles and machinery.
Medical	EDU	Ability to render first aid/medical care to injured or sick characters. Cascade skill: (*Diagnosis*, *Trauma Aid*, *Surgery*).
Metallurgy	EDU	Knowledge of smelting ore into metal, forming alloys, and fundamental metal-working.
Meteorology	EDU	Understanding of weather and the forces governing it.
Navigation	INT	Ability to determine correct position and direction of travel using maps, compass, landmarks, the stars, etc.
Observation	INT	Ability to spot concealed enemies and avoid ambushes.
Parachute	CON	Ability to use a parachute.
Persuasion	CHR	Ability to phrase arguments in ways best calculated to gain acceptance.
Pilot	AGL	Ability to fly aircraft. Cascade skill: (*Fixed-Wing*, *Rotary-Wing*).
Riding	CON	Ability to ride a horse.
Scrounging	INT	Ability to find man-made items such as spare parts, domestic food, ammunition, etc.
Scuba	CON	Ability to use an aqua-lung or rebreather. Skill level may not exceed character's Swimming skill.
Small Arms	STR	Ability to use small arms (pistols, rifles, shotguns, etc.). Cascade skill: (*Pistol*, *Rifle*).
Small Watercraft	CON	Ability to operate small boats, including oar-driven, wind-driven, and small (under 20 meters) motor boats.
Snow Skiing	AGL	Ability to travel using snow skis.
Stealth	AGL	Ability to move silently and without being spotted.
Survival	INT	Ability to find food in the wild, including knowledge of what plants are edible and where to find them, and the ability to set snares and traps, and the ability to catch or trap fish.
Swimming	CON	Ability to swim.
Tac Missile	AGL	Ability to fire a guided tactical missile launcher.
Thrown Weapon	STR	Ability to hit a target with a thrown weapon, such as a knife, rock, or grenade.
Tracking	INT	Ability to follow vehicles, humans, or animals by the traces they leave behind them.
Unarmed Martial Arts	STR	Ability to conduct hand-to-hand combat.
Warhead	AGL	Ability to arm, disarm, and repair both conventional and nuclear warheads.

Conny Delshagen (order #3265201)

Personal Weapons

Albania
PPSh submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
Tokarev pistol

Belgium
FN-FNC assault rifle
MAG machinegun
HP-35 pistol

Bulgaria
PPSh-41 submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
PM Makarov pistol

Canada
Sterling submachinegun
M16 assault rifle
C3 Parker-Hale sniper rifle
M249 automatic rifle
M60 machinegun
M9 or M1911A1 pistol

Czechoslovakia
Vz-24 submachinegun
AK-74 assault rifle
Vz-54 sniper rifle
RPK-74 automatic rifle
Vz-59 machinegun
Vz-52 pistol

Denmark
Uzi submachinegun
G3 battle rifle
MG3 machinegun
HP-35 pistol

Finland
M71 assault rifle
PK machinegun
PM Makarov pistol

France
MAT-49 submachinegun
FA-MAS assault rifle
FR-F1 sniper rifle
AAT-52 machinegun
PA-15 pistol

Germany
G11 submachinegun
PSG1 sniper rifle
HK-CAW shotgun
MG3 machinegun
P7 M13 pistol

Greece
FN-FAL battle rifle
MAG machinegun
M1911A1 pistol

Hungary
AKR or AMD-65 submachinegun
AKMR assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
M1933 Tokarev pistol

Italy
M12 submachinegun
AR-70 assault rifle
MAG machinegun
M92S (M9) pistol

Yugoslavia
PPSh-41submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
M1933 Tokarev pistol

Netherlands
Uzi submachinegun
FN-FAL battle rifle
MAG machinegun
HP-35 pistol

Norway
G3 battle rifle
M249 automatic rifle
MAG machinegun
HP-35 pistol

Poland
AKR submachinegun
AK-74 assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
P-64 pistol

Romania
AMD-65 submachinegun
AKM assault rifle
SVD sniper rifle
RPK automatic rifle
PK machinegun
PM Makarov pistol

Turkey
M3A1 submachinegun
G3 battle rifle
M21 sniper rifle
M60 machinegun
M1911A1 pistol

UK
L2A3 Sterling submachinegun
L85 (IWS) assault rifle
L42 sniper rifle
L86A1 (LSW) automatic rifle
L7A2 (MAG) machinegun
HP-35 pistol

USA
M231 submachinegun
M177 carbine
M16 assault rifle
M21 sniper rifle
HK-CAW shotgun
M249 automatic rifle
M60 machinegun
M9 or M1911A1 pistol

USSR
AKR submachinegun
AK-74 assault rifle
SVD sniper rifle
RPK-74 automatic rifle
PK machinegun
PM Makarov pistol

Conny Delshagen (order #3265201)

Character Generation Worksheet

1. Name _____

2. Gender _____

3. Nationality _____

4. Native Languages
(See Army/Nationalty/Native Language Table.)

_____

_____

5. Basic Attributes (2D6–2. Roll 0 over. If total is less than 30, may add points as desired to bring total up to 30. Alternatively, allocate a total of 32 points; no attribute less than 1 or greater than 10. Aging and/or activities may raise or lower certain attributes.)

Attribute	*Roll*	*Adj*	*Final*
Strength (STR)	____	____	____
Agility (AGL)	____	____	____
Constitution (CON)	____	____	____
Intelligence (INT)	____	____	____
Education (EDU)	____	____	____
Charisma (CHR)	____	____	____

Roll: Roll/allocation *Adj:* Adjustment.

6. Background Skills

_____+2
_____+2
_____+2
_____+2

Background Skill List

- Language*
- Swimming
- Ground Vehicle (Wheeled)
- Computer
- Unarmed Martial Arts
- Riding
- Survival
- Small Watercraft
- Ground Vehicle (Motorcycle)
- Tracking
- Farming

*Language is in addition to any native language(s) the character has as a result of nationality choice.

