Introduction

The **Special Weapons** supplement to the **Phoenix Command Combat System** contains an assortment of unusual weapons. The accent is on equipment used by military and paramilitary organizations in the latter half of the 20th century, but other weapons included (such as Bows and Garrotes) have a much longer history, and can be applied to a wide variety of time periods.

The supplement has been divided into four Chapters. The first deals with Incendiary Weapons such as Flamethrowers; the second with distinctive military weapons of the last fifty years, including Claymore mines; the third with weapons encountered during riots and protests (Tear Gas, Rubber Bullets, Molotov Cocktails, and the like); and the last with comparatively silent weapons and attacks, including Bows, Silenced Weapons, and Garrotes.

Phoenix Command players will find that there are quite a number of new rules in this supplement, which is unusual for a Weapon Data Supplement. All of the rules are organized in the usual way, and may be incorporated on a Section by Section basis; most will only apply when the appropriate weapon is in use.

For those unfamiliar with **Phoenix Command**, certain aspects of this supplement will provide valuable reference information. The scale used is 6 feet per hex, 1/2 second per Impulse and 2 seconds per Phase.

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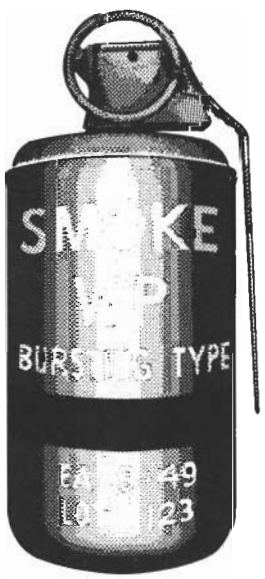
INCENDIARY WEAPONS

The use of fire for destructive purposes almost certainly dates back to prehistoric times. As civilization developed, incendiary weapons made frequent appearances on battlefields and in sieges, and were used with increasing sophistication. The military applications of fire have continued to advance, and now the modern army is equipped with a wide and devastating array of fire-based weapons, including flamethrowers and White Phosphorus grenades.

1.1

WHITE PHOSPHORUS



White Phosphorus grenades and shells are common anti-personnel and smoke rounds. These explosives are ideal for a variety of purposes, including clearing buildings and bunkers, detonating flammable substances, and blocking visibility.

White Phosphorus (WP), first used in World War II, is a wax-like solid which spontaneously burns as soon as it comes into contact with comparatively low levels of oxygen; it will ignite on exposure to either air or water, for example. Grenades and shells which use WP have an explosive charge which disperses the WP over a comparatively wide area. The dispersed phosphorus immediately combusts, forming a dense white cloud which simultaneously blocks vision and burns all personnel within its volume. The smoke effects of this cloud are covered in the Smoke rules of Section 2.5, using the smoke values (Smk and Dur) listed in the **White Phosphorus Grenade Data Table (13B)**.

The anti-personnel effects of WP grenades are also given in the **White Phosphorus Grenade Data Table (13B)**. Examining **Table 13B** you will find a number of new terms in addition to the standard values of Weight (W), Length (L), Arm Time (AT), and Range (R). These terms are discussed below.

Base White Phosphorus Hit Chance (BWPHC)

The bursting charge of a WP grenade disperses the phosphorus as a number of large pieces or chunks, called **WP Fragments**, as well as a shower of small particles. The **BWPHC** is the base chance of hitting a target with a WP Fragment. This Hit Chance is similar to the Base Shrapnel Hit Chance (BSHC) and corrections for Target Size may be made, using Section 3.7 of third edition **Phoenix Command**. For each target in the burst area, roll a 00-99 number. If less than or equal to the BWPHC is rolled, the target has been hit by a WP Fragment. Numbers preceded by an asterisk (*) give the number of Fragment hits.

Physical Damage for Body and Limbs (PD Body or PD Limb)

If a target is hit by a WP Fragment, the damage caused is given by these PD values. Determine the WP Hit Location using standard rules and read off the PD inflicted from **Table 13B**; either Body or Limb as appropriate. Hits to the Head use the Body values.

Physical Damage Surface Burns at Target Size 0, 4, or 7 (PDs TS 0, 4, 7)

The PDs values give the burn damage caused by the small particles of WP which saturate the burst area. Unlike the Fragments, these small particles cause surface burns over the entire exposed target area, and automatically hit all exposed personnel in the burst area. This is the White Phosphorus equivalent of Concussion. The PDs gives the PD inflicted on an exposed Target Size of 0, 4, or 7. Round the actual Target Size Modifier down to the nearest value if necessary; treat values below 0 as 0.

When determining the **Target Size**, it is important to use the larger ot the Target Size using direct line of sight from the burst, or the Target Size as viewed from directly overhead. This is because the WP is scattered into the air, and then begins to settle to the ground; consequently, low walls and similar types of cover are of little use against WP. The PDs is the amount of damage which a target takes at ground level as the WP falls to the ground. Thus, a prone target would be Target Size = 7 rather than Target Size = 2. The PDs also attacks targets completely behind cover if the WP is free to settle there. In this case the **Indirect Line of Sight Modifier** of .25 applies.

Example: Din and Humbert are caught in the burst of an M15 WP grenade. Din is kneeling in the open one hex from the burst while Humbert is two hexes away, and is prone behind a waist high wall.

Din is hit by 4 WP Fragments since the BWPHC is *4. Damage from each piece will do either 40 or 7 PD, depending on whether it hits Din in the head/body, or in a limb. In addition, Din takes 150 PD from surface burns (Kneeling TS = 6 using the PDs TS 4 line).

Humbert is separated from the burst by a waist high wall. He is immune to the WP Fragments, but will take burns from WP settling on his side of the wall. The damage he takes is 56 PDs (Prone TS 7 from above, at Range 2) X .25 (Indirect LOS) = 14 PD.

"...And if you can't riddle them with bullets, fry them like an egg."

Corley Norris

Smoke (Smk)

The **Smk** value gives the diameter in hexes of the smoke cloud created by the WP burst, assuming that there is no wind. Detailed use of the Smk value and the effects of wind are in Section 2.5.

Duration (Dur)

The **Dur** gives the time, in Phases, during which the WP smoke cloud continues to be generated. This is used in the Smoke rules of Section 2.5. While the Dur gives the burn time for the small particles, the **WP Fragments** will burn much longer. The Fragments produce little smoke but are dangerous if touched or stepped on, making it unsafe to enter the burst area. If a person enters the burst area within 10 X Dur Phases, there is a chance he will take damage from a WP Fragment. Check each Impulse a person moves in the area; the chance of a hit is equal to the BWPHC, depending on the hex's distance from the original burst. If the BWPHC indicates a hit, the damage done is given by the PDs Limb value. Personnel going prone or placing more of themselves in contact with the ground increase their chance of contacting the burning WP. Use the Target Size Modifier rules of Section 3.7 **Phoenix Command** (3rd Edition) to find this chance.

