

TWILIGHT:2000™

MERC: 2000™

Referee's Screen

Loren K. Wiseman



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=near side hit.

Prone Biped: Table assumes top shot.

Side Shot: As above.

Front Shot: Leg or abdomen hit=miss.

Rear Shot: Head, arm, or chest shot=miss.

Quadruped: Table assumes side shot.

Front Shot: Hindquarters or abdomen hit=miss.

Rear Shot: Head or forequarters hit=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

MELEE WEAPONS CHART

Weapon	Range	Hit Mod.	Damage
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+(Strength÷2)

*Including bayonet, when not on rifle.

† When on rifle.

COMBAT MOVEMENT CHART

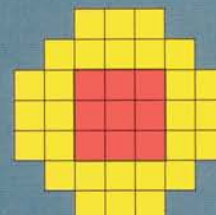
Type	Move
Animals	Walk/Trot/Run
Bear	10/20/40
Bison	10/15/—
Boar	* 5/10/30
Camel	10/20/40
Dog, other canines	15/30/60
Elephant	10/15/30
Horse	10/20/60
Large cat	10/30/60
Mule	10/20/—
Ox	10/15/—
Rhino	10/15/25
Tiger	10/20/40
Wild cattle	10/15/—
Humans	Crawl/Walk/Trot/Run
Human	2/8/15/30

SAMPLE BURST DIAGRAMS (Eight-Meter Grid)

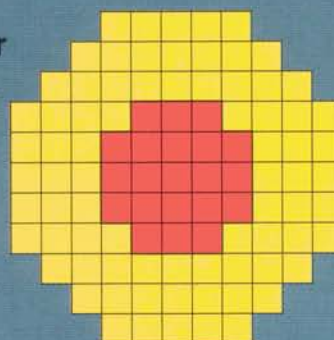
■ Primary
■ Secondary



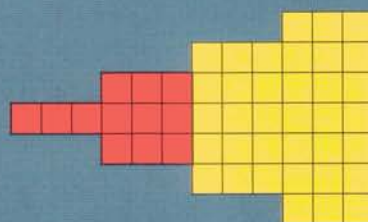
Four-Meter
Burst



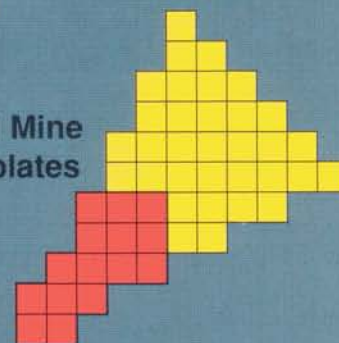
12-Meter
Burst



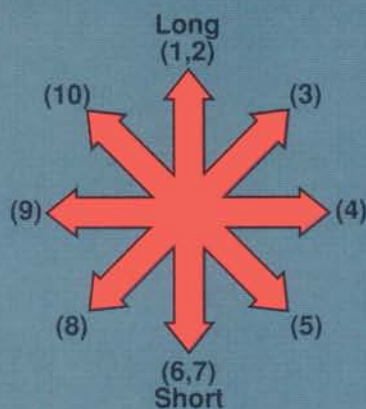
20-Meter
Burst



Directional Mine
Burst Templates



SCATTER DIAGRAM



HAND GRENADES

Type	Damage	Pen
Frag	C:3, B:12	Nil
Antitank	C:3, B:4	18C
Concussion	C:5	Nil
Thermite	C:1, B:4	Nil
Chemical	C:1, B:12	Nil
WP	C:1, B:12	Nil

RIFLE GRENADES

Type	Rng	IFR	Damage	Pen
RAW HE	100	2000	C:10, B:28	1C
RAW HEAT	100	2000	C:8, B:20	75C
HEAT	15	200	C:7, B:12	30C
WP	25	200	C:1, B:12	Nil

MORTARS

Type	Round	Damage	Pen
60mm	HE	C:5, B:20	Nil
IFR:4km	WP	C:2, B:12	Nil
	ILLUM	B:400	Nil
81mm	HE	C:8, B:28	-4C
IFR:4.5km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil
4.2"	HE	C:12, B:36	-2C
IFR:6km	WP	C:3, B:36	Nil
	ILLUM	B:1500	Nil
	ICMDP	B:36	Grenade*
	CHEM	C:3, B:12	Nil
120mm	HE	C:16, B:44	0C
IFR:6km	WP	C:3, B:36	Nil
	ILLUM	B:1500	Nil
	CHEM	C:3, B:12	Nil

*See ICM, *Twilight: 2000*, p. 201.

FASCAM Mine Density Table

Type	Density	Area in Meters
RAAM	.01	240 (30 squares)
ADAM	.04	240 (30 squares)

Density is in mines per eight-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 phase*.

TURRETED VEHICLE DAMAGE

Turret		Hull	
Minor		Minor	
Die	Result	Die	Result
1	1 Crewmember	1	1 Crewmember
2	1 Crewmember	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 Crewmembers	1	Engine
2	2 Crewmembers	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 there are no passengers present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

CREW-IN-HULL VEHICLE DAMAGE

Turret		Hull	
Minor		Minor	
Die	Result	Die	Result
1	Loader	1	1 Crewmember
2	Sight/Vision	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	Main Armament	1	Engine
2	Main Armament	2	Engine
3	Main Armament	3	Fuel
4	Main Armament	4	Fuel
5	Major Hull	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 there are no passengers present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

FRAGMENTATION ATTACK TABLE

Fragmentation Radius	Range	Mult.	1 Hit	Miss	Dam	Pen
Primary burst radius	1 × Burst	1-3	4-6	7-10	2	1
Secondary burst radius	2 × Burst	1	2	3-10	1	Nil

VEHICLE HIT LOCATION CHART

Die	Turreted	CIH	Standard	Flush Deck	Superstructure
1	Turret	Turret	Hull	Hull	Superstructure
2	Turret	Hull	Hull	Hull	Superstructure
3	Hull	Hull	Hull	Hull	Hull
4	Hull	Hull	Hull	Hull	Hull
5	Hull	Hull	Hull	Hull	Hull
6	Suspension	Suspension	Suspension	Waterline	Waterline
7	Suspension	Suspension	Suspension	Waterline	Waterline

+1 to die roll for side shots.

CIH = Crew In Hull (small turret)

Suspension Damage: Minor cuts speed in half, major immobilizes. Two minor damage results = major damage.

VEHICLE DAMAGE RESOLUTION CHART

P-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

P-AV: Penetration minus Armor Value.

STANDARD VEHICLE DAMAGE

Hull Minor	
Die	Result
1	1 Crewmember
2	1 Crewmember
3	2 Passengers**
4	2 Passengers**
5	Radio
6	Major Hull

Major	
Die	Result
1	Engine
2	Engine
3	Fuel
4	Fuel
5	Weapon/Ammo
6	Weapon /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 there are no passengers present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

SUPERSTRUCTURE VESSEL DAMAGE

Waterline Minor		Hull Minor		Superstructure 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

FLUSH-DECKED VESSEL DAMAGE

Waterline Minor		Hull Minor	
Die	Result	Die	Result
1	Waterline Hull	1	1 Crewmember
2	Waterline Hull	2	Auxiliary Machinery
3	Waterline Hull	3	Secondary Armament
4	1 Crewmember	4	Radio/Radar
5	Cargo	5	Sight/Vision
6	Major Waterline	6	Major Hull

Major		Major	
Die	Result	Die	Result
1	2 Crewmember	1	Main Armament
2	Rudder/Screw	2	Main Armament
3	Engine	3	2 Crewmembers
4	Fuel	4	2 Crewmembers
5	Ammo	5	Ammo
6	Minor Hull	6	Fire

Auxiliary machinery includes bilge pumps, power winches on the deck, generators, etc.