7. Careers

1st Term _____
Scndry Act _____ Promo? ____
Contact _____
2nd Term _____
Scndry Act _____ Promo? ____
Contact _____
3rd Term _____
Scndry Act _____ Promo? ____
Contact _____
4th Term _____
Scndry Act _____ Promo? ____
Contact _____
5th Term _____
Scndry Act _____ Promo? ____
Contact _____
6th Term _____
Scndry Act _____ Promo? ____
Contact _____

8. Skills

Skill Name	*Level*

9. Initiative _____

Regular military=1D6.
Reserve military=1D6+2, round up.
Drafted military, Civilian=1D6+2, round down.

Initiative Modifiers: +1 ranger, airborne, special forces, force recon, sniper; –1 support, air force enlisted, aviation enlisted, military intelligence, civilian.

These modifiers never modify a character's Initiative to less than 1.

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10. Rads _____

Military=1D6 per 2×Initiative.
Civilian=1D6×1D10.

11. Age _____

Age=17+(Terms×4).

Terms	*End Age*	*Term Skills*	*Losses STR*	*AGL*	*CON*	*INT*
—	17	8*	—	—	—	—
1	21	N**	—	—	—	—
2	25	5	—	—	—	—
3	29	4	—	—	—	—
4	33	3	—	Y	—	—
5	37	2	—	Y	—	—
6	41	1	Y	Y	—	—
7	45	1	Y	Y	—	—
8	49	1	Y	Y	Y	—
9	53	1	Y	Y	Y	—
10	57	1	Y	Y	Y	—
11	61	1	Y	Y	Y	—
12	65	1	Y	Y	Y	Y

* Background Skills
** First Term Package

12. Hit Capacity _____

Head=CON×2.
Chest=(STR+CON)×3.
Other=(STR+CON)×2.

13. Weight _____

Male=80+[4×(STR–AGL)].
Female=65+[4×(STR–AGL)].

14. Load _____

Load=3×(STR+CON).

15. Throw Range _____

Throw range=4×STR.

16. Unarmed Combat Damage

_____

Unarmed combat damage=
Melee Combat (Unarmed)×STR+10, round down.

17. Equipment Allowance

_____

Equipment allowance=
5000×military terms, ×2 if officer.

Conny Delshagen (order #3265201)

Character Record Sheet

Player _____ Age _____ Initiative _____

Character _____ Service Branch _____ Rank _____

Nationality _____ Weight _____ Rads _____

Gender _____ Throw Range _____ Load _____

Attributes and Skills

Strength _____
Aircraft Mechanic _____
Archery _____
Armed Martial Arts _____
Autogun _____
Grenade Launcher _____
Heavy Artillery _____
Heavy Gun _____
Mechanic _____
Small Arms (Pistol) _____
Small Arms (Rifle) _____
Thrown Weapon _____
Unarmed Martial Arts _____

Education _____
Biology _____
Chemistry _____
Civil Engineer _____
Computer _____
Electronics _____
Excavation _____
Geology _____
Medical (Diagnosis) _____
Medical (Trauma Aid) _____
Medical (Surgery) _____
Metallurgy _____
Meteorology _____

Constitution _____
Climbing _____
Combat Engineer _____
Parachute _____
Riding _____
Scuba _____
Small Watercraft _____
Swimming _____
_____

Charisma _____
Disguise _____
Instruction _____
Interrogation _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Language (_____) _____
Leadership _____
Persuasion _____
_____

Agility _____
Acrobatics _____
Forgery _____
Ground Vehicle (Motorcycle) _____
Ground Vehicle (Tracked) _____
Ground Vehicle (Wheeled) _____
Gunsmith _____
Hovercraft _____
Intrusion _____
Machinist _____
Pilot (Fixed-Wing) _____
Pilot (Rotary-Wing) _____
Snow Skiing _____
Stealth _____
Tac Missile _____
Warhead _____
_____

Intelligence _____
Farming _____
Forward Observer _____
Navigation _____
Observation _____
Scrounging _____
Survival _____
Tracking _____
_____

Contacts

Derived Values

Throw [ ] Range [ ] Weight Load [ ]

Unarmed Combat Damage [ ]

Hit Capacity

	Current	Scratch	(Base) Slight	Serious	Critical
Head					+
Chest					+
Abdomen					+
Right Arm					+
Left Arm					+
Right Leg					+
Left Leg					+

Equipment

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Conny Delshagen (order #3265201)

Encounters

	Terrain					
Die	Road	Wood	Swamp	Hill	Clear	River
0	Group	Group	Group	Group	Group	Group
1	Group	Group	Group	Group	Group	Group
2	Group	Animal	Item	Animal	Item	Item
3	Group	Group	Group	Item	Animal	Hazard
4	Item	Animal	Animal	Group	Group	Hazard
5	Item	Item	None	Animal	Item	None
6+	None	None	None	None	None	None

Group Encounters

Group	Org.	Ind.	Ins.	Ter.	An.	Dev.	Dsp.	Cnt.
Marauders	1	1	1,2	1,2	1,2	1,2	1	—
Patrol	2,3	2	—	—	3	3	2,3	1,2
Mil. convoy	4,5	—	—	—	—	4,5	4,5	3,4
Merchants	6	3,4	3	—	—	—	—	5
Refugees	—	—	—	3,4	4,5	—	6,7	—
Slavers	—	5	4	5	6	6	—	—
Hunters	7	6,7	5,6	6	7	7	—	6
Primitives	—	—	7	7	8	8,9	—	—
Smugglers	8	8	8	8	9	—	—	7
Large unit	9	9	9	9	—	—	8,9	8,9
Stragglers	10	10	10	10	10	10	10	10