Armor and Damage

Armor will provide some protection from White Phosphorus. If the armor's PF is greater than the PD Limb value, the WP Fragments will do no damage. If the armor's PF X 2 is greater than the PD Limb value, the WP Fragments do 1 / 2 damage, and if the armor's PF X 3 is greater than the PD Limb value, the WP Fragments do 3 / 4 damage.

For damage from small particles and surface burns, armor will provide protection if its PF X 2 is greater than the PD Limb value. If the armor worn meets these requirements, the exposed target area is reduced as shown on the following table. If the armor's PF does not meet these requirements, it may still provide some protection. If the PF X 4 is greater than the PD Limb value, surface burns do 1 / 2 damage. If the armor's PF X 6 is greater than the PD Limb value, surface burns do 3 / 4 damage.

Reduction in Exposed Target Size

Open Helmet only	-1
Open Helmet and Body Armor	-3
Body Armor only	-2

Example: A standing target in body armor and helmet is caught 2 hexes from the burst of an M15 WP grenade. The PD value for TS 7 is 56 points. If the target had a PF 10 Helmet and Body Armor, he would have an effective Target Size of 7 (standing) - 3 (Reduced TS for Helmet and Body Armor) = 4 and would take damage based on TS 4; in this case, 8 PD.

Note that if the target's Armor PF were 5 or less, he would receive no protection; the PF must be at least one tenth the PD if the armor is to provide protection. For armor which is fully enclosed, such as is common in High-Tech settings, the Flamethrower rules of Section 1.2 should be used to determine if the WP can burn through the suit.

1.2

FLAMETHROWERS

Flamethrowers are powerful weapons, designed for clearing bunkers and for use on vehicles. They are generally carried by Combat Engineers and other specialized troops, and flamethrowers have never been common battlefield weapons; they are far too dangerous to friend and foe alike for use by untrained personnel, and are likely to explode when damaged.

The appearance of the flamethrower has changed little through the years. One or more cylinders are carried on the user's back, and feed a hose which ends in the hand grip and nozzle. The fuel carried in the tanks is usually pressurized, so when the trigger is pulled it is forced through the hose and expelled from the nozzle onto the target. Ignition takes place at the moment of discharge, and is caused by an ignition cartridge. Data for common flamethrowers is found in the **Flamethrower Data Table (14A)**. The **Weight** and **Aim Time Mods** follow the standard definitions for small arms. New values specific to flamethrowers are discussed below.

"Well, at least I have a hobby."

Pete the Pyromaniac

 # Shots

The **# Shots** value gives the number of **Ignition Cartridges** contained in the gun assembly. These cartridges are expendable units which ignite the fuel a single time each, and they are reloaded along with fuel and pressurant gas. These cartridges limit the number of "hot shots" which can be taken. The user may only begin firing the Flamethrower a number of times equal to the # Shots value. Once a Shot has begun, it may last any number of Impulses (limited by Time, discussed below), as the firer wishes.

Time

The **Time** value gives the total number of Impulses of fuel which can be fired. A Time of 20 means there is a total of 20 Impulses of fuel in the unit. This can be expended in one large 20 Impulse burn or smaller burns whose number is limited by the # Shots available.

Depth

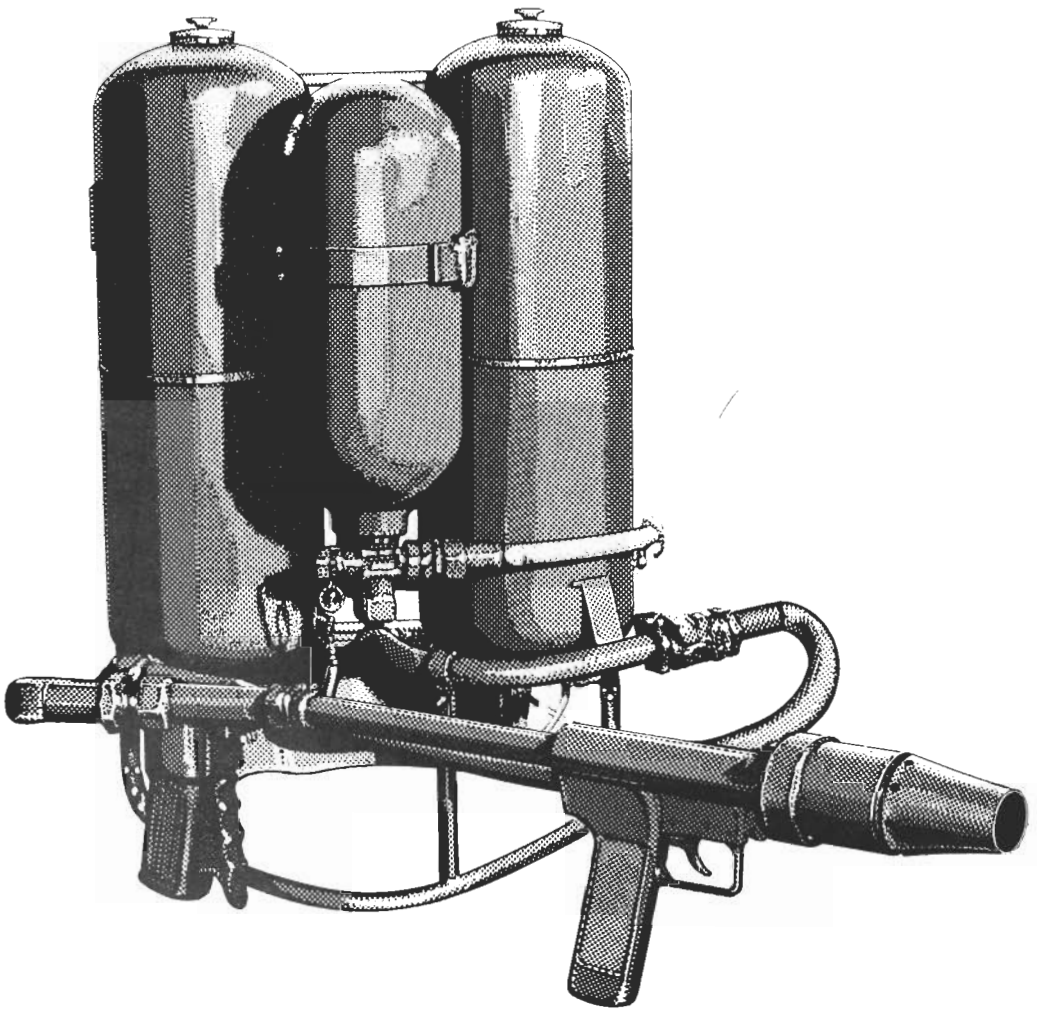
The **Depth** gives the depth of the resulting fire in hexes. If the Depth were 2, then the flamethrower would cause a fire 2 hexes deep behind each hex of width covered. The width of the sweep may be determined by the firer, as discussed below under "Burn Duration".