SKILL LIST

GDW LIBRARY

Skill	Associated Attribute	Definition
Aircraft Mechanic	STR	Ability to repair and maintain aircraft.
Biology	EDU	Knowledge of plant and animal biology.
Chemistry	EDU	Knowledge of chemical interactions and compounds.
Civil Engineer	EDU	Ability to plan/supervise construction of buildings, roads, and bridges.
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.
Disguise	CHR	Ability to alter appearance to avoid recognition.
Electronics	AGL	Ability to repair electronic devices.
Farming	INT	General knowledge of growing food crops and raising livestock.
Fishing	INT	Ability to catch fish, using hook and line or net.
Foraging	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.
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.
Gunsmith	AGL	Ability to construct and repair weapons.
Heavy Weapons	STR	Ability to use antitank missile launchers, flame weapons, rocket and grenade launchers, large-caliber guns, and howitzers.
Horsemanship	CON	Ability to ride a horse.
Hunting Bow	STR	Ability to use a longbow.
Instruction	CHR	Ability to teach skills.
Interrogation	CHR	Ability to persuade or force a prisoner to reveal information.
Language	CHR	Ability to speak and understand a given language. A specific language must be chosen.
Leadership	CHR	Ability to inspire followers.
Lockpick	AGL	Ability to pick a lock.
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.
Melee Combat	STR	Ability to conduct hand-to-hand combat. <i>Cascade skill (Armed, Unarmed).</i>
Metallurgy	EDU	Knowledge of smelting ore into metal, forming alloys, and fundamental metal-working.
Meteorology	EDU	Understanding of weather and the forces governing it.
Mining Engineer	EDU	Ability to supervise the construction and operation of a mine.
Motorcycle	CON	Ability to ride a motorcycle.
Mountaineering	CON	Ability to climb steep slopes and sheer cliffs.
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. <i>Cascade skill (Fixed Wing, Rotary Wing).</i>
Scrounging	INT	Ability to find man-made items such as spare parts, domestic food, ammunition, etc.
Scuba	CON	Ability to use an aqualung or rebreather. May not be purchased at a higher level than the character's Swimming skill.
Small Arms	STR	Ability to use small arms (pistols, rifles, shotguns, etc.). <i>Cascade skill (Pistol, Rifle).</i>
Small Boat	AGL	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.
Swimming	CON	Ability to swim.
Thrown Weapon	STR	Ability to hit a target with a thrown weapon, such as a knife, rock, or grenade.
Tracked Vehicle	AGL	Ability to drive a tracked vehicle.
Tracking	INT	Ability to follow vehicles, humans, or animals by the traces they leave behind them.
Warhead	AGL	Ability to arm, disarm, and repair both conventional and nuclear warheads.
Wheeled Vehicle	AGL	Ability to drive a wheeled vehicle.

TWILIGHT:2000™

MERC: 2000™

Referee's Screen

D20 Clarification: To convert old task difficulty levels to new ones, examine the old modification of the Skill Level and apply the same modification to the new system. For example, placing an explosive charge under the old system was an Easy task (roll versus 2xCombat Engineering skill). Under the D20 system, a 2x roll is an Average difficulty level, therefore placing a demolitions charge under the D20 system is an Average task.

Please note that combat-related tasks are a special case, and are discussed in the paragraph with the bold, in-text heading "Common Task Levels," which is under the "D20 System: Task Difficulty Levels" major heading.

Eratta of October 28, 1992 inserted in text.

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TWILIGHT: 2000/MERC: 2000 REFEREE'S SCREEN

This screen is intended to serve two functions: to provide the referee with a concise, convenient reference for the most needed charts during a game, and to give the referee something to hide secret diagrams, maps, die rolls, and so on from the players' eyes.

As a secondary function, this screen and the booklet it contains represent a minor revision of the **Twilight: 2000/Merc: 2000** rules system.

USING THIS SCREEN

The center charts (pages 7-10 of this booklet) were intended to be removed by carefully prying up the staples with a butter knife or similar tool, removing the pages, and folding the staples down again.

This screen was intended to be used in concert with photocopies: Each player should have an individual character sheet, each vehicle in the party should be represented by its own photocopied sheet (preferably from one of the vehicle guides, since these have check-off boxes to record fuel and ammunition expenditure, combat damage, etc.), stacked in order of speed, slowest on top. The referee should make photocopies of animal encounters for the specific area of the campaign setting, plus any special scenario encounter charts, etc.

Keeping track of combat phases is easier with a simple technique: Seat the players in order of their character's initiative rating. Use a D6 with the number of the current phase turned upward to mark the phase, and set the die in front of the player or players whose initiative number equals the phase.

At the beginning of each phase, the referee turns the die so that the number facing up is the number of the current combat phase. The die used should be a radically different color, size, or differentiated in some easily recognizable way from the other dice, to keep someone from picking it up and rolling it. One of the GDW staff uses a souvenir casino die, another uses a die that is 3" on a side.

RULE CHANGES

The main rule changes are associated with the shift from a D10 system to D20. A few other modifications have also been made.

THE D20 SYSTEM

It's remarkably easy to adapt the **Twilight: 2000/Merc: 2000** D10 task system to a broader D20 system, while retaining its compatibility with weapon damages and task statements from previous materials. And doing so certainly enhances play. Players will notice, for instance, that the D20 allows for five distinctive task difficulty levels, compared to the basic three of the D10 system. Also, defaulting to controlling Attributes is much more satisfying with this new system, and it becomes possible to include a reasonable rule for automatic success and automatic failure. There are numerous other advantages that will become evident with play.

The various tables in this booklet cover the changes necessary to adopt this new system, but a few notes of explanation are included here for clarity.

D20 without D20s: The boxed version of the game includes D10s, not D20s. If you have no D20s, simply roll a D10 and a second die (number of sides is irrelevant as long as they

are an even number), and add 10 to the result of the D10 if the result of the second die is even. Add nothing if the result of the second die is odd. An alternate method is to flip a coin for whether a particular D10 roll gets 10 added to it (heads yes, tails no). All of these methods are a little clumsy, however, and we recommend that you get a few 20-sided dice (they are quite common in game and hobby shops). Don't throw out the D10s that came with the game, however, you will still need them from time to time.

D20 CHARACTER GENERATION CHANGES

The rules that follow explain how to create the range of skill levels necessary for a D20 adaptation.

Basic Attributes: Generate these as normally, per the basic game rules.

Skill Levels: Generate all skill levels normally, *but in addition* record the total of the skill level and its controlling attribute. For example, a character with a STR of 9 and a Melee Combat (Unarmed) skill of 7 would record the skill as "Melee Combat (Unarmed) 7/16," the first being the skill level, and the second being the total of skill and attribute.

Skill Tests: All skill tests are versus the total of skill and controlling attribute.

Unskilled Tests: Characters may attempt to use skills for which they have no training, by making a test versus the controlling attribute alone, at one Difficulty Level higher than normal (i.e., an Easy test becomes Average, an Impossible test requires a roll versus $\frac{1}{2}$ th the Attribute, etc.).

Attribute Tests: GMs should be careful in assigning Difficulty Levels for tests versus Attributes alone, as the range of numbers is still only 1 to 10. Note for example that Melee Combat Agility tests have been adjusted for this reason.

Unarmed Combat Damage: Use only the basic skill level, not the total of attribute and skill, when multiplying times STR in the Unarmed Combat Damage formula.

D20 SYSTEM COMBAT NOTES

The following adaptations must be made when handling combat in the D20 system.

Small Arms Performance Limit: Under the original D10 system, a roll of 9 or 10 in direct fire combat results in a miss. When adapted to D20, the range becomes 17-20.

D20 SYSTEM: TASK DIFFICULTY LEVELS

A few comments are worth making concerning the revised task difficulty levels for the D20 system.

First, you will notice that Easy, Average, and Difficult tasks have effectively become one level lower in difficulty (Easy is now less than or equal to $4 \times$ skill, rather than merely 2). The purpose of this is to bring the task names more in line with what players would expect. That is, an average character (skill level 10 of a possible 20) will now succeed at an Average task virtually all the time (unless an Automatic Failure is rolled, see below).

Auto Success/Auto Failure: Under the D20 system, a natural roll of 1 always succeeds, and a natural roll of 20 always fails, regardless of skill level. This gives characters a small chance of success even at the absolute worst of times, and of failure even at the absolute best of times. Both of these are intellectually satisfying, and bring an element of tension to the simplest of situations.