Item Encounters

Item	Org.	Ind.	Ins.	Ter.	An.	Dev.	Dsp.	Cnt.
Village	1,2	1,2	1,2	1,2	1	—	1	1
Ruined village	—	—	—	3	2	1,2	2	—
Farm	3,4	3,4	3	4	3	—	3	2
Ruined farm	—	5	4	5,6	4	3,4	4	3
Roadblock/ camp	5,6	6,7	—	7	—	—	5	4
Supply dump	7	—	—	—	—	—	6	5
Abandoned supply dump	—	—	5	—	5	5	—	6
Repair yard	8	—	—	—	—	—	7	7
Abandoned repair yard	—	—	6	—	6	6	—	8
Field hospital	9	8	—	—	—	—	8	9
Abandoned field hospital	—	—	7	—	7	7	—	10
Crater	10	9	8	8	8	8	—	—
Derelict vehicle	—	10	9	9	9	9	9	—
Derelict convoy	—	—	10	10	10	10	10	—

Territories

Die	Territory	DM
1	Organized	–1
2	Independent	0
3	Insular	0
4	Terrorized	0
5	Anarchy	+1
6	Devastated	+2
7	Disputed	–1
8	Cantonment	–1

Encounter Range

Terrain	Range
Open	1D10×300m
Hill	1D10×100m
Swamp	1D10×30m
Woods	1D10×10m

Spotting Modifiers

Condition	Own	Enemy
Per character	–1	+1
Per vehicle	–5	+5



Conny Delshagen (order #3265201)

Item Information

Item	*People*	*Type*	*Weapons*	*Goods*
Village	See pages 167-168.			
Ruined village	None	—	—	1-2: Food, 3-4: Mrcht
Farm	2D6	X/N	Civilian	Food
Ruined farm	None	—	—	1-2: Food
Roadblock/camp	Patrol/marauder band (see Encounter Statistics Table below).			
Supply dump	3D6	X/N	Military	Military
Abandoned supply dump	None	—	—	1-2: Military
Repair yard	3D6	X/N	Military	Parts, vehicles
Abandoned repair yard	None	—	—	Derelict, 1-4: Parts
Field hospital	3D6	X/N	Military	Medical
Abandoned field hospital	None	—	—	1-3: Medical
Crater	None	—	—	—
Derelict vehicle	None	—	—	—
Derelict convoy	None	—	—	1-2: Mil, 3-4: Mrcht

Encounter Statistics

Group	*Number*	*Observation*	*Type*	*Weapons*	*Heavy Weapons*	*Transport*
Marauders	1D6×1D6	80	X/N	Military	1-3	1-2: H, 3-4: V
Patrol	1D6+6	80	V/X	Military	1-4	1-2: H, 3: V, 4: A
Military convoy	1D6×6	60	X/N	Military	1-2 each	1-2: W, 3-6: V
Merchants	1D6×4	80	V/X	Civilian	1 each	1-4: W, 5-6: V
Refugees	1D6×5	40	N	Poor	None	None
Slavers	1D6+4	80	V/X	Military	1-2	1-4: H
Hunters	1D6	60	X/N	Civilian	None	1-2: H
Primitives	2D6	60	X/N	Poor	None	None
Smugglers	2D6	60	X/N	Civilian	None	1-2: H, 3-4: W, 5-6: V
Large unit	1D10×10	80	V/X	Military	Yes, each	1: A, 2: H, 3: V, 4: Arty
Stragglers	1D6	60	X/N	Military	None	1: H

Transport Abbreviations: *H:* Horse *V:* Motor vehicle *W:* Wagon *A:* Armored vehicle *Arty:* Artillery.

Encounter Equipment

Die	*Heavy Weapons*	*Artillery*	*Motor Vehicles*	*Armored Vehicles*	*Military Cargo*	*Merchant Cargo*
1	AT missile	Rapira-3	5-ton	Tank	Ammo	Scrap metal
2	AT rocket	Mortar	5-ton	Light AFV	Parts	Machinery
3	Grenade launcher	Mortar	2½-ton	Light AFV	Medical	Food
4	Machinegun	Howitzer	2½-ton w/still	APC	Food	Wool
5	Machinegun	Howitzer	¾-ton	APC	Fuel	Clothing
6	Machinegun	SPA	UAZ-469	IFV	Weapons	Furnishings

SPA: Any self-propelled howitzer or air defense gun.
Tank: Any tank in the Equipment List.
Light AFV: Any light combat vehicle in the Equipment List.
APC: Any armored personnel carrier in the Equipment List except those listed below under IFV.
IFV: Infantry fighting vehicle—M-2 or any BMP variant.

Conny Delshagen (order #3265201)

Settlement Attitudes (1D6)

Die	Attitude
1	Friendly and curious
2	Friendly and curious
3	Open to contact
4	Neutral
5	Neutral
6	Suspicious
7	Frightened
8	Defensive
9	Hostile

Territory Die Roll Modifiers: +1, organized, devastated; +2, anarchy, disputed, cantonment; +3, insular, terrorized.

Settlement Crisis (1D10)

Die	Crisis
1	Food shortage
2	Engineer needed
3	Ammunition shortage
4	Impending attack
5	Internal unrest
6	Rampant corruption
7	Citizens kidnapped
8	Mechanic needed
9	Epidemic, doctor needed
10	Disease, medicine needed

Urban Government (1D6)

Die	Type
1	Federated
2	Federated
3	Popular council
4	Corrupt council
5	Popular council
6	Dictator
7	Warlord
8	Captive
9	Anarchy
10	Captive
11	Anarchy

Territory Die Roll Modifiers: +2, independent; +3, insular, disputed; +4, terrorized; +5, anarchy.

Terrain Effects on Movement

Unit	Open	Wood	Swamp	Hill	Mountain	Water
Humans	N	N	N	1/2	1/4	—
Animals	N	N	1/2	1/2	1/4	—
Vehicles	N	1/2	1/4	1/2	1/6	—
Hovercraft	1/2	1/2	N	1/2	—	N
Boats	—	—	1/2	—	—	N

N: Normal.
—: Prohibited.

Urban Encounters (1D6)

Die	Day	Night
1	None	None
2	None	None
3	None	None
4	Patrol	None
5	Patrol	Scavenger
6	Work gang	Thugs
7	Refugee	Gang
8	Scavenger	Primitives
9	Primitives	Dogs
10	Mob	Gang
11	Gang	Dogs

Government Type Die Roll Modifiers: +1, corrupt council; +2, captive, anarchy.
Settlement Size Die Roll Modifiers: +1, town; +2, city; +3, major city.