Ammunition Weight (AW)

The AW gives the weight of fuel, ignitors, and pressurant gas which must be loaded to fully recharge the unit. This can be done from a service cart with gas compressor or from gas storage and fuel tanks. In the field, spare fuel, ignitors, and gas are carried in a separate backpack. The **Reload Time** is on the order of two to five minutes.

Range

This gives the maximum range, in hexes, the unit can be fired. Note that, unlike normal small arms, a Flamethrower cannot be aimed past someone; the firer must shoot at the nearest target in a given direction.



"Well, you can either surrender... or you can become a human hibachi."

The Torch Patrol

Burn Duration (Dur)

The **Burn Dur** gives the burn time of the resulting fire in the target hexes as a function of target range. This value is the time which the fire will burn if the jet was concentrated on a one hex wide front. The firer may, however, elect to sweep the jet of flame across a wider frontage (with a maximum of 30 degrees per Impulse). To determine the effective Burn Dur, simply divide the listed Burn Dur, at the appropriate range, by the number of hexes covered by the sweep.

Example: An M2A1 flamethrower, with a Depth of 2, fires for 4 Impulses into a 3 hex front area at a range of 10 hexes. The resulting fire burns for 4 (Impulses) X 35 (Burn Dur at range 10) / 3 (3 hex front) = 4 X 35 / 3 = 140 / 3 = 47 Impulses.

Note that the burn time given is for the flamethrower's fuel only; if there is flammable material in the area covered by the flamethrower, it is likely that it will also combust. Rules regarding the spreading of fires are contained in Section 1.3.

Jet Physical Damage (PDj) for Target Size 0, 4, 7

The jet of flame which pours out of a flamethrower is burning at temperatures in excess of 2200 degrees Fahrenheit (1200 degrees Centigrade), and obviously has terrible effects on any exposed personnel in its path. The **PDj TS** values give the total cumulative PD done to a target of exposed Target Size 0, 4, or 7 for a given amount of time, in Impulses, that he is in the firing jet. As an example, a target of TS 8 in the firing jet of an M2A1 flamethrower for 3 Impulses takes 27K PD (27,000 PD). Note that this PD is the total from the first Impulse it contacts the target to the time listed. As usual, round the TS down to the nearest value, but never below 0.

Burn Physical Damage (PDb) for Target Size 0, 4, 7

"I see smoke... Where's Axly?"

Vladimir

Once an area is no longer directly exposed to the flamethrower's jet, temperatures are likely to drop. It remains burning and dangerous, however, for Burn Dur Impulses. The **PDb TS** values give the total PD done to a target of exposed target size 0, 4, or 7 for the amount of time, in Impulses, that he is in a hex which has been set afire. Like the PDj value, the PDb is the total from the beginning of the exposure. For this sort of exposure, the Target Size is based on the amount of the target which is exposed directly to the flame; for a person running through an area which is on fire, use a TS of 0.

Example: Derek runs through two hexes which have been set afire by an M2A1 to escape a building. If he is in the flames for 2 Impulses, he would take PDb TS 0 damage at 2 Impulses exposure time, for a total of 130 PD.

Odds of Hitting

A flamethrower is usually aimed at a target hex. We will cover firing at vertical targets later in this section, but for now let us assume the target is a ground level hex. To find the **Odds of Hitting** this hex, use the normal rules with a Target Size of +12 and the **Burst Elevation Odds Table (4G)**. If the result is a hit, the target hex has been hit. Flamethrowers have an SAB value of +10 for subsequent Impulses of fire. For a miss, use the normal grenade scatter rules for shot placement.

The above rules apply to putting 1 Impulse of fire into a target hex . If the shooter wishes, he may also spray fire over multiple hexes as in fully automatic fire. The resulting fire would cover the width the arc was swept to a depth given by the flamethrower's Depth value. The time this fire will burn is given by the Burn Dur values discussed in the preceding text.

"I see flames... Where's Axly?"

Vladimir

When shooting at a vertical target inside half Range, the jet is swept across the target. The Odds of Hitting use the preceding rules for Automatic Fire at a Target Size of +12. The only difference now is the landing place of the jet not intercepted by the target. For those interested, it will fall at:

$$\text{Range in hexes} = (\text{Maximum Range} + \text{Target range}) / 2$$

Oxygen Depletion

A flamethrower need not hit its target to kill or incapacitate. When clearing bunkers and tunnels, oxygen depletion is a major effect. The flame actually consumes the available oxygen in the bunker, which asphyxiates the occupants. A standard flamethrower will deplete the oxygen from 1 Hex per Impulse of jet fire.

Example: A bunker which is 2 by 4 hexes has only small firing ports for ventilation. A flamethrower is used to fire into the bunker. Opponents not killed by the Flamethrower will begin to asphyxiate after 8 Impulses of fire into the bunker; one Impulse of fire per hex of bunker size.

The oxygen depletion effect is obviously dependent on relatively poor ventilation, and has no effect in trenches, normal buildings, and so forth. The oxygen depletion effect should only be used in cases where the target is a tightly enclosed space, and where all the vents are either small, covered up, or exposed to the flamethrower's effects.

A person inside a depleted bunker has a limited amount of oxygen already inside his lungs. The number of Phases of normal operation he is allowed, after the bunker has been fully depleted, is equal to his Health characteristic plus a 0-9 roll. This is determined separately for each person within a bunker, and represents how recently each has breathed. Note that it is not possible to deliberately hyperventilate and hold one's breath once a flamethrower has begun depleting the bunker; the combination of noxious combustion products and extreme heat makes the air nearly unbreathable. Once a person has exceeded the number of Phases of normal operation, he begins to asphyxiate. Use the rules of the Section 4.3 to determine damage and knockout.

Self Immolation

One of the dangers of using a flamethrower is self immolation. The user is carrying large quantities of highly combustible fuel under pressure. If the user is hit in the body on a Hit Location Roll of 20-41, the bullet may strike the fuel tanks. If hit from the front, the bullet must penetrate the user and any body armor before hitting the tanks; if hit from behind, the tank is the first object hit. If the tank is ruptured, it will soak him and his hex in fuel. The fuel tanks have a PF of 1 and if ruptured by normal ammunition have a 1% chance of igniting. If ruptured by an explosive round the chance is 80%, and from tracer fire 30%. If the user is in the process of firing the flamethrower, or has fired within the last 12 Impulses, there is another 5% chance per Impulse he will ignite himself if he has not failed his KV roll, and a 20% chance per Impulse if he has failed his KV roll. These chances apply for 12 Impulses after the tank is ruptured. Once a tank is ruptured, the Flamethrower will not function.