Outstanding Success/Outstanding Failure: Note that under the D20 system, a roll of 10 points or more below the target number results in an Outstanding Success, and a roll of 10 points or more above the target number results in an Outstanding Failure. Effects of these are decided by the referee unless specified by the rules.

Common Task Levels: While tasks in general have become more easy for characters to accomplish under the D20 system, combat tasks worked very well under the original D10 system. To maintain the same percentage chance of successes and failures in this area, then, the task difficulty *names* are increased one level, as summarized on the appropriate Task Levels Tables.

"The task is Difficult: (Combat Engineering+Electronics)+2 given proper equipment, Formidable: (Combat Engineering+Electronics) given improvised equipment."

OTHER RULES CHANGES AND ADDITIONS

The remaining changes to the rules are more in the nature of fine-tuning adjustments rather than substantive changes.

EXPLOSIVE ROUNDS

The following rule was included in the **Heavy Weapons Handbook**, and clears up a minor problem area in the rules.

When a high explosive round (HE, HEAT, or one of the many variations) hits a living target, roll a number of D6s equal to the round's penetration value or concussion value, whichever is greater, and apply the entire damage rolled to the hit location that received the impact. After this, roll normally for concussion and fragmentation for everyone within the round's burst radius.

RECOIL CHANGES

The following changes are made to the recoil of certain weapons:

The recoil calculation formula used in the game did not take into account the fact that certain weapon designs absorb more of a given round's recoil than others. In semiautomatic and automatic weapons, some of the energy of recoil is absorbed into moving the breechblock and cocking the action for the next cycle. In other weapons, such as revolvers or bolt action rifles, the same size cartridge will have a greater felt recoil. This principal has been incorporated into the charts included with this book, and they are to supersede all other ratings charts. This recoil reduction applies *only* to semiautomatic and fully automatic weapons.

All SA weapons and weapons with a numerical ROF (fully automatic weapons) reduce their recoil rating by a number equal to 10 percent of the recoil rating (rounded off to the nearest whole number). For example, a weapon with a recoil rating of 8 would be reduced by 1 (10% of 8 = 0.8, rounded to 1), a weapon with a recoil rating of 18 would be reduced by 2 (10% of 18 = 1.8, rounded to 2), and a weapon with a recoil rating of 4 would be reduced by 0 (10% of 4 = 0.4, rounded to 0).

AUTOMATIC FIRE CHANGES

To determine hits in a burst of fully-automatic fire, roll 1D20 for each round in a given burst (the size of the burst is indicated in the ROF column of the firing charts for a given weapon), treating each round fired as an Impossible (i.e., 1/4) Small

Arms skill test to hit. Range considerations reduce the total number of dice rolled in a burst, according to the existing autofire rule. Characters may fire up to five bursts per turn, as limited by recoil and their own judgement.

RADIO DETONATION OF EXPLOSIVES

Detonating explosive by radio is a risky business, not because it is hard but because it is so easy (some electrical blasting caps can be accidentally detonated by induced current from stray radio signals, and must be specially shielded to prevent this). Rigging an explosive to be radio-detonated requires an explosive charge, a standard electrical blasting cap, and a radio detonation receiver (all with the charge), plus a broadcast unit to send the required signal.

Ordinary failure means the charge does not detonate. Catastrophic failure means the charge detonates prematurely (at a time determined by referee, at random if desired).

"Improvising a radio detonation receiver or transmitter from a normal radio is a Difficult: (Combat Engineering+Electronics)+2 task."

The task becomes one level more difficult without an electronics tool set.

The following items of equipment become available at the discretion of the referee:

Radio-Detonation Receiver Unit: An electrical device which enables an explosive charge to be detonated from a remote location via radio signal. The receiver and its associated broadcast unit are specially adapted to send and receive a coded signal to prevent accidental detonation by harmonics or by induction. Addition of a voice recognition chip to the circuit (Difficult: Electronics) makes possible detonation by a single specific word or sound sent by the transmitter. The unit is about the size of a pack of chewing gum, and contains a ROM chip and a battery. It is attached to a normal electrical blasting cap.

The unit may receive signals from up to one kilometer. Longer distances may be possible with units improvised from longer-ranged radios.

Wt: Nil

Twilight: 2000 Price: \$250 (—/—)

Merc: 2000 Price: \$250 (—/—)

Radio-Detonation Broadcast Unit: An electrical device which enables a charge to be detonated from a remote location via radio signal. The broadcast unit is specially adapted to send a coded signal to prevent accidental detonation of the charge by harmonics or by induction. The unit may broadcast signals from up to one kilometer. Longer distances may be possible with units improvised from longer-ranged radios.

Wt: 0.3 kg

Twilight: 2000 Price: \$350 (—/—)

Merc: 2000 Price: \$350 (—/—)

ENHANCED DAMAGE ROUNDS — OPTIONAL

These rounds include a broad class of small arms rounds specially-designed to trade off penetration for increased tissue damage, usually by causing the round to widen, flatten, and/or fragment. Special rounds include hollow-points, mercury loads, reversed wadcutters, dum-dums, and a number of proprietary designs too numerous to mention. Such rounds are not suitable for military use (as they violate a number of international accords and their inferior performance against

body armor makes them less suitable for most military firefights).

The game effects of these rounds are as follows:

Special rounds are available only at the referee's discretion, and only in calibers between .22LR and .45ACP. They weigh the same as normal rounds, and cost the same. Availability is up to the referee, but they cannot be more common than the round they are based upon.

Add 1 to Damage value of enhanced damage rounds, but add 2 to the penetration value. When the penetration number equals or exceeds the modified damage number, it becomes Nil. For example: A standard 7.62mmN rounds has damage of 4, and penetration of 2-3-Nil. With enhanced damage rounds, the damage becomes 5, and the penetration 4-Nil (2-3-Nil plus 2 becomes 4-5-Nil, but since 5 equals the damage, value, it becomes Nil). The round will do more damage, but is less effective against body armor.

WEAPON EXPERTISE—OPTIONAL

Expertise with a particular weapon can be gained through extensive practice. This rule may be implemented at the referee's discretion.

Melee Weapons Expertise: During the character generation process, players may wish to pick a melee weapon as the object of their character's single-minded training and practice sessions. That weapon then becomes a sub-cascade of the Melee Combat (Armed) skill on their character sheet. The detriment to this is that Melee Combat (Armed) skill for other melee weapons will be considered half of the specialty weapon. The benefit is that the character may be able to do extra damage with the weapon. This damage is applied as an additional modifier to the damage roll for the weapon, and it is equal to the skill in the specific weapon, multiplied by the character's strength, and the result divided by 10 (rounded down). In equation format, the formula is:

Damage Modifier = [Melee Combat (Armed: Weapon Specialty) × STR] ÷ 10.

Small Arms Expertise: Characters may specialize in a particular type of firearm. This specialization is indicated in a different manner from melee weapon expertise, and its benefit is not increased damage, nor is there a decrease in skill levels of Small Arms (Pistol) or (Rifle). Rather, the expertise is recorded with the weapon stats, in the equipment section of the record sheet; and the benefit is enhanced chances to hit, as detailed on the table below. The only detriment is expenditure of experience points (see Skill Improvement in the basic game) to "purchase" the enhancement, again as indicated on the table below:

SMALL ARMS EXPERTISE

Level	XP Cost	Auto Miss	STR Bonus
Default	—	17-20	—
I	10	18-20	1
II	12	19-20	2
III	14	20	3

The "level" number is merely a convenient way of keeping track of what effects have been bought. The "XP Cost" is how many experience points must be spent to buy the enhancement (each level must be paid for separately). The "auto miss" column indicates any change to the automatic miss rule for fire combat (see the basic game). The "STR bonus" column indicates effective additions to the firer's strength for purposes of withstanding the specialty weapon's recoil.