Foraging

Area	Winter	Spring	Summer	Fall
Wood/scrub	1	3	6	6
Meadow/swamp	0	1	2	2
Field	0	0	25	50
Fishing (1D6×)	1/2	2	1	1

Settlement Size (1D10)

Die	Village	Town	City	Major City
1	50	1000	10,000	30,000
2	100	1500	12,000	40,000
3	150	2000	14,000	50,000
4	200	2500	16,000	60,000
5	250	3000	18,000	70,000
6	300	3500	20,000	80,000
7	350	4000	22,000	90,000
8	400	4500	24,000	100,000
9	450	5000	26,000	110,000
10	500	5500	28,000	120,000
Armed	20%	10%	5%	5%

Conny Delshagen (order #3265201)

New To Old, Old to New

In the transition from **Twilight: 2000** 2nd edition to **Twilight: 2000** 2.2, we made quite a number of changes in skills, primarily to bring them into synch with **Traveller: The New Era**, but partly to make the system a little more rational.

CHANGES TO OLD SKILLS

Civil Engineer: Civil Engineer becomes Construction, without any other changes.

Fishing & Forage: Both of these skills are combined into the new Survival skill, of which more below.

Heavy Weapons: We deleted Heavy Weapons skill and replaced it with several more specific skills: Autogun, Grenade Launcher, Heavy Artillery, Heavy Gun, and Tac Missile. More on these below. This will enable players to fine-tune their characters a little more, and make them unique.

Horsemanship: Horsemanship becomes Riding, without changing definition.

Hunting Bow: Hunting Bow becomes Archery, with the change that it no longer covers crossbows.

Lockpick: Lockpick becomes Intrusion, without changing definition. This makes it clearer that it covers all means of breaking into locked places, not just picking locks.

Medical: The old Medical skill has become a cascade: Medical (Diagnosis), Medical (Trauma Aid), and Medical (Surgery). We feel this more accurately reflects the specialized nature of medical practice in the game.

Melee Combat (Armed): Melee Combat (Armed) becomes Armed Martial Arts, without changing definition.

Melee Combat (Unarmed): Melee Combat (Unarmed) becomes Unarmed Martial Arts, without changing definition.

Mining Engineer: Mining Engineer becomes Excavation, without changing definition.

Motorcycle: Motorcycle becomes a cascade of Ground Vehicle skill, or Ground Vehicle (Motorcycle), and thus shifts its controlling attribute from Constitution to Agility. We felt this was more rational than having it and tracked and wheeled as completely separate skills.

Mountaineering: Mountaineering becomes Climbing, without changing definition.

Small Boat: Small Boat becomes Small Watercraft, changing its controlling attribute from Agility to Constitution, without changing definition.

Tracked Vehicle: Tracked Vehicle becomes a cascade of Ground Vehicle skill, or Ground Vehicle (Tracked), without otherwise changing.

Wheeled Vehicle: Wheeled Vehicle becomes a cascade of Ground Vehicle skill, or Ground Vehicle (Wheeled), without otherwise changing.

NEW SKILLS

All the new skills are also in **Traveller**, and are compatible.

Acrobatics (AGL): Acrobatics is totally new, but plays a vital roll in unarmed melee combat. Fighters who wish to make optimum use of their Unarmed Martial Arts skill will need Acrobatics as well.

Autogun: Autogun skill is one of the replacements for the old Heavy Weapons skill, enabling the use of rapid-fire weapons such as machineguns, autocannon, and full auto grenade launchers.

Early Firearms (STR): Early Firearms is totally new, and enables the use of archaic firearms such as the black powder pistol and the crossbow (the use of which has more in common with firearms than with archery).

Grenade Launcher (STR): Grenade Launcher skill is one of the replacements for the old Heavy Weapons skill, enabling the use of grenade launchers and mortars (which can be understood better if you remember that one of the older names for mortar is "Grenade Discharger").

Heavy Artillery (STR): Heavy Artillery skill is one of the replacements for the old Heavy Weapons skill, and covers the operation of indirect fire weapons.

Heavy Gun (STR): Heavy Gun skill is one of the replacements for the old Heavy Weapons skill, covering the use of direct fire large-caliber weapons such as the main gun on a tank. It also covers recoilless rifles and direct fire antitank guns.

Hovercraft (STR): Hovercraft is new, and covers the operation of hovercraft. Hovercraft work differently from other vehicles, and we felt that they deserved their own skill.

Survival (INT): This is a skill from **Traveller**, and covers all aspects of staying alive and relatively healthy without the normal support apparatus civilization provides. Frankly, having Fishing as a separate skill was a little too specialized, and we felt that it was best combined into Survival, along with Foraging.

Tac Missile (AGL): Tac Missile skill is one of the replacements for the old Heavy Weapons skill, covering guided tactical missiles such as TOW or MILAN.

SIZE RATINGS

Traveller: The New Era players should note that the target size ratings have been made compatible with **Traveller: The New Era**, but have been given different names.

Twilight: 2000	Traveller
1	SM (Sub-Micro) and Mc (Micro)
2	VS (Very Small
3	S (Small)
4	M (Medium)
5	L (Large)