If a fuel tank is ruptured and ignited, the user will take normal damage as if the entire remaining fuel load were fired into his hex. So, if a tank were ruptured with 10 Impulses of fire left, he will burn and take damage (PDb) as if he had been in a hex which was fired upon for 10 Impulses.

"I hear screams. .. Where's Axly?"

Vladimir

Armor Effects

Body armor is of little help when a person has been soaked in fuel and is on fire. Only a self contained life support system with sufficient insulation to protect the wearer will provide significant protection. Such systems are available in modern tanks and high tech power armor (see our Vehicular Combat System, High-Tech Weapon Data Supplement, and Living Steel). For such self contained units, the time before the unit becomes nonfunctional and uninhabitable is given opposite the unit's PF.

PF	Time	PF	Time	PF	Time
10	.5 Phase	70	6 Phase	700	11 Minutes
20	1 Phase	100	11 Phase	1000	19 Minutes
30	2 Phase	180	25 Phase	1500	34 Minutes
40	3 Phase	200	30 Phase	2500	70 Minutes
50	4 Phase	260	40 Phase	3500	115 Minutes
60	5 Phase	400	80 Phase	5000	190 Minutes

Example: A tank with top armor of PF 260 has been set afire. If the fire burns for more than 40 phases, the crew must abandon the vehicle.

Equipping Times and Sound Magnitudes

Putting on a Flamethrower takes 20 AC while removing one takes 8AC. This can be particularly important if you are under attack. As far as **Sound Magnitude**, a Flamethrower's Ignition Cartridge makes quite a bit of noise. The Sound Magnitude for an Ignition Cartridge Flamethrower is 65. Many Flamethrowers, including the German Flammenwerfer and Russian LPO-50 are capable of "hot shots" only. They automatically fire the Ignition Cartridge when the trigger is pulled. The US M2A1 and M9A1 are capable of "cold shots" as well as "hot". For a "cold shot", the Sound Magnitude is 44. These Sound Magnitudes are used in the 3rd edition **Phoenix Command** Sound Detection rules.

1.3

FIRES

Once an area has been set on fire by a Flamethrower or by White Phosphorus, there is a significant chance that the fire will continue to burn on natural fuel after the original cause of the fire has been consumed. While a full examination of fires and the way they spread is beyond the scope of this supplement, the following simple system is presented for general use. It is not comprehensive, but will serve to give players guidelines as to the behavior and dangers of fires. The rates at which fires spread are given below, and damage done by such fires is given later in this section.

"A Bullet in the Beak Is really very Bleak. But Boiling like a Duck Just absolutely Sucks."

Fred the Burning Bandit

Fire Table

Hex Type	Burn Duration	Fire Factors	Critical Fire Factors
Dry Grass / Hay	5	3	.2
Light Brush	10	4	.5
Heavy Brush	40	6	.8
Forest	120	9	1
Residential Building	150	15	2
Commercial Building	150	20	2.5

The **Burn Duration** is the number of Phases during which a hex of the given type will burn at its peak temperature. It is during this time that the fire is most dangerous; after the Burn Duration, the bulk of the highly combustible material has been consumed, and the temperature of the fire will begin to decline. Full use of the Burn Duration is discussed below. The **Fire Factor** is an indication of how long it takes a hex of a given type to catch fire, and of how hot it burns once it is aflame. **Critical Fire Factor** is used to determine how easily a hex can be set on fire.

Once a hex is on fire, all adjacent hexes have a risk of catching fire as well. If the Fire Factor of the burning hex is greater than the Critical Fire Factor of the target hex, the target hex will begin to burn. It takes a number of Phases equal to the Fire Factor of the target hex for the hex to be fully ablaze; once this time has passed, it is possible for fire to spread from the old target hex into any new adjacent hexes. Note that the Fire Factor translates directly into the speed at which a fire is travelling, in Phases per Hex.

If the fuel in a hex is **Damp**, multiply the hex's Critical Fire Factor by 10; if it is actually **Wet**, then multiply the Critical Fire Factor by 20. Hexes which contain no fuel, such as Fire Breaks, will not burn; for the purposes of this supplement, a fire will not cross a Fire Break.

If a Damp hex does catch fire, multiply its Fire Factor by 10 to determine how long it takes for the hex to burn; for Wet hexes, multiply the Fire Factor by 20. In both cases, the Fire Factor is normal for determining the chance of the fire spreading to adjacent hexes. The fact that a hex is Wet or Damp simply reduces its chance of burning, and increases how long it takes for the hex to burn.

If there is a significant **Wind** blowing, Fire Factors are modified as follows. For every 10 miles per hour (5 HPP) of wind, hexes downwind of the fire have their Fire Factors divided by 2 to determine how fast they burn, while hexes upwind of the fire have their Fire Factors doubled for the same purpose. In all cases, Fire Factors are taken at their normal value to determine if it is possible to spread to an adjacent hex. Hexes which are perpendicular to the direction of the wind are unaffected; their Spreading Times remain normal.

Physical Damage

The Physical Damage done to a person in a burning hex is given on the following **Burn Physical Damage Table** for an exposed Target Size of 0, 4, and 7. To determine the Total PD inflicted, cross-index the exposed Target Size and the time, in Impulses, the target is exposed to the burning hex. The Target Size is the target area exposed directly to the flames; a person running in a burning hex is considered Target Size 0, while a person in a burning automobile would be considered Target Size 7.

The **Burn Physical Damage Table** gives the damage done to a target in the burn area during the first Burn Duration period, when the fire is at its hottest. Once the Burn Duration has passed, the damage taken from the fire is 1/2 the rate shown. Damage is done on this basis for another period equal to the Burn Duration, at which time it is halved again. This process of time passing and damage being halved continues until the Burn Duration has expired 6 times. At this point, the fire has subsided enough that the hex can be negotiated, if care is taken, and no damage is taken when travelling through the hex.

"If this fire spreads any further, I'll have to get more marshmallows."