Example: Vanna has a Strength of 5, has a Small Arms (Rifle) skill of 10, and has spent 9 experience points to purchase a level I expertise with the AK-74. Her skill is listed as "Small Arms (Rifle) 10: AK-74, I." Her skill with all rifles, including AK-74s, is 10, but she gains two benefits when firing an AK-74. First, if she fires with quick shots at a short range target and rolls a 9 and a 10, she will hit with

the first (despite the auto miss rule) and miss with the second (despite her skill level). Second, her adjusted strength of 6 (5 plus the expertise bonus of 1) is sufficient to handle the recoil for two shots with the AK-74.

SCRATCH WOUNDS — OPTIONAL

At the referee's discretion a fourth level of wound severity may be implemented below slight wound: scratch wound. 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" (as in "I'm OK, its only a scratch."). Scratch wounds mainly represent the initial shock of suddenly being *hurt*. The first time that a character takes damage during combat, he loses his 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.

ADDITIONAL CAREER — CIVILIAN Nurse

Entry: Education 5+

First Term Skills: The character receives the following skills in the first term:

- Medical 3
- Biology 1
- Chemistry 1

Subsequent Term Skills: A total of 4 levels from any one or a combination of the following:

- Medical
- Biology
- Chemistry
- Scrounging
- Instruction
- Persuasion

Contacts: Two per term, business or medical. Roll 1D10 for 7+ 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. In **Twilight: 2000**, when war breaks out, the character will receive a direct commission as a lieutenant in the medical corps.

CORRECTION: 100MM GUN

The stats for the Soviet 100mm gun were inadvertently left out of the **Twilight: 2000** revision. They are:

Type	Round	Rng	Damage	Pen
100mm	HVAPDS-T	350	26	70/60/50/30
Rld: 1	APHE	300	C:6, B:12	70C
	HEAT	250	C:4, B:10	60C
	WP	250	C:3, B:20	Nil

100mm HVAPDS-T:

Wt: 25 kgs

Price: \$750 (—/R)

100mm APHE:

Wt: 21 kgs

Price: \$650 (—/S)

100mm HEAT:

Wt: 22 kgs

Price: \$650 (—/S)

100mm WP:

Wt: 18 kgs

Price: \$700 (—/S)

D20 CHARTS

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D20 SYSTEM: TASK DIFFICULTY LEVELS

<i>Level</i>	<i>Roll (1D20)</i>
Easy	$\leq 4 \times (\text{Skill} + \text{Attribute})$
Average	$\leq 2 \times (\text{Skill} + \text{Attribute})$
Difficult	$\leq \text{Skill} + \text{Attribute}$
Formidable	$\leq 1/2^* (\text{Skill} + \text{Attribute})$
Impossible	$\leq 1/4^* (\text{Skill} + \text{Attribute})$

* Round fractions down.

Auto Success/Auto Failure: A 1D20 roll of 1 always succeeds, and a roll of 20 always fails, regardless of skill level (except in fire combat, where 17-20 always fails).

Outstanding Success/Outstanding Failure: A 1D20 roll of 10 points or more below the target number results in an Outstanding Success. A 1D20 roll of 10 points or more above the target number results in an Outstanding Failure. Effects of these are decided by the referee.

Unskilled Defaults: Characters may attempt tasks for which they lack relevant skill, at one difficulty level higher, rolling against the Controlling Attribute alone. Unskilled attempts at Impossible tasks are rolled against one-eighth the Controlling Attribute of the missing skill (round fractions down). Referees should feel free to allow automatic success (no die roll required) for everyday tasks in which a character has any relevant skill. There is no such thing as automatic success in a task for which a PC has no relevant skill.

D20 SYSTEM: COMMON TASK SUMMARY

Combat Tasks

Unarmed Melee:

<i>Attack Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Strike	Difficult	Melee Combat (Unarmed)	Damage
Block	Formidable	Melee Combat (Unarmed)	Avoid Strike/Lose Action
Aimed Strike	Formidable	Melee Combat (Unarmed)	Damage to Chosen Location
Grapple	Difficult	Agility	Controlling "Hits"
Strangling	Difficult	Agility	Controlling "Hits"/Damage
Escape	Difficult	Agility	Remove Controlling "Hits"
Diving Blow, Avoid	Difficult	Agility	Avoid Diving Blow

Armed Melee:

<i>Attack Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Attack	Difficult	Melee Combat (Armed)*	Damage
Block	Formidable	Melee Combat (Armed)**	Avoid Strike/Lose Action
Aimed Attack	Formidable	Melee Combat (Armed)	Damage to Chosen Location

*Some weapons yield die modifiers.

**Must have an object to block with.

Thrown Weapon:

<i>Attack Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Throw	Difficult	Thrown Weapons	Damage
Throw, Long Range	Formidable	Thrown Weapons	Damage

Direct Fire Combat:

<i>Attack Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Fire, Short Range	Average	Small Arms (Pistol) or (Rifle)	Damage
Fire, Medium Range	Difficult	Small Arms (Pistol) or (Rifle)	Damage
Fire, Long Range	Formidable	Small Arms (Pistol) or (Rifle)	Damage
Fire, Extreme Range	Impossible	Small Arms (Pistol) or (Rifle)	Damage
Fire, Aimed	-1 Level	Small Arms (Pistol) or (Rifle)	Damage
Fire, Target Obscured	+1 Level	Small Arms (Pistol) or (Rifle)	Damage
Fire, Automatic	*	*	Damage

*See Automatic Fire Rules.

Indirect Fire Combat:

<i>Attack Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Indirect Fire, Conventional	Formidable	Heavy Weapons*	Explosive Damage
Indirect Fire, Hand-Held	Impossible	Heavy Weapons*	Explosive Damage

*Lower of firer's or forward observer's. Bonuses for repeated fire.

Cut Here

Demolitions:

<i>Task Type</i>	<i>Task Difficulty</i>	<i>Skill</i>	<i>Effect</i>
Set Charge	Average	Combat Engineering	Charge Readied
Set Radio Charge	Difficult	(Combat Engineering+Electronics)+2	Charge Readied
Improvise Radio Detonator	Difficult*	(Combat Engineering+Electronics)+2	Detonator Improvised

*Becomes Formidable without electronics tool set.

REVISED SMALL ARMS (SEMI AND FULL AUTO)

The recoil factors of semiautomatic and fully automatic weapons (from both the **Twilight: 2000** 2nd edition rules and **Infantry Weapons of the World**) have been adjusted, as discussed elsewhere in this booklet. Only the weapons whose recoil values have changed are listed here. All others remain the same.

Pistols

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
HS Der.	SA	1	Nil	0	21	7	—	4

SMGs

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
180 M-2	10	-1	Nil	5	177	1	5	20
AKR	5	3	1-Nil	2/3	30	3	7	30
AMD-65	5	3	1-Nil	3/4	30	3	7	40
Beretta M93R	3	2	Nil	1	20	5	7	12
stock	3	2	Nil	2	20	3	5	20
Bushmaster	5	3	1-Nil	3	20/40	4	9	30
Colt Scamp	3	2	1-Nil	1	27	4	6	12
Ingram M10 9mmP	10	2	Nil	1/3	32	2	8	20
Ingram M10 .45	10	2	Nil	1/3	30	2	9	20
Ingram M11	10	1	Nil	1/2	16/32	2	10	20
M177	5	3	1-Nil	3/4	20/30	3	7	40
M177 9mmP	5	2	Nil	3/4	20/30	2	5	30
M32/M712	5	2	Nil	1	10/20	4	8	12
stock	5	2	Nil	3	10/20	4	5	20
Mini-Uzi	10	2	Nil	1/3	20/30	2	9	30
MP5A2	5	2	Nil	4	15/30	2	5	30
MP-5K	5	2	Nil	3	15/30	3	7	12
MP-5SD3	5	2	Nil	3/4	15/30	2	5	30
subsonic	5	1	Nil	3/4	15/30	1	3	30
PM-63	5	1	Nil	1	15/40	3	7	12
stock	5	1	Nil	3	15/40	2	3	20
Stechkin	5	1	Nil	1	20	5	12	12
stock	5	1	Nil	3	20	3	7	20
Type 64	10	2	1-Nil	3/4	40	2	9	30
subsonic	10	1	1-Nil	3/4	40	1	4	20
VP-70	SA	2	Nil	1	18	5	—	12
stock	3	2	Nil	3	18	4	5	20
Vz-61/62	5	1	Nil	1	10/20	3	6	4
stock	5	1	Nil	3	10/20	1	4	12