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Travel Movement

Unit	Move	Fuel	Maint #
Human	20/20	—	—
Horse	20/20	—	—
Mule	20/20	—	—
Camel	15/15	—	—
Elephant	10/5	—	—
Wagon/horse	20/5	—	1
Wagon/ox	10/5	—	1
Cart/horse	20/5	—	1
Cart/ox	10/5	—	1
Bicycle	65/15	—	1
Civilian car	215/35	80/20	2
HMMWV	215/85	90/30	2
UAZ-469	215/45	60/20	2
Motorcycle	195/85	16/8	2
2½-ton truck	175/35	195/65	4
5-ton truck	175/35	280/70	4
HEMTT 10-ton truck	175/65	600/200	4
¾-ton truck	195/35	90/30	2
5-ton tank truck	175/35	280/70	4
10-ton tank truck	175/65	600/200	4
M2A2 Bradley	130/110	660/220	8
M113A3	130/85	360/90	6
BMP-2	130/85	460/100	12
BMP-3	130/85	460/100	12
BTR-80	150/65	290/80	6
OT-64	195/85	320/80	6
Marder	150/110	650/185	10
Warrior	150/110	770/175	12
AMX-10P	130/85	530/115	12
AIFV	130/85	400/100	10
LAV-25	195/85	300/90	6
M8 Armored Gun System	150/130	570/170	10
BRDM-4	195/85	290/80	4
OT-65 FUG	175/65	200/60	4
M1	150/130	1900/1100	14
M1A1	130/110	1900/1200	14
M1A2	130/110	1900/600	16
Leopard I	130/85	955/200	8
Leopard 2 (I)	140/110	1200/315	14
Challenger 2	130/110	1800/500	16
M60A3	110/65	1400/280	10
M48A5	110/65	1400/280	10
EPC "Leclerc"	150/130	1300/350	14
C-1 "Ariete"	130/110	1400/350	12
T-55	100/65	950+380/190	8
T-72	150/110	1000+400/350	16
T-80	150/110	1000+400/350	18
T-90	150/110	1000+400/350	18
M109A2/A3	110/70	495/165	10
SO-122	130/80	540/135	10
SO-152	100/60	840/110	10
ZSO-30-4	100/60	880/220	12
KvP-92	240/195	420/60	24
SK-25	240/195	250/50	24
Very small open boat	4/4	—	1
Small sailing boat	8/8	—	2
Small motorboat	16/16	220/20	4
Medium motorboat	12/12	400/40	6
PBR	24/24	500/50	6
Torpedo boat	12/12	1800/110	10
River tugboat	8/8	1000/100	15
Barge	Towed	—	2

Move: On-road/off-road (cross-country) *Fuel:* Capacity/consumption per period.

Alcohol Output

Still Size	Input	Output
Small	30	5
Medium	80	35
Large	3000	2400

Input is in kilograms, and output is in liters.

Fuel Energy

Fuel	CM
Gas	1
Avgas	1
Diesel	1
Ethanol	3
Methanol	3.5
Wood	5
Coal	2

CM: Consumption multiplier.

Food Consumption

Human	1.5 kg MRE *or* 2 kg domestic *or* 3 kg wild
Horse	15 kg grain and graze 8 hrs
Mule	10 kg grain and graze 8 hrs
Ox	Graze 8 hrs
Camel	Graze 8 hrs
Elephant	Graze 8 hrs

Navigation Hazards

Die	Result
1	Boat aground. 10 miles travel lost pulling it off.
2	Boat aground. One full travel period lost pulling it off.
3	Screw or rudder damaged. Speed halved until repaired.
4	Hull damaged. 1D6+3 flotation hits.
5	Hull damaged. 1D6+2 flotation hits.
6	Hull crushed. Vessel is grounded to avoid sinking. Cannot be refloated unless a large work crew and vessel are brought to the site.

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Demolition

DP	Concussion/Penetration*
1	3
2	4
3	6
4	7
5	8
7	9
8	10
9	11
11	12
13	13
15	14
18	15
32	20
50	25
72	30
96	35
128	40
162	45
200	50

*Penetration is modified by emplacement. *Tamped:* Pen×2. *Laying on or Leaning Against:* Pen+2.

Armor Values of Cover

Cover	AV
Sandbag (250mm)	5*
2" wooden plank (50mm)	1
Timber house wall (200mm)	4
Cinder block wall (300mm)	9
Stone wall (300mm)	6
Thick stone wall (600mm)	12
Reinforced concrete	10**
Tree trunk (600mm)	12
Brick wall (100mm)	3
Thick brick wall (300mm)	9

*Per sandbag.
**Per 250mm.

Armor Equivalent

Material	Millimeters per Armor Value 1	Armor Value Constant
Armor plate	5	.2
Sheet steel	6	.16
Reinforced concrete	25	.04
Concrete and bricks	35	.03
Stone, packed dirt, wood	50	.02
Loose dirt	250	.004

Explosive Penetration Formulas

$C=5(\sqrt{DP+2})$. *C:* Concussion *DP:* Damage points.

$DP=2[(C+5)^2]$. *C:* Concussion *DP:* Number of damage points needed to arrive at a certain concussion.

Radiation Illness

Rads	Slight Illness	Serious Illness	Death
50	1.0	—	—
100	0.5	1.0	—
300	0.2	0.5	1.0
400	Auto	0.2	0.5
600	Auto	Auto	0.2
800	Auto	Auto	Auto

NPC Initiative

NPC Type	Initiative
Elite	5
Veteran	4
Experienced	3
Novice	1

Equipment Availability (1D10)

Location	Very Common	Common	Scarce	Rare
Major city	10–	10–	8–	4–
City	10–	8–	6–	2–
Town	10–	7–	4–	1–
Village	6–	3–	2–	—
Encounter	4–	2–	1–	—

NPC Motivation

Clubs

Card	Motivation
Ace	War leader
King	Brutal
Queen	Stubborn
Jack	Murderous
8-10	Very violent
5-7	Moderately violent
2-4	Somewhat violent

Diamonds

Card	Motivation
Ace	Generous
King	Selfish
Queen	Lustful
Jack	Coward
8-10	Very greedy
5-7	Moderately greedy
2-4	Somewhat greedy

Hearts

Card	Motivation
Ace	Just
King	Honorable
Queen	Loving
Jack	Wise
8-10	Very sociable
5-7	Moderately sociable
2-4	Somewhat sociable

Spades

Card	Motivation
Ace	Charismatic
King	Deceitful
Queen	Ruthless
Jack	Pompous
8-10	Very ambitious
5-7	Moderately ambitious
2-4	Somewhat ambitious

Contaminated Water

Present: 12+ (2D6)

1D10	Disease
1-3	Dysentery
4-7	Typhoid
8-10	Minor disease

Encampment Diseases

Present: 10+ (2D6)