Soon-to-be-ex-firefighter Axly

Burn Physical Damage Table

Target Size	Exposure Time in Impulses										
	1	2	3	4	5	6	8	10	15	20	30
PD TS 0	-	14	44	67	84	100	120	140	170	200	230
PD TS 4	-	100	330	500	630	740	900	10H	13H	15H	17H
PD TS 7	-	57H	19K	28K	35K	41K	51K	58K	72K	82K	96K

Example: A hex filled with dry grass has a Burn Duration of 5 Phases. A person running through this hex would take 14 PD (PDb TS 0) if he stays in the hex for 2 Impulses. 5 Phases after the hex catches fire, the damage from the fire goes to 1/2 value and a target standing in it for 2 Impulses would take 14 / 2 = 7 PD. After 5 more Phases (10 Phases from ignition) damage goes to 1/4; at 15 Phases it becomes 1/8, and so on for a total of six Burn Durations.

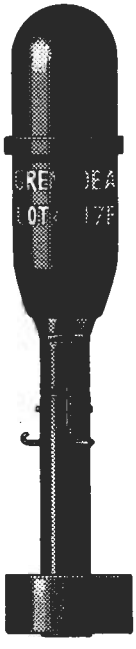
2

MODERN MILITARY EQUIPMENT

The battlefields of the late 20th century feature unprecedented firepower, deployed from aircraft, ground vehicles, and distant artillery. In order to deal with the special dangers of modern war, infantrymen are now equipped with their own implements of destruction and defense. Some of the most prominent weapon systems which have been used by infantry during the last few decades are described in this chapter.

2.1

RIFLE GRENADES



Rifle Grenades first saw widespread use in WW II and continue to be deployed in some modern military forces. Developed to give the rifleman an explosive anti-personnel, anti-tank, illumination, and smoke delivery weapon, the rifle grenade is a highly portable and inexpensive alternative to light artillery. Although not as powerful or as accurate as a mortar, the rifle grenade has at least some of its advantages, without the supply and manpower commitments necessary for a mortar team. This versatile weapon requires a simple grenade adapter which is mounted onto the rifle's muzzle. Modern rifle grenades are designed for ease of use, and most come equipped with a propelling cartridge, called a **Ballistite Cartridge**, and deployable grenade mounted sights for direct fire delivery.

The operation of a Rifle Grenade is as follows. A propellant cartridge is inserted into the chamber; except as mentioned below, this will necessitate unloading normal ammunition from the weapon. The cartridge is similar to a normal rifle cartridge, without the bullet. The grenade is then fitted to the grenade adapter on the muzzle of the rifle, the sights are deployed, and the weapon is aimed and fired. Many modern Rifle Grenades alter this pattern slightly; a bullet trap is included in the grenade, and a normal 5.56mm round is used for propulsion. This results in a somewhat limited range and restricts the user to direct fire use of the grenade, but it removes the time loss and inconvenience of unloading the weapon. The **Rifle Grenade Data Table (13A)** gives data for five rifle grenades from WW II to the present. These grenades are representative of those commonly found throughout the world.

Rifle grenades may be fired as indirect weapons for maximum range, but they are generally used as direct fire weapons with a range of about 100 meters (55 hexes). This supplement will discuss the use of rifle grenades in the direct fire mode only. Use of rifle grenades in the indirect fire mode will be discussed in the **Artillery and Indirect Fire System**.

For direct fire, a rifle grenade's accuracy is handled as any other weapon, using the rifle's Aim Time Mod with a maximum of 6 AC of aim time. The limitation to 6AC aim time accounts for the limited accuracy of the simple rifle grenade sights. The grenade may be fired from a standing or kneeling stance. The Angle of Incidence (AOI), Ballistic Accuracy (BA), and Time of Flight (TOF) for Rifle Grenades are given in the following table. Explosive damage follows standard rules using the explosive data from **Table 13A**.

Rifle Grenade Ballistic Data				
	Target Range in 2 Yard Hexes			
	20	30	40	50
AOI	-	-	1	1
BA	28	25	23	21
TOF	6	10	13	15

Example:

Donovan pulls out an FN AP/AZ 32 rifle grenade and spends 10 AC (Arm Time) preparing his FN FAL rifle. He then assumes a firing stance and takes 6AC aim at a stationary jeep 40 hexes away. Donovan's Odds of Hitting are:

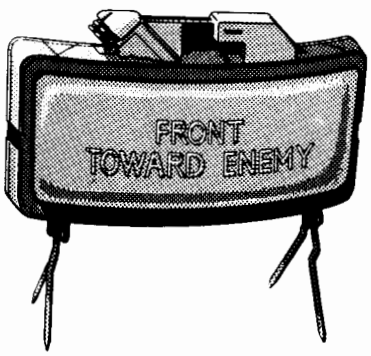
Aim Time	ALM = -5	Aim Time 6AC
SAL	ALM = +10	Skill Accuracy Level
Range	ALM = +7	Range 40 hexes, Table 4A
Firing Stance	ALM = +3	Kneeling, Table 4B
Target Size	ALM = +14	Jeep Target Size
	EAL = 29	

This gives an EAL of 29 and Donovan hits the jeep automatically.

An opponent sitting in the jeep would be at Range 0 from the blast (same hex), and would take 451 PD in concussion damage and be hit by 4 pieces of shrapnel.

In many countries, the Rifle Grenade itself is obsolete, but the concept has advanced to the next stage; the rifle-mounted Grenade Launcher. The American M203 and German H & K 79 are 40mm versions, while the Soviets use a 30mm launcher on the AK74. All three weapons are included in **PCCS**.

CLAYMORE MINES



The **M18A1 Claymore Mine** is a rectangular anti-personnel mine containing C4 explosive and 700 steel balls. When fired these balls are projected into a fan shaped pattern sixty degrees wide. The mine comes packed in its own bandolier which includes an electrical firing device, test set, blasting caps, 100 feet of firing wire, and instructions.

A Claymore Mine may be detonated by tripwire or manual command, and the **Claymore Mine Data Table (13C)** gives the complete data for the device. All values of **Table 13C** follow standard rules for grenades and explosives, except for the mine's limited shrapnel blast area. Shrapnel is effective only in a 60 degree cone to the front of the mine. The mine's **Facing** is established in the same way it would be for a character, and is determined when the mine is placed. Only targets in the cone are attacked by shrapnel. The **Base Concussion (BC)**, however, applies to targets in all directions from the mine, including friendly personnel. For this reason, the mine must be dug into a suitable backstop to prevent backblast, or all friendly personnel must stay under cover or out of the blast area.

Example:

A Claymore Mine has been placed at the base of a bunker in a backstop which opens only into the mine's field of fire. An opponent 6 hexes away and in the blast cone would take 5 shrapnel hits, and 17 PD in concussion damage. Gil, who is in the bunker 1 hex away from the mine, is also in the mine's concussion radius. Since the mine was dug in, there is solid cover between Gil and the mine, so Gil takes 430 (BC range 1) X .01 (Solid Cover Blast Modifier) = 4 PD.