Rifles

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
AK-47	5	3	2-Nil	5	30	3	7	50
AK-74	5	3	1-Nil	5	30	3	7	50
AKM	5	3	2-Nil	5	30	3	7	50
AKMR	5	3	1-Nil	5	30	3	6	45
AR-10	5	4	2-3-Nil	5	20	4	8	65
AR-18	5	3	1-Nil	4/5	20/40	3	8	55
AR-70	5	3	1-Nil	5	30	3	7	55
Barret M82*	SA	9	2-2-3	4	5	7	—	50
bipod	SA	9	2-2-3	4	5	4	—	90
BM-59	5	4	2-3-Nil	5	20	4	8	65
FA-MAS	5	3	1-Nil	4	25	3	7	50
FG-42	5	4	2-3-Nil	5	20	4	8	65
bipod	5	4	2-3-Nil	5	20	2	5	75
FN-FAL	5	4	2-3-Nil	5	20	4	8	65
FN-FNC	3	3	1-Nil	5	30	3	6	50
G3	5	4	2-3-Nil	5	20	4	7	65
Gaill ARM	5	3	1-Nil	4/5	35/50	3	6	55
HK 33A2	5	3	1-Nil	5	20/40	3	7	55
L85 IWS	5	3	1-Nil	4	20	3	6	50
M14	5	4	2-3-Nil	6	20	4	8	70
M2 Carbine	5	2	1-Nil	4	15/30	3	7	50
Mk I Boys	SA	11	2-2-3	8	5	8	—	20
monopod	SA	11	2-2-3	8	5	5	—	75
MKS	5	3	1-Nil	3/4	30	4	8	55
MP-44	5	3	1-Nil	5	30	3	6	55
PSG1*	SA	4	2-3-Nil	6	20	5	—	75

Foraging

Area	Winter	Spring	Summer	Fall
Wood/scrub	1	3	6	6
Meadow/swamp	0	1	2	2
Field	0	0	25	50
Fishing (1D6x)	1/2	2	1	1

Encounters

Die	Terrain	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	—

Spotting Modifiers

Condition	Own	Enemy
Per Character	-1	+1
Per Vehicle	-5	+5

Encounter Range

Terrain	Range
Open	1D10x300m
Hill	1D10x100m
Swamp	1D10x30m
Woods	1D10x10m

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

Settlement Attitudes (1D6)

Die	Attitude
1	Food Shortage
2	Friendly & Curious
3	Friendly & Curious
4	Open to Contact
5	Neutral
6	Neutral
7	Suspicious
8	Frightened
9	Defensive
10	Hostile

Territory Die Roll Modifiers:

+1, Organized, Devastated; +2, Anarchy, Disputed, Cantonment; +3, Insular, Terrorized.

Settlement Crisis (1D10)

Die	Attitude
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	Attitude
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.

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.

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%

ALCOHOL OUTPUT

Still Size	Input	Output
Small Still	30	5
Medium Still	80	35
Large Still	3000	2400

Input is in kilograms, output is in liters.

FUEL ENERGY TABLE

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 & graze 8 hrs
Mule	10 kg grain & 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. Hole is 1D6 damage points large.
5	Hull damaged. Hole is 2D6 damage points large.
6	Hull crushed. Vessel is grounded to avoid sinking. Cannot be refloated unless a large work crew and vessel are brought to the site.

Item Information

Item	People	Type	Weapons	Goods
Village	See pages 161-162 of <i>Twilight: 2000</i> .			
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	2.5-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

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—M2 or any BMP variant.

NPC

Initiative

<i>NPC Type</i>	<i>Initiative</i>
Elite	5
Veteran	4
Experienced	3
Novice	1

Terrain Effects on Movement

<i>Unit</i>	<i>Open</i>	<i>Wood</i>	<i>Swamp</i>	<i>Hill</i>	<i>Mountain</i>	<i>Water</i>
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.

Armor Values of Cover

<i>Cover</i>	<i>AV</i>
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.

NPC Motivation

Clubs

<i>Card</i>	<i>Motivation</i>
Ace	War leader
King	Brutal
Queen	Stubborn
Jack	Murderous
8-10	Very violent
5-7	Moderately violent
2-4	Somewhat violent

Diamonds

<i>Card</i>	<i>Motivation</i>
Ace	Generous
King	Selfish
Queen	Lustful
Jack	Coward
8-10	Very greedy
5-7	Moderately greedy
2-4	Somewhat greedy

Hearts

<i>Card</i>	<i>Motivation</i>
Ace	Just
King	Honorable
Queen	Loving
Jack	Wise
8-10	Very sociable
5-7	Moderately sociable
2-4	Somewhat sociable

Spades

<i>Card</i>	<i>Motivation</i>
Ace	Charismatic
King	Deceitful
Queen	Ruthless
Jack	Pompous
8-10	Very ambitious
5-7	Moderately ambitious
2-4	Somewhat ambitious

Armor Equivalent

<i>Material</i>	<i>Millimeters per Armor Value 1</i>	<i>Armor Value Constant</i>
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

Radiation Illness

<i>Rads</i>	<i>Slight Illness</i>	<i>Serious Illness</i>	<i>Death</i>
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

Contaminated Water

Present: 12+ (2D6)

Die Disease

1-3	Dysentery
4-7	Typhoid
8-10	Minor disease

Encampment Diseases

Present: 10+ (2D6)

Die 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)

Die Disease

1	Dysentery
2-3	Food poisoning
4-5	Minor disease
6	Cholera
7	Hepatitis-A
8	Pneumonia
9	Typhus
10	Bubonic plague

Equipment Availability (1D10)

<i>Location</i>	<i>Very Common</i>	<i>Common</i>	<i>Scarce</i>	<i>Rare</i>
Major city	10—	10—	8—	4—
City	10—	8—	6—	2—
Town	10—	7—	4—	1—
Village	6—	3—	2—	—
Encounter	4—	2—	1—	—

Animal Diseases

Present: 12+ (2D6)

Die Disease

1-4	Food poisoning
5-7	Minor disease
8	Typhus
9	Rabies
10	Bubonic plague

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
PTRS-41*	SA	12	2-2-3	11	5	9	—	40
bipod	SA	12	2-2-3	11	5	5	—	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
RPK-74	10	2	1-Nil	5	30/40	1	5	50
bipod	10	2	1-Nil	5	30/40	1	3	75
Ruger AC-556	5	3	1-Nil	5	20/30	4	8	50
SIG 510-4	5	4	2-3-Nil	5	20	5	8	65
Steyr AUG	5	3	1-Nil	4	30	3	7	50
Steyr AUG Car.	5	3	1-Nil	3	30	4	8	45
Stoner M22	5	3	1-Nil	5	30	3	7	55
Stoner M23	5	3	1-Nil	3/4	30	3	6	50
Type 64	5	4	2-3-Nil	5	20	4	8	65
Vz-58V	5	3	1-Nil	3/4	30	3	8	55

*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.

†One shot per 30-seconds.

‡Backpack is good for 12 shots; none are actually carried "in" weapon.

Shotguns

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
H&K CAW	5†	4	3-4-Nil	4	10	3	7	40
Close*	5	9	Nil					
Medium*	5x10	1	Nil					
Ithica Auto.	SA	3	Nil	2	2i	5	—	12
Close*	SA	9	Nil					
Medium*	5x10	1	Nil					

*Buckshot, see page 200 of Twilight: 2000.