1D10	Disease
1	Dysentery
2	Food poisoning
3	Minor disease
4	Cholera
5	Hepatitis-A
6	Pneumonia
7	Typhoid
8	Typhus
9	Bubonic plague
10	Pneumonic plague

Settlement Diseases

Present: 11+ (2D6)

1D10	Disease
1	Dysentery
2-3	Food poisoning
4-5	Minor disease
6	Cholera
7	Hepatitis-A
8	Pneumonia
9	Typhus
10	Bubonic plague

Animal Diseases

Present: 12+ (2D6)

1D10	Disease
1-4	Food poisoning
5-7	Minor disease
8	Typhus
9	Rabies
10	Bubonic plague

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Combat Task Summary

Unarmed Melee

Attack Type	*Difficulty*	*Asset*	*Effect*
Hand Strike	Difficult	Unarmed Martial Arts	Damage UCDR*
Kick	Difficult	Unarmed Martial Arts	Damage UCDR*×1.5
Block	Formidable	Unarmed Martial Arts	Avoid Strike/Lose Action
Aimed Strike	Formidable	Unarmed Martial Arts	Damage Chosen Location
Leaping Kick	Difficult	Agility**	Damage 2×Atkr's CON
Avoid Leaping Kick	Difficult	Agility**	Avoid Attack/Lose Action
Grapple	Average	Agility**	Controlling "Hits" UCDR*
Grapple Escape	Average	Agility**	Remove Controlling "Hits" UCDR*
Strangling	Average	Agility**	Damage UCDR*
Strangle Block	Average	Agility**	Avoid Attack/Lose Action
Combat Throw	Formidable	Unarmed Martial Arts	Damage 2×Defender's CON
Limit Throw Damage	Difficult	Agility**	Damage×1/2
Avoid Diving Blow	Average	Agility**	Avoid Diving Blow†

*UCDR = character's unarmed combat damage rating

**Plus Acrobatics skill, if any

†If not avoided, Diving Blow damage is ([Attacker's CON×2]+1D6) – (Defender's STR+CON).

Armed Melee

Attack Type	*Difficulty*	*Asset*	*Effect*
Attack	Difficult	Armed Martial Arts*	Damage by Weapon
Block	Formidable	Armed Martial Arts**	Avoid Strike/Lose Action
Aimed Attack	Formidable	Armed Martial Arts*	Damage Chosen Location

*Some weapons have die modifiers.

**Must have object to block with.

Thrown Weapon

Attack Type	*Difficulty*	*Asset*	*Effect*
Throw	Difficult	Thrown Weapon	Damage STR+1D6*
Throw, Long Range	Formidable	Thrown Weapon	Damage STR+1D6*

*For most objects. Throwing knife is always 1D6; grenades do explosive damage.

Direct Fire Combat

Attack Type	*Difficulty*	*Asset*	*Effect*
Fire, Short Range	Average	Appropriate to Weapon	Damage by Weapon
Fire, Medium Range	Difficult	Appropriate to Weapon	Damage by Weapon
Fire, Long Range	Formidable	Appropriate to Weapon	Damage by Weapon
Fire, Extreme Range	Impossible	Appropriate to Weapon	Damage by Weapon
Fire, Quick	+1 Level*	Appropriate to Weapon	Damage by Weapon
Fire, Target Obscured	+1 Level	Appropriate to Weapon	Damage by Weapon
Fire, Automatic	**	**	Damage by Weapon

*Not possible at extreme range

**See automatic fire rules (page 203)

Indirect Fire Combat

Attack Type	*Difficulty*	*Asset*	*Effect*
Conventional	Formidable	Forward Observer*	Explosive Damage
Hand-Held	Impossible	Grenade Launcher*	Explosive Damage

• Or appropriate weapon asset of the firing character, whichever is lower. Bonuses for repeated fire.

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DESIGNERS' NOTES

The first, and most important, question that designers' notes should answer is "why?" Why produce this game, in particular a "version 2.2" edition of this game? There are two answers.

First, the newspaper headlines and every night's newscast. The world we live in is changing, quickly and dramatically. A number of our players have wondered if this has made **Twilight: 2000** obsolete. You hold the answer in your hands. This is a tremendously exciting time we live in, but the end of the Cold War has *increased* the potential for instability, not decreased it.

Second, the publication of **Traveller: The New Era** moved the GDW house system forward in some very useful ways, and we wanted to retro-fit those improvements to **Twilight: 2000** as well. Most of the designers' notes below will deal with those changes.

BACKGROUND

When we first published **Twilight: 2000** in 1984, we suggested that a general European war might come not from a Soviet invasion of Europe, but rather from Soviet preoccupation elsewhere coupled with sudden German reunification. While the prospect of German reunification appeared to be a fantasy at the time (and many critics singled it out as a particularly unrealistic aspect of the game), by the time the original second edition was published German Unification was imminent, and it has since become a reality. The secession of the Baltic States and Ukraine from the Soviet Union, the disintegration of Yugoslavia into its component republics, and other seemingly impossible events have also come to pass.

Nevertheless, as time passes, the chronology is overtaken by events and becomes anachronistic, no matter how often we revise it. Therefore, we have opted for a different approach in the current version of the game. The chronology is now accurate up through the defeat of the Soviet coup in August of 1991. In the game's chronology, however, the coup is successful, and sets the world on a path toward Armageddon. Even in the current version, however, the path is not as direct or obvious as you might think. But it serves two purposes. First, having settled on a definite point of divergence from our own history, there will never be need to revise the history again. Second, this background provides a plausible means that, had the world been less fortunate, might have led to the events in the game. (It is worth remembering that the KGB's *Alpha Team was* ordered to spearhead the assault on the Parliament building and kill Boris Yeltsin. When *every* officer in the unit, one after another in descending order of seniority, categorically refused to carry out the order, the assault was aborted and the coup collapsed. By this slender a thread does our current world situation hang.)