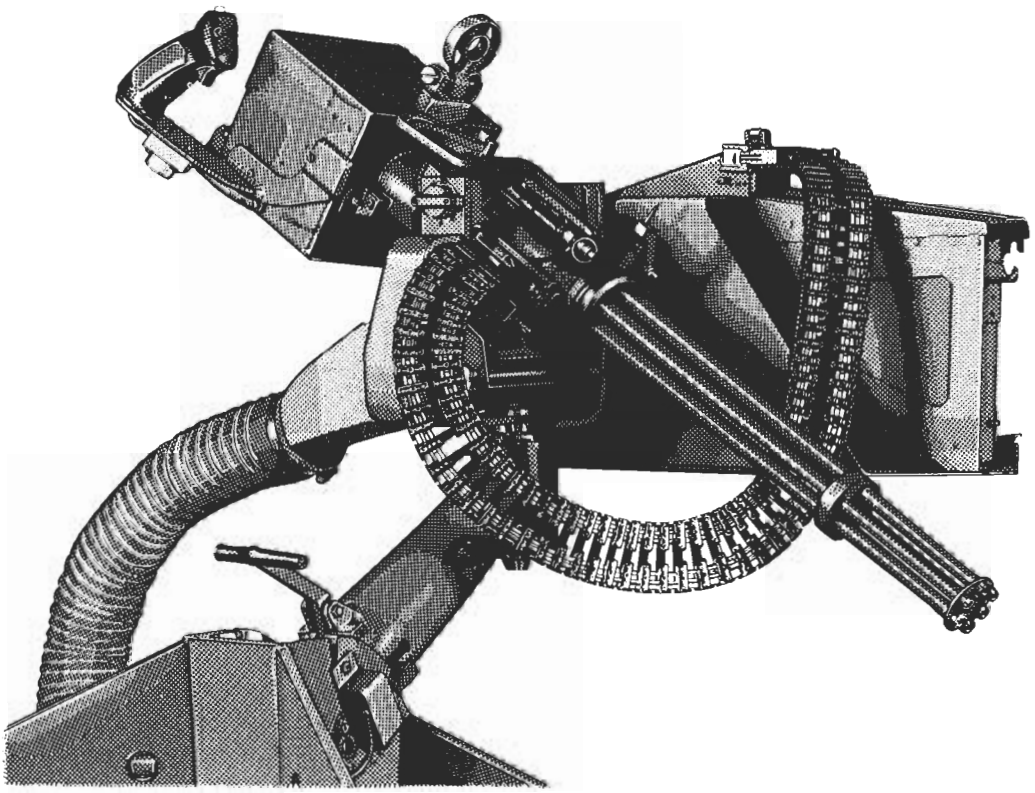
2.3

MINIGUNS

The earliest machineguns were called Gatling guns, after the man who invented them. They were the first weapons to have a rate of fire similar to the automatic weapons of today; what made the high rate of fire possible was the innovation of having several barrels on one weapon, with every barrel performing a different function simultaneously. As one barrel fired, another was ejecting a case, another was chambering a round, and so forth. Once modern machinegun technology was developed, the approach used in the Gatling gun fell out of favor. It returned to use in the late 1960's, when the American military felt a need for weapons with extremely high rates of fire. By combining modern technology with the logic developed by R. J. Gatling, the Minigun was created. Firing standard rifle ammunition, the Minigun has six barrels and provides light vehicles, aircraft, naval vessels, and ground emplacements with a high rate of fire weapon for anti-personnel use.

Two basic miniguns are included in the **Minigun Data Table (14B)**. This data is for the weapon in the ground emplacement role and is typical of that found on vehicles and naval craft. Ammunition is contained in Cassette Magazines and the gun is driven by electrical power. This power is supplied by the vehicle in which the gun is mounted, or by a rechargeable battery. The standard battery is capable of sustaining 3000 rounds of fire per charge. Accuracy and damage follow normal rules for fully automatic weapons.

Airborne minigun's fire patterns differ from those used in the ground role and will be discussed in the **Air to Ground Combat Supplement**.



2.4

FLASH AND STUN GRENADES

Flash and Stun Grenades create an intense flash of light and a deafening blast without lethal shrapnel or concussion. They are ideal for anti-terrorist operations in which hostages or friendly personnel may be interspersed with opponents. Typical Flash and Stun Grenades are 5 inches long, weigh .6 pounds, have an Arm Time of 3, a Fuse Length of 1 Phase, and can be thrown 20 hexes.

The **Stun** and **Blast Effects** of the grenade are measured by the **Shock Points (SP)**, as listed in the following **Flash and Stun Grenade Damage Table**. Cross index the target range from burst to find the SP. Because the head is the part of the body that is most vulnerable to shock, it is the exposure of the head to the grenade's blast that has the greatest effect on the SP received. If the target's head is exposed to the blast use the SP value for a target in the Open. If the target's head is behind solid cover, use the SP for a target under Cover.

The SP are used as PD for purposes of Knockout and Incapacitation. They are not, however, included in the PD Total for wound recovery and are effective only on the Impulse inflicted. If the target makes his Knockout Roll, he is essentially unaffected by the blast. If he fails his Knockout Roll he is Stunned and incapable of action. The **Incapacitation Time** is taken from the **Incapacitation Time Table (8B)**, using a PD Total of 0.

Flash and Stun Grenade Damage Table

Range	SP Open	SP Cover	Visibility ALM	Range	SP Open	SP Cover	Visibility ALM
0	85	56	-14	8	20	1	-1
1	67	40	-14	10	16	-	-
2	50	25	-14	12	11	-	-
3	40	16	-13	14	9	-	-
4	35	11	-11	16	7	-	-
5	30	7	-8	20	4	-	-
6	25	4	-5	25	1	-	-

Flash

The blinding flash of these grenades will impair the vision of anyone within Line of Sight of the blast. The **Visibility ALM** gives the penalty for anyone whose Field of View included the blast. The Visibility ALM penalty decreases by 1 each Impulse following the blast.

Example:

Donovan throws a flash and stun grenade into a room with an opponent. The grenade goes off 2 hexes from the opponent and is in his Field of View. The opponent takes 50 SP and has a Visibility ALM of -14. If the opponent's PD Total were 10 and his KV were 30, he would have to make a Knockout Roll based on a PD Total of 10 + 50 = 60. The opponent rolls an 89 and is not incapacitated or stunned. Two Impulses later, Donovan comes around the corner. The opponent has an additional Visibility ALM of -12 (2 less than the original -14) to any fire that Impulse.

2.5

SMOKE

Smoke devices have many practical combat applications and are rated by their **Smoke Value (Smk)** and **Duration (Dur)**. The Smk gives the diameter (in hexes) of the circular smoke cloud created in outdoor conditions if there is no wind. This smoke blocks vision, and opponents firing through it must use the **Blind Fire Rules** of the **Advanced Rules** for **PCCS** (Section 6.5).