Machineguns

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil—		Rng
						SS	Brst	
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
DShK	5	9	2-2-3	8	50B	6	15	65
tripod	5	9	2-2-3	8	50B	3	7	150
LB6A1 LSW	10	3	1-Nil	5	30/100B	2	10	50
bipod	10	3	1-Nil	5	30/100B	1	5	65
M2HB	5	8	2-2-3‡	8	105B	3	13	65
tripod	5	8	2-2-3‡	8	105B	2	6	150
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
MG-3	10	4	2-3-Nil	6	50B	1	6	65
bipod	10	4	2-3-Nil	6	50B	1	3	90
tripod	10	4	2-3-Nil	6	50B	1	1	125
MG-34	10	4	2-3-Nil	6	50B	1	6	65
bipod	10	4	2-3-Nil	6	50B	1	4	90
tripod	10	4	2-3-Nil	6	50B	1	2	125
MG-42	10	4	2-3-Nil	6	50B	2	7	65
bipod	10	4	2-3-Nil	6	50B	1	4	90
tripod	10	4	2-3-Nil	6	50B	1	2	125
Steyr LMG	10	3	1-Nil	4	30	4	16	50
bipod	10	3	1-Nil	4	30	2	8	65
Stoner LMG	10	3	1-Nil	5	30	2	10	60
bipod	10	3	1-Nil	5	30	1	5	75
tripod	10	3	1-Nil	5	30	1	3	90
S. M207/Mk 23	10	2	1-Nil	4	100B	2	8	50
bipod	10	2	1-Nil	4	100B	1	5	65
tripod	10	2	1-Nil	4	100B	1	2	80
Vz-59	10	4	2-3-Nil	6	50B	1	8	65
bipod	10	4	2-3-Nil	6	50B	1	5	90
tripod	10	4	2-3-Nil	6	50B	1	4	125

‡.50 SLAP ammunition has a penetration value of 1-1-2.

CONSOLIDATED HEAVY WEAPONS CHARTS

These tables include all man-packed heavy weapons from the basic game and from the **Heavy Weapons of the World**.

Rocket Launchers

Type	ROF	Rld	Rng	Round	Damage	Pen
Apilas	1	2	200	HEAT	C:4, B:4	60C
Armbrust	1	—	75	HEAT	C:4, B:4	55C
B-300	1	2	100	HEAT	C:4, B:4	55C
			125	HE	C:12, B:12	5C
Eryx	1	2	600	HEAT	C:12, B:12	60C
LAW 80	1	—	125	HEAT	C:6, B:4	100C
LRAC F1	1	2	125	HEAT	C:4, B:4	70C
M12 SMAW	1	2	100	HEAT	C:4, B:4	55C
			125	HE	C:12, B:12	5C
M20A1	1	2	25	HEAT	C:3, B:4	55C
M72 LAW	1	—	50	HEAT	C:3, B:4	55C
M136	1	—	75	HEAT	C:4, B:4	70C
RPG-7	1	1	50	HEAT	C:4, B:4	55C
RPG-16	1	2	100	HEAT	C:6, B:6	65C
RPG-18	1	—	75	HEAT	C:4, B:4	60C
RPG-22	1	—	80	HEAT	C:4, B:4	60C
RPG-27	1	2	60	HEAT	C:4, B:4	45C
RPG-75	1	—	100	HEAT	C:4, B:4	55C
Type 69	1	1	50	HEAT	C:4, B:4	60C

Large Caliber Guns (Antiaircraft Artillery)

Type	Round	Rng	Damage	Pen
KS-12	APHE	600	C:5, B:10	50C
	HVAP	400	22	25/20/15
	HE	700	C:5, B:24	4C
KS-19	HE	1500	C:6, B:20	4C
	APHE	800	24	35/25/15
KS-30	HE	2750	C:7, B:24	4C
M-1944 (AA)	APHE	600	C:5, B:10	50C
	HVAP	400	22	25/20/15
	HE	800	C:5, B:24	4C
S-60	HET	1200	C:5, B:24	4C
	API	1200	22	20/10/5/1
Type 59	HET	1200	C:6, B:24	4C

Large Caliber Guns (Antitank Artillery)

Type	Round	Rng	Damage	Pen
D-48	APHE	600	C:5, B:10	50C
	HVAP	400	22	25/20/15
D-74	HE	300	C:16, B:28	1C
IFR:15km	HEAT	300	C:10, B:20	100C
Rld:1	WP	300	C:3, B:36	Nil
	CHEM	300	C:3, B:12	Nil
	ICM	—	B:36	Grenade
	ILLUM	—	B:1500	Nil
M-1944 (AT)	HVAPDS-T	350	26	70/60/50/30
	APHE	300	C:6, B:12	70C
	HEAT	250	C:4, B:10	60C
	WP	250	C:3, B:20	Nil
M-1946	HE	900	C:6, B:32	4C
IFR:27km	APHE	800	28	55/45/35/20
Rld:2	WP	1000	C:6, B:32	Nil
M-1975	HE	300	C:24, B:36	3C
IFR:19km	APHE	350	C:8, B:12	80C
Rld:2	WP	300	C:3, B:44	Nil
	CHEM	300	C:3, B:28	Nil
	ICM	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
M-1966	HE	650	C:4, B:16	4C
	HEAT	650	C:4, B:8	55C
Rapra-3	APFSOS	450	28	100/90/80/70
Rld:2	APFSOSDU	450	28	110/100/90/70
	HEAT	400	C:10, B:20	110C
	HE	400	C:14, B:28	1C
Royal Ordnance	HE	350	C:10, B:20	1C
IFR:18km	HEAT	350	C:10, B:16	100C
Rld:2	HESH	350	C:10, B:16	80C
	WP	—	C:10, B:32	Nil
	ILLUM	—	C:10, B:32	Nil

Type	Round	Rng	Damage	Pen
S-23	HE	450	C:32, B:40	4C
IFR:30km	HE-RAP	450	C:32, B:40	4C
Rld:4				
SD-44	APHE	600	C:5, B:10	50C
	HVAP	400	22	25/20/15
D-44	APHE	600	C:5, B:10	50C
	HVAP	400	22	25/20/15
T-12	HVAPDS-T	350	26	70/60/50/30
	APHE	300	C:6, B:12	70C
	HEAT	250	C:4, B:10	60C
	WP	250	C:3, B:20	Nil

Howitzers

Type	Round	Rng	Damage	Pen
M198	HE	350	C:30, B:36	3C
IFR:24km	HEAT	350	C:20, B:28	110C
Rld:2	WP	350	C:3, B:44	Nil
	CHEM	350	C:3, B:28	Nil
	ICM-DP	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
	FASCAM	—	B:124	Mine
TR	HE	350	C:30, B:36	3C
IFR:26km	HEAT	350	C:20, B:28	110C
Rld:2	WP	350	C:3, B:44	Nil
	CHEM	350	C:3, B:28	Nil
	ICM-DP	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
D-1	HE	300	C:24, B:36	3C
IFR:19km	HEAT	350	C:8, B:12	80C
Rld:2	WP	300	C:3, B:44	Nil
	CHEM	300	C:3, B:28	Nil
	ILLUM	—	B:2000	Nil
D-20	HE	300	C:24, B:36	3C
IFR:19km	HEAT	350	C:8, B:12	80C
Rld:2	WP	300	C:3, B:44	Nil
	CHEM	300	C:3, B:28	Nil
	ICM	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
D-30	HE	300	C:24, B:36	3C
IFR:15km	HEAT	350	C:10, B:20	100C
Rld:1	WP	300	C:3, B:36	Nil
	CHEM	300	C:3, B:12	Nil
	ICM	—	B:60	Grenade
	ILLUM	—	B:1000	Nil
FH-70	HE	350	C:30, B:36	3C
IFR:24km	HEAT	350	C:20, B:28	110C
Rld:2	WP	350	C:3, B:44	Nil
	CHEM	350	C:3, B:28	Nil
	ICMDP	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
	FASCAM	—	B:124	Mine
M-58	HE	350	C:30, B:36	3C
IFR:24km	HEAT	350	C:20, B:28	110C
Rld:2	WP	350	C:3, B:44	Nil
	CHEM	350	C:3, B:28	Nil
	ICMDP	—	B:60	Grenade
	ILLUM	—	B:2000	Nil
	FASCAM	—	B:124	Mine
M-1931	HE	400	C:36, B:44	4C
IFR:18km				
Rld:8				