Is that important? We think so. Much of the enjoyment that comes from a roleplaying game is similar to what you derive from entertainment programming on TV or at the movies. **Twilight: 2000** is not meant to be a serious projection of future trends; it is escapist entertainment. But for the entertainment to be complete, players (or viewers of movies and TV) have to be able to engage in "willing suspension of disbelief."

That means that you don't have to believe that this might actually have happened to enjoy it, you just have to be able to temporarily suspend judgment. If the scenario is so stupid that you can't do that (and all of us have seen motion pictures like that), then it's nowhere near as enjoyable. That's why we spend as much time on the background to the war as we do.

CHARACTER GENERATION

Very little is changed from version 2.1 (as we labeled the second edition revision), although the changes will be welcomed by most players. A consistent criticism of the 2nd edition character generation rules was that characters, particularly military characters, and most particularly military characters from elite organizations, did not receive sufficient skills. That has been remedied in the current version, and players will find their Rangers, SEALs, and Snake-Eaters much more competent and deadly these days.

The main system change in character generation is incorporation of the decreasing skills-per-term rules from **Traveller**. This enables players to have very capable young characters without making older characters absolutely invincible. The actual skill list itself has been expanded, including a number of new skills taken from **Traveller**. Several skills were renamed to match the **Traveller** skill list. These changes are discussed in detail in the sidebar on page 272.

Also in response to consumer suggestions, we added a civilian nurse career.

TASK RESOLUTION

The single greatest change in the system is the new D20-based task resolution routine. We think you'll really find it to be a major improvement over the old system at no increase in difficulty. Its main features are a greater range of results, easy incorporation of five distinct difficulty levels, a very nice unskilled default rule, and a much stronger role for player character attributes on a continuing basis during play.

COMBAT

Finally, we come to the combat system. There are a great many detail changes in the revised combat system and a couple of really major ones. We'll start with the major ones.

The Initiative system in **Twilight: 2000**, in both editions, went into more detail than just about any other roleplaying system.

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Maybe too much detail. Perhaps it was a good simulation, but players and referees consistently complained hat it was cumbersome and penalized unskilled characters too much. The 2nd edition version was less cumbersome but was even more decisively weighted in favor of high-Initiative characters. Recognizing that all that really counts in a game is whether the players like it, we've conducted dramatic surgery on the Initiative rules. These are the rules which appear in **Traveller: The New Era** and which have now been retro-fitted to **Twilight: 2000.** Speak, and we listen.

A second system change, also prompted by player feedback, was tying autofire to marksmanship skill. It's still mostly a crap shoot, but highly skilled players now get more of a break.

You will also notice that NPCs (and animals, which follow the same rules) now take about twice as much damage before biting the dust. We still believe that player characters should get most of the breaks, but NPC damage was way too low in earlier editions. Along the same line, the quick-kill rule is no longer optional, so even a single bullet can now drop a player character, without increasing the damage value of every round that hits. That, combined with double damage for Outstanding Success, makes combat decidedly more hazardous.

Minor rules additions and changes include adoption of the fire control and target size rules from **Traveller**, as well as inclusion of rules on reactive armor, tandem ATGM warheads, amphibious vehicle water movement, blow-off ammo panels, and flechettes in the basic game rules. While we were at it, we added the corrections to recoil from the **Twilight/ Merc Referee Screen** and updated the data on vehicles where better data has come to light. You'll also find the vehicle cards to be more useful and detailed, with things like small arms ammo carried on board, attachment points for reactive armor, radiological protection, and amphibious speed ratings.

NEW VEHICLES

Finally, we decided to upgrade the actual mix of vehicles in the game, and you have here the first game ratings ever published for a number of vehicles. These six new vehicles are:

Leopard 2(I): This is the up-armored version of the Leopard. There was a lot of disagreement about just how good the Leopard 2's armor really was. Many sources listed it as having Chobham armor and protection as good or better than the M1 family. A few sources said it had only conventional spaced armor and was not nearly as well protected as the M1 series. The fact that the Germans felt the need to field an up-armored version probably says it all as to who was correct. To our shame, we based the Leopard 2's protection ratings on the more inflated claims. The new Leopard 2(I) in the game has values almost identical to what we used to give for the Leo 2. What's different? The drawing. We're almost certain that this is the first time the Leopard 2(I) has been shown in a game.

M8 Armored Gun System (AGS): The AGS is the light tank being built for the Army to replace the M551 Sheridan in the 82nd Airborne Division and to beef up the light divisions. As such, it replaces the old LAV-75 of previous game editions. Too bad, we always liked the LAV-75. Unfortunately, nobody ever built it (we were once taken to task by a miniatures firm that specializes in modern vehicles—one of their customers was extremely irritated that they didn't have a LAV-75 when it clearly existed. "It's gotta be real" the customer said, "there's a picture of it in **Twilight: 2000**!"). The M8 is another "first" for this edition, as it has not appeared in any other game.

M1A2: When the first edition of **Twilight** was designed, there was a lot of interest in crew-in-hull tanks, which led to our pick of that configuration for the M1A2 "Giraffe," Leopard 3, T-90, and LAV-75. None of these predictions came true, and it looks like the whole crew-in-hull concept may have been a design dead end. A turret just has too much handy storage room in it to make it easy to get rid of.

The M1A2 in the current version of the game is the actual current production variant, and is undoubtedly the most capable tank in the world, particularly if it is operating with its supporting data networks and GPS satellites in place. In a post-holocaust world, of course, those capabilities are considerably degraded, but it's still a very tough tank.

T-90: What a disappointment! This is it? *This* is the T-90? Unfortunately, yes. Our original version of the T-90 was a combination of the crew-in-hull tank that appeared on the cover of Richard Simpkin's book *Red Armour* along with the capabilities of the "FST-1" (Future Soviet Tank-1), a vehicle which existed mostly in the fevered imaginations of professional threat inflators. Still, it was a good game item and we will probably resurrect some version of it in a future vehicle supplement, even if the Russians never do build the thing.