When a Smoke device is used in a building, the smoke creates a cloud of Smk diameter the first phase and expands, filling Smk hexes each subsequent phase. The Duration (Dur) gives the time (in phases) the smoke is generated. After Dur phases, the smoke burns out, and will begin to dissipate.

Example:

A smoke grenade of Smk 3 is thrown into a 5 x 5 hex room. In the first phase, a 3 hex diameter cloud is created. This covers 7 hexes of the room in smoke. In the second phase, another Smk (here 3) hexes of the room are covered in smoke for a total of 10 hexes, and in the third phase another 3 hexes, and so on. The grenade will continue to generate 3 hexes of smoke per phase until its Dur is reached, or until the room is full, after which smoke will exit through open doors, windows, and so forth if possible.

To find the smoke's effectiveness after burn-out, enter the following **Smoke Effects Table** with the Smk value and elapsed time since burn-out. The number on the table is a Visibility ALM to all fire crossing the smoke (a "B" indicates the screen blocks vision).

Smoke Effects Table

Elapsed Time Phases	Wind Speed HPP	Smoke Diameter 8	7	6	5	4	3	2	1
5	1	B	B	B	B	B	B	B	B
10	2	B	B	B	B	B	B	B	-9
15	3	B	B	B	B	B	B	-11	-5
20	4	B	B	B	B	-12	-12	-9	-3
25	5	B	B	B	B	-11	-10	-8	-1
30	6	B	B	B	-13	-10	-9	-5	0
35	7	B	B	-13	-11	-9	-7	-4	
40	8	B	-13	-12	-10	-8	-6	-3	
45	9	-13	-12	-11	-9	-7	-5	-2	
50	10	-12	-11	-10	-9	-6	-5	-1	
55	12	-11	-10	-9	-8	-5	-4	-1	
60	14	-11	-10	-8	-7	-4	-3	0	
65	16	-10	-9	-7	-6	-3	-2		
70	18	-9	-7	-6	-5	-2	-1		
75	20	-8	-7	-5	-4	-1	0		
80	22	-7	-6	-5	-3	-1			
85	24	-6	-5	-4	-2	0			
90	26	-5	-4	-3	-2				
95	28	-5	-4	-2	-1				
100	30	-4	-3	-1	0				
105	34	-3	-2	0					
110	38	-2	-1						
115	42	-1	0						
120	46	0							

"Violence is Golden."

Corley Norris

Example:

A smoke grenade of Smk = 1 has just burned out. The first 5 phases after burn-out, it still blocks vision as shown. In phases 6 through 10, the Visibility ALM is -9, in phases 11 through 15 it is -5, etc.

Wind Effects

When wind is present, smoke will not simply form a cloud; it will pour from its source and move downwind, making a wall or screen. The effectiveness of the screen depends on the Smk value and the wind speed and is given on the **Smoke Effects Table**. Enter the

table, cross-indexing the Smk and Wind Speed in hexes per phase (2 X HPP = mph) to find the Visibility ALM to all fire crossing the screen. A "B" indicates the screen blocks vision.

The smoke screen is generated at the source and moves downwind at the wind speed. At the end of Dur phases, it has completed the wall. After Dur phases, it continues to move downwind, but is no longer generated. The Visibility ALM of the screen varies with distance from the source. The length from 0 to Wind Speed (W) hexes has a Visibility ALM found on the **Smoke Effects Table**. The section from W to 2 X W hexes has a value found one line down, and the section from 2 X W to 3 X W hexes has a value found two lines down, and so forth.

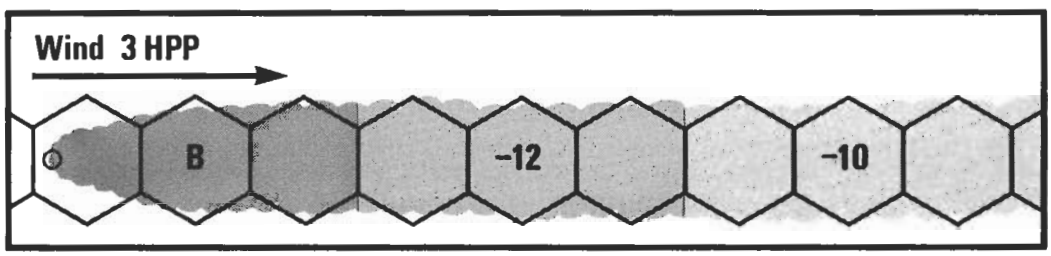


Figure 1

Example: With a 3HPP wind blowing, a smoke grenade of Smk = 3 will generate a screen which grows in length 3 hexes each phase. This screen starts at the grenade and moves downwind. The effectiveness of the screen is found on the Smoke Effects Table. The section 0 to 3 hexes from the grenade Blocks vision. The section 4 to 6 hexes away has a Visibility ALM = -12, and the section 7 to 9 hexes away has a Visibility ALM = -10 as shown in Figure 1.

Smoke is also delivered by indirect fire weapons; this use will be covered in our **Artillery and Indirect Fire System**. Data for a common hand thrown smoke grenade (burning type) is given below.

Hand Thrown Burning Type Smoke Grenade

Length	5.7	Arm Time	4	Range	12	Smk	3
Weight	1.5	Fuse Length	1			Dur	60

3 RIOT CONTROL AND PROTEST WEAPONS

Civil disorder is a common factor in the modern world, as various peoples and classes struggle for control and wealth. Ranging from non-violent demonstrations for increased rights to outright rebellion by poorly armed peasants, internal dissent is present in virtually every country in the world. It poses a very special set of problems for government forces seeking to maintain order: if protesters are not opposed, they can bring down governments; if opposed too strenuously, a country can dissolve into civil war overnight. The more prominent weapons used to control protesters (and the most common weapons used by protesters) are included in this chapter.

3.1

TEAR GAS

Tear Gas is typically contained in canisters and is either hand thrown or delivered by a tear gas gun. The canister ignites, emitting the gas. Data for typical tear gas canisters is given below. The Weight, Length, Arm Time, Fuse, and Range are identical to the values used for grenades, while the aiming characteristics for Tear Gas Guns are included in the section on Rubber Batons (Section 3.2). The Smk value gives the diameter of the gas cloud in hexes under outdoor conditions of no wind. The Dur value gives the length of time that the gas is emitted in Phases, and the **Shock Points (SP)** gives the Shock Points done to a target without a gas mask who is in the cloud each Phase.