Mortars

Type	Round	Damage	Pen
L5	HE	C:8, B:28	4C
IFR:4.5km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil
L16A2	HE	C:8, B:28	4C
IFR:4.5km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil

Type	Rnd	Damage	Pen
M-1937	HE	C:8, B:28	-4C
IFR:4km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil
M-1943	HE	C:16, B:44	0C
IFR:6km	WP	C:3, B:36	Nil
	ILLUM	B:1500	Nil
	CHEM	C:3, B:12	Nil
M-1952	HE	C:40, B:48	-4C
IFR:9.7km			
M-1953	HE	C:26, B:40	-4C
IFR:8km	CHEM	C:4, B:18	Nil
M29E1	HE	C:8, B:28	-4C
IFR:4.8km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil
M30	HE	C:12, B:36	-2C
IFR:6km	WP	C:3, B:36	Nil
	ILLUM	B:1500	Nil
	ICMDP	B:36	Grenade
	CHEM	C:3, B:12	Nil
M224	HE	C:5, B:20	Nil
IFR:4km	WP	C:2, B:12	Nil
	ILLUM	B:400	Nil
Thompson-Brandt	HE	C:16, B:44	0C
IFR:6km	WP	C:3, B:36	Nil
	ILLUM	B:1500	Nil
	CHEM	C:3, B:12	Nil
Wojo Combo	HE	C:5, B:20	Nil
60mm	WP	C:2, B:12	Nil
IFR:4km	ILLUM	B:400	Nil
81mm	HE	C:8, B:28	-4C
IFR:4km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil
82mm	HE	C:8, B:28	-4C
IFR:4km	WP	C:2, B:20	Nil
	ILLUM	B:1000	Nil

Mines

Type	Damage	Pen
KHF-2 CHEM	C:4, B:20	Nil
M14 APERS	C:8, B:16	Fragments
M15 AT	C:22, B:22	30C
M16A1 APERS	C:8, B:32	Fragments
M18A1 APERS	Special	Fragments
M19 AT	C:22, B:22	30C
M21 AT	C:18, B:18	24C
M23 CHEM	C:4, B:20	Nil
M24 AT	C:8, B:4	90C
M25 APERS	Special	Fragments
M26 APERS	C:8, B:12	Fragments
M66 AT	C:6, B:4	90C
MON-50 APERS	Special	Fragments
PM APERS	Special	Fragments
POMZ-2 APERS	C:2, B:2	Fragments
TM-46 AT	C:16, B:40	24C
TM-57 AT	C:18, B:40	30C
Wojo AT	C:18, B:40	20C
YaM5 AT	C:16, B:40	24C

Multiple Rocket Launchers

Type	Round	Rng	Damage	Pen
122mm Rkt	HE	—	C:16, B:44	1C
IFR:11km	CHEM	—	C:4, B:30	Nil
Rld:2	WP	—	C:3, B:44	Nil
RPJ-14 MRL	HE	—	C:12, B:32	1C
IFR:9.8km	CHEM	—	C:4, B:24	Nil
Rld:10	WP	—	C:3, B:32	Nil
Type 83 MRL	HE	—	C:4, B:24	4C
IFR:8km				
Rld:20				
WP-8 MRL	HE	—	C:12, B:32	1C
IFR:9.8km	CHEM	—	C:4, B:24	Nil
Rld:8	WP	—	C:3, B:32	Nil

Type	Round	Rng	Damage	Pen
BM-70 MRL	HE	—	C:16, B:44	1C
IFR:21km	CHEM	—	C:4, B:30	Nil
Rld:40	WP	—	C:3, B:44	Nil
BM-27 MRL	HE	—	C:26, B:38	4C
IFR:40km	CHEM	—	C:4, B:30	Nil
Rld:24	WP	—	C:4, B:46	Nil
	ICMDP	—	B:60	Grenade†
	FASCAM	—	B:124	Mine

* Single rocket from improvised launcher.

† Use 203mm ICMDP attack table on page 259 of Twilight: 2000.

Special Mortar Rounds

Type	Rld	Max. Rng	Damage	Pen
Merlin	2	4500	C:5, B:5	20C
Strix	2	6500	C:8, B:8	90C

Antitank Missiles

Type	Rld	Max. Rng	Damage	Pen
ADATS (AT)	1	6000	C:12, B:20	170C
AT-3 "Sagger"	2	3000	C:6, B:4	75C
AT-4 "Spigot"	3	2000	C:6, B:4	100C
AT-7 "Saxhorn"	2	1000	C:12, B:12	100C
AT-8 "Songster"	6	5000	C:12, B:12	115C
Dragon PIP	2	1000	C:12, B:12	135C
FOG-M (AT)	2	10,000	C:12, B:12	160C
HOT	2	4000	C:12, B:12	155C
MILAN II & II-T	3	2000	C:12, B:12	145C
RBS-56 BILL	2	2000	C:8, B:8	130C
SS-11				
HEAT	2	4000	C:8, B:8	120C
APERS	2	3000	C:12, B:18	2C
Swingfire	2	4000	C:12, B:12	100C
Tank Breaker	2	2000	C:6, B:4	90C
TOW II & II-C	2	3500	C:12, B:12	160C
Hong Jian-8	2	3000	C:10, B:10	155C

Hand Grenades

Type	Damage	Pen
Antitank	C:3, B:4	18C
Chemical	C:1, B:12	Nil
Concussion	C:5	Nil
Fragmentation	C:3, B:12	Nil
White Phosphorus	C:1, B:12	Nil

Rifle Grenades

Type	Rng	IFR	Damage	Pen
BTU APERS	20	400	C:3, B:12	Nil
BTU HEAT	20	400	C:7, B:12	30C
Chemical	15	200	C:1, B:12	Nil
M31 HEAT	15	200	C:7, B:12	30C
RAW HE	100	2000	C:10, B:28	1C
RAW HEAT	100	2000	C:8, B:20	75C
US APERS	20	400	C:3, B:12	Nil
US HE	20	400	C:2, B:9	Nil
US HEAT	20	400	C:7, B:12	30C

ICM Attack Data

Weapon	Close	Adj.	Conc	Burst	Pen
D-74	1-3	2	3	12	Nil
M198	1-4	3	3	12	4C
M-1976	1-4	3	3	12	Nil
TR	1-4	3	3	12	4C
D-20	1-4	3	3	12	Nil
D-30	1-3	2	3	12	Nil
FH-70	1-4	3	3	12	4C
M-68	1-4	3	3	12	4C
M30	1-2	2	3	12	4C

Special Mortars

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
AM2 B9	5	5	200	HE	C:8, B:28	-4C
IFR:3km			200	HEDP	C:7, B:20	15C
			200	WP	C:2, B:20	Nil
			—	ILLUM	B:1000	Nil

Grenade Launchers

Type	ROF	Mag	Rng	IFR	Rnd	Damage	Pen
AGS-17	5	30D	150	1700	HE	C:2, B:12	Nil
BG-1	1	11	100	300	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil
HK-69	1	11	100	400	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil
M79	1	11	100	400	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil
M203	1	11	100	400	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil
Mk-19	5	50B	200	3000	HVHE	C:3, B:12	Nil
					HVHEDP	C:3, B:12	4C
MM-1	5	12	100	400	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil
TGS	1	11	100	400	HE	C:3, B:12	Nil
					HEDP	C:3, B:12	4C
					CHEM	C:1, B:4	Nil
					ILLUM	B:100	Nil

Large Caliber Guns (Antiaircraft Autocannons)