As to the T-90, what's there to say? Same old 125mm gun. It still fires a missile, so we know that its long-range gun accuracy still sucks. Same old suspension, same old engine, same old tired vehicle (yawn). The T-90 is a hooker 20 years past her prime trying to hide it with thicker layers of makeup.

Challenger 2: Every time I say something bad about the Challenger I get hate mail from British tankers. When I said that there were problems with the installed fire control system and that the L-11 120mm rifled gun wasn't up to the performance of the German/American 120mm smoothbore, blistering letters poured in. (Well, three blistering letters poured in.) When I said the protection wasn't as good as the M1A1 heavy armor variant, people reacted as if I'd run over their dog. Now the Challenger 2 is entering service. Better fire control system (one that the gunner actually can use while the tank is moving), better performance from the new L-30 rifled gun, better armor protection.

I rest my case.

BMP-3: Now here is an interesting vehicle. The Soviets started the whole IFV thing with the original BMP, and have been slowly upgrading it ever since. We knew they were ready for a new version, but thought that it might be a slight improvement to the existing BMP-2. (We made it a BMP-2 with a coaxial 30mm automatic grenade launcher for engaging area targets. An interesting guess, but wrong.) The actual BMP-3 is a whole new vehicle with a rifled gun capable of taking on light tanks and area targets and a coaxial autocannon for killing APCs and IFVs. The armor looks heavier as well. Very interesting, and it is fascinating to wonder where this line of development might have led had the Soviet Union not collapsed.

— Frank Chadwick, David Nilsen, and Loren Wiseman

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THE TWILIGHT GPS SURVEY

Why is this called a GPS survey? A GPS (Global Positioning System) is designed to tell you where you are and where you're going, and that's just what this survey is intended to do as well.

Twilight: 2000 has been out for almost 10 years as this is written, and a lot has happened in that time. While there is still a lot of interest in the original East-versus-West apocalyptic war, a lot of other possibilities present themselves as well. The essence of **Twilight: 2000,** after all, is military roleplaying in the modern era. The post-nuclear world is an interesting adventure environment, but it's not the *only* interesting adventure environment.

As we kick around ideas, we often feel the need for gamer feedback, and we get less mail in proportion to sales of **Twilight** than any other game we produce. This may mean that you are happy with what we do for the game, but it doesn't give us much direction as to what to do next.

The following paragraphs are brief descriptions of some of the directions we are considering for future **Twilight** products. Please do us (and yourself) a favor and read through them. Photocopy the page (don't tear it out of your book!), fill out the survey, and mail it to us. To fill out the survey, just rate every idea from 1 (terrible) to 10 (great). We've given you little ballot boxes by the titles to put the numbers in. They can all be 1s, all 10s, or a mixture of any values that you think fit. Please feel free to write down any other suggestions or criticisms you have as well.

Remember, we aren't psionic. (At least not in this version of the house rules.) We want to produce the games you want, but to do that you've got to tell us.

Twilight: Planet Strike

☐ Recently the Earth narrowly missed colliding with a planetoid, and was not aware of the event until afterwards. The possibility of a sudden unexpected meteor or planetary strike is constantly with us. Such a strike could cause considerable immediate damage, but the long-term climatic effects could be more severe. Either a hothouse atmosphere, with melted icecaps and elevated ocean levels, or a new ice age are possibilities. In either case, the global order would be dramatically changed and survival would be difficult.

The setting would be soon after the strike, while the world was still trying to adapt to altered conditions but while those conditions (such as rising ocean levels) were still making themselves felt. Referees would have more control over the campaign situation than in the current versions of **Twilight.**

Twilight: Biohazard

☐ A bio-engineered DNA-altering strain of bacteria escapes from laboratory isolation and initiates a global plague. Much of the population dies almost immediately. A significant majority of the survivors become homicidal throwbacks, and a very small minority remains uninfected. That minority fights to maintain a handful of safe enclaves and contact other bands of survivors.

Twilight: Mean Streets

☐ In the near future, gangs have virtually taken over the cities and are increasingly invading the countryside. Players have a variety of options, from law enforcement personnel to social workers (although with a wider range of options than current social workers). Teams of players have to conduct campaigns of successive operations against gangs to reduce and eventually break their control. These operations have to have economic, social, and psychological components, not just lots of firepower. (Not that lots of firepower isn't required—this is still **Twilight,** after all.)

Twilight: The Iron Dream

☐ The **Twilight: 2000** system used to allow detailed roleplaying in World War II. Players can pick from a variety of nations and a variety of career types (just as in the current modern rules). Emphasis will be on commando and patrol-type actions, but participation as part of larger set-piece battle is also possible. This would, by the nature of the situation, be a more structured adventure game than any of the post-holocaust games.

Twilight: Contingency Force

☐ Another structured adventure game, this one is set in the very near future (say 2000 AD), but there has been no global war and no major economic collapse (as in **Merc: 2000**). Instead, the game covers a variety of likely trouble spots for the US and casts players as members of the regular armed forces deployed to deal with the problem. Emphasis again is on commando and patrol operation, but also some civil affairs and local training missions.

Twilight: Armor 21

☐ Europe is unified and locked in a global trade war with the US and Japan. Africa is heavily depopulated by AIDS. Parts of the Middle East are still radioactive from Iraq's abortive attempts at nuclear blackmail. The world is short of raw materials, particularly oil, and the Nigerian wells and oil reserves may mean the difference between economic survival and collapse.

This game covers conventional and unconventional warfare between the US and the EEC in central Africa over Nigerian and Angolan oil. The scenario is an excuse to explore the nature of warfare two to three decades down the road. The obsolete tanks are M1A3s with 140mm electrochemical guns. Newer vehicles mount hyper-velocity railguns and active electromagnetic armor, but the real killers are helicopters and commando teams with laser designators.

Even if it all sounds like science fiction, everything in the game will be weapons systems currently being developed or researched.

Twilight: Stay the Course

☐ You know this one—it's the book you're holding, a game of military adventure following a nuclear war. We plan to continue to support this direction (after all, it's where **Twilight** began), but want to know what you think. Do you want us to concentrate on this angle, or devote more attention in other directions?

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