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
Artemis	10	500B	875	API	16	4/2/0-2
			875	HE	C:1, B:2	-6C
Bofors L60	5	20	1200	APT	16	5/1/-2
				HET	C:1, B:2	-6C
Bofors L70	5	24	1200	APT	16	5/1/-2
				HET	C:1, B:2	-6C
Breda L70	5	144	1200	APT	16	5/1/-2
				HET	C:1, B:2	-6C
Breda Sentinel	10	500B	750	API	16	4/2/0-2
			750	HE	C:1, B:2	-6C
Breda Twin L70	5	480D	200	API	14	4/2/0-2
Giat 53T4	20	300B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
Giat 76T2	20	540B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
M-53 Twin	10	500B	750	API	16	4/2/0-2
			750	HE	C:1, B:2	-6C
M-1939	5	10D	1200	APT	16	5/1/-2
				HET	C:1, B:2	-6C
M-53/1	5	500B	750	API	16	4/2/0-2
			750	HE	C:1, B:2	-6C
M55 20/3	30	180D	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
M55 20/2	20	1000B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
M55 Quad	20	840B	150	BMG	8	2-2-3
				SLAP	8	1-1-2
M75 20/1	10	60D	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
M167	60	1000B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
Oerlikon 18s	10	30D	250	API	10	3/-2/-5
			250	HE	C:1, B:2	-8C
			250	ADPI	12	3/-2/-4
GAI-CO1	5	75B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
GAI-CO4	5	150B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
GAI-D01	10	240B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
Oerlikon Diana	10	500D	250	API	10	3/-2/-5
			250	HE	C:1, B:2	-8C
GBI-A01 25mm	10	210B	250	API	10	3/-2/-5
			250	HE	C:1, B:2	-8C
Oerlikon Twin	10	112D	500	API	12	3/-2/-5
			500	HE	C:2, B:3	-6C
Rheinmetall Twin	20	500B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
TCM	20	120B	450	API	10	3/-2/-5
			450	HE	C:1, B:2	-8C
Type 74	10	50D	1200	APT	16	5/1/-2
				HET	C:1, B:2	-6C
Type 85	10	56B	250	APT	10	2/-4/-6
			250	HE	C:1, B:2	-8C
			250	HEAP-T	C:1, B:2	-4C
ZPU-1	5	1200B	150	14.5mmB	12	2-2-3
ZPU-2	10	2400B	150	14.5mmB	12	2-2-3
ZPU-4	20	4800B	150	14.5mmB	12	2-2-3
ZU-23-2	10	100B	250	API	10	2/-4/-6
			250	HE	C:1, B:2	-8C
ZU-23-4	20	100B	250	API	10	2/-4/-6
			250	HE	C:1, B:2	-8C

AA Missiles

Missile	Rng	Guidance	Acc. Level
FOG-M (AA)	10 km	TV	Easy
ADATS (AA)	6 km	IR	Average
Blowpipe	3.5 km	CMD	Difficult
FIM-43 Redeye	5 km	IR	Difficult
FIM-92 Stinger	6 km	IR	Average
FIM-99 Scorpion	7 km	Radar/IR	Easy
HN-5	3.6 km	IR	Difficult
Javelin	4 km	Radar	Average
Matra Mistral	6 km	IR	Average
MBB-7 Venusfliegenfalle	7 km	Radar/IR	Easy
RBS-70/RBS-90	5 km	CMD	Average
SA-7 Grail	3.6 km	IR	Difficult
SA-14 Gremlin	8 km	IR	Average
SA-16	8 km	IR	Average
SA-27 Grappler	6 km	Radar/IR	Easy
Starstreak	7 km	CMD	Easy
Towed Rapier	7 km	CMD	Average

Recoilless Rifles

Type	ROF	Rld	Rng	Round	Damage	Pen
B-10	1	2	600	HEAT	C:4, B:4	45C
				HE	C:4, B:20	1C
B-11	1	2	800	HEAT	C:6, B:12	75C
				HE	C:6, B:16	4C
Folgore	1	2	100	HEAT	C:4, B:4	70C
M3 Carl Gustav	1	2	150	HEAT	C:4, B:4	70C
L6 Wombat	1	2	450	HE-P	C:10, B:20	100C
M-59A	1	2	600	HEAT	C:4, B:4	45C
				HE	C:4, B:20	1C
M18A	1	2	125	HEAT	C:6, B:16	55C
				HE	C:6, B:24	2C
				WP	C:6, B:24	Nil
M20	1	2	300	HEAT	C:4, B:16	-1C
				HEPT	C:4, B:4	20C
M27A1	1	2	200	HEAT	C:6, B:12	80C
				HEPT	C:6, B:8	40C
M40A1	1	2	300	HEAT	C:6, B:12	80C
				HEPT	C:6, B:8	40C
M67	1	1	100	HEAT	C:6, B:12	70C
				HE	C:4, B:16	4C
				APERS	C:4, B:24	4C
SPG-9	1	2	200	HEAT	C:6, B:16	75C
				HE	C:6, B:24	4C
Type 36	1	2	125	HEAT	C:6, B:16	55C
				HE	C:6, B:24	2C
				WP	C:6, B:24	Nil
Type 56	1	2	300	HEAT	C:4, B:16	-1C
Type 65	1	2	600	HEAT	C:4, B:4	45C
				HE	C:4, B:20	1C

Flame Projectors

Type	ROF	Rld	Rng	Round	Damage	Pen
HAFLA	1	—	10	ICEN	C:1, B:12	Fragments

Flamethrowers

Weapon	ROF	Dam	Pen	Blk	Mag	SS	—Recoil—	Brst	Rng
LPO-50	SA	*	Nil	4	5	4	—	—	5
M9A2	SA	*	Nil	4	5	4	—	—	5
TPO-50	SA	*	Nil	4	15	4	—	—	5

*Damage by burning gasoline is covered on page 198 of Twilight: 2000.

AMMO RECORD FORMS

Magazine

[illegible]

Magazine

Caliber _____

Magazine

Caliber _____

Magazine

Caliber _____

Magazine

Caliber _____

50-Round Belt

Caliber _____

50-Round Belt

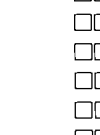
Caliber _____

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50-Round Belt



Caliber _____

NPC RECORD FORMS

NPC#: _____

Experience: _____

Attributes: _____

Skills: _____

Initiative: _____

Weapon: _____

Magazines: □□□□□□□□

Special:

Wounds

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Initiative: _____	In Weapon
Weapon: _____	☐ ☐ ☐
Magazines: ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
Special: _____	☐ ☐ ☐ ☐ ☐
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NPC#: _____

Experience: _____

Attributes: _____

Skills: _____

Initiative: _____

Weapon: _____

Magazines: □□□□□□□

Special:

Wounds

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NPC#: _____

Experience: _____

Attributes: _____

Skills: _____

Initiative: _____

Weapon: _____

Magazines: □□□□□□□□

Special:

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TWILIGHT:2000™ MERC: 2000™ *Referee's Screen*

Twilight: 2000/Merc: 2000 Ref's Screen

The **Twilight: 2000 Ref's Screen** is fully usable with **Twilight: 2000**, **Merc: 2000**, and the other products in the **Twilight: 2000** system. The screen itself contains the charts a referee needs most often in a conveniently arranged, stand up screen, to conceal the referee's secrets from the players.

The **Twilight: 2000 Ref's Screen** comes wrapped around a 16-page booklet containing new D20 game mechanics, consolidated small arms and heavy weapons listings (From both **Small Arms of the World** and **Heavy Weapons Handbook**), rules extensions to character generation, combat (including a system for skill-based fully automatic fire), still more charts (in a 4-page pull-out section), and optional rules including (among other things) the first treatment of enhanced damage rounds (such as hollow points and mercury loads) in the **Twilight: 2000** system.

The new D20 game mechanics expand the range of possible task results and increase the speed, simplicity and flexibility of the game system, at the same time bringing a greater sense of realism and enjoyment.

No referee can afford to be without this product.

Design: Loren K. Wiseman

D20 System Design: Lester W. Smith

2015 5.50

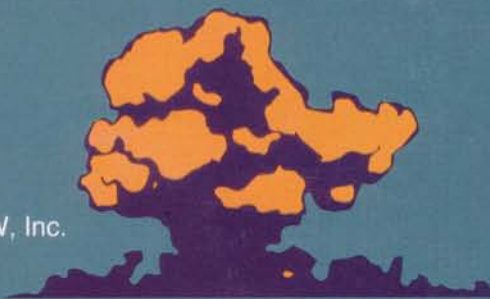


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ISBN 1-55878-134-X

Made in U.S.A.
Printed in U.S.A.

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