37 or 38mm Tear Gas Gun Canister

Length	4.7	Arm Time	-	Range	60	Smk	3
Weight	.5	Fuse Length	-	SP	3	Dur	8

Hand Thrown Tear Gas Canister

Length	5.7	Arm Time	4	Range	14	Smk	3
Weight	1.2	Fuse Length	1	SP	3	Dur	12

Tear Gas Cloud

Outdoors with no wind, the tear gas cloud forms a cloud Smk hexes in diameter. This cloud has a Visibility ALM of -7. For wind conditions and dissipation, the Smoke rules of Section 2.5 should be used. The Visiblity ALM for tear gas is one-half that of a smoke grenade and never higher than -7.

When tear gas is fired into an enclosed building, the cloud will fill the area, expanding by Smk hexes per Phase until it has filled the room just as a smoke grenade would.

Target Effects

Any unprotected person in a tear gas cloud takes a number of **Shock Points** each Phase. These Shock Points are not PD and do not penalize wound recovery, but measure incapacitation due to the irritating effects of the gas. Once a person has taken over KV / 10 SP he suffers a **-8 Visibility ALM** to all fire and must make a Knockout Roll. If he makes the Knockout Roll he may stay in the cloud but still has the -8 Visibility ALM penalty. Each KV / 10 SP taken thereafter forces him to make another Knockout Roll. If he fails his KV roll he must leave the gas cloud or become completely incapable of coherent action. Once out of the cloud, the -8 Visibility ALM applies until the effects of the gas wear off, as described below.

The time a person who has failed his KV roll suffers the -8 Visibility ALM is taken from the **Incapacitation Time Table (8B)** using the 50 PD Total line. The time a person who has been exposed to more than KV / 10 SP but has not failed his KV roll suffers the -8 ALM is taken from **Table 8B** using the 0 PD Total line.

For those using the Smoke rules of Section 2.5, people in the cloud with Blind (B) Visibility level suffer the full SP per Phase. As the cloud dissipates, or under wind conditions, the SP imposed is 1 /10 the Visibility ALM value per Phase.

Gas Masks

A gas mask will protect the user from tear gas under ideal conditions. In combat situations of quick movement and action it is easy for a mask to be jarred or displaced. For simplicity these effects have not been included, but the referee should consider a character's actions and the possibility of dislodging his mask. Even under ideal conditions, the mask seriously restricts visibility, limiting the Field of View to 120 degrees and causing a -2 Visibility ALM.

Example:

A tear gas canister is thrown into a 5 X 3 hex room. The canister Smk value is 3, Dur 30, and SP value 3. Gil is at the far end of the room and watches the gas fill the room. This takes 4 Phases (7 hexes in the first Phase, plus 3 hexes per Phase thereafter). So 4 Phases later, Gil is in the tear gas cloud and begins taking 3 SP per Phase. Since Gil's KV = 21, he must make a KV roll each Phase he is in the cloud and has a -8 Visibility ALM at the end of the first Phase. Gil's first KV roll is made with an SP Total of 3 points. His second would be at a total of 6 points, etc. Gil makes his first 4 KV rolls but during the fifth phase he rolls a 03 and fails. Gil flees the building in a hail of gunfire and manages to hide in a dumpster. The time he suffers the Visibility penalty is taken from Table 8B on the 50 PD Total line. Gil rolls a 3 and is penalized for 29 Phases.

3.2

BATONS AND PLASTIC BULLETS

When confronted with civil disobedience, riots, or insurrections, governmental officials are faced with critical decisions. To preserve their own power and influence, they must attempt to stop the uprisings; at the same time, if they react too violently they risk much wider opposition, and possible civil war. The responses chosen vary widely, from government to government and from incident to incident, and range from simply ignoring the popular dissent to using direct, lethal military intervention. One of the most popular choices, representing a firm and forceful middle ground which displays governmental authority while minimizing civilian fatalities is the use of a type of bullet called a Baton.

Fired from conventional 37mm and 38mm riot guns of the sort which are also used to deliver tear gas and other irritants, there are two basic types of **Baton**; Rubber and Plastic. These rubber and plastic batons are solid rubber or plastic and will cause serious blunt trauma but are rarely fatal. Data for a standard 37mm riot gun firing rubber and plastic batons is included in the following table. Damage uses the **Blunt Damage Table** of Section 3.3 of this supplement or the **Blunt Damage Table** of the **Phoenix Command Hand to Hand Combat System**.

37mm Tear Gas Gun Firing Rubber or Plastic Batons							
Physical Data		**Aim Time**		**Ballistic Data**	**Target Range**		
		AC	**Mod**		**10**	**20**	**40**
Length	29	1	-21	Rubber ID	4.6	3.6	2.1
Weight	6.4	2	-11				
		3	-8	Plastic ID	4.2	2.9	1.4
Reload Time	10	4	-7				
		5	-5				
Capacity	1	6	-4				
Ammo Weight	.4	7	-3				
	Rnd			BA	29	19	10
Knock Down	8			TOF	3	6	14

"Do people really care enough about student demonstrators to put a thin plastic coating over a 13 gram steel core? People do."

Neemis Enterprises,
Ad campaign

Plastic Bullets

Batons, tear gas and water cannon have been employed for riot control over the years with moderate success, and usually have the desired effect. While they do not halt civil opposition, they do state the government's case rather forcefully, without thoroughly brutalizing the public. It then falls to the protesters to decide if their cause is worth being bruised, gassed, and hosed down for; such decisions determine the fate of most movements for social change. In recent years, however, certain nations have begun to use **Plastic Bullets** as part of their "crowd control" techniques. These bullets are roughly the size of a gumball and are simply a steel core with plastic coating. They are fired from special adapters and are designed to cause serious although not life threatening damage. The steel core gives the bullet enough penetrating power and mass to cause serious wounds and it was designed in the hope that it would be a serious deterrent to would-be rioters. The plastic coating increases the size of the bullet, limiting its penetration and flight trajectory to an "acceptable" value. The plastic coating is also quite valuable for public relations purposes; regardless of how many people are killed by them, it is somewhat difficult to take a plastic weapon very seriously. The trick is to avoid mentioning the steel core.

Data for Plastic Bullets is found in the following table. This data uses the standard damage rules for wounds and recovery. Unlike the rubber and plastic batons, the Plastic Bullet is designed to penetrate.

Plastic Bullets							
Physical Data		**Aim Time**		**Ballistic Data**	**Target Range**		
		AC	**Mod**		**10**	**20**	**40**
Length	45	1	-24	PEN	.8	.6	.4
Weight	11.1	2	-13	DC	3	2	1
		3	-9				
Reload Time	12	4	-7				
		5	-6				
Capacity	1	6	-5				
Ammo Weight	.04	7	-4				
	Rnd	8	-3	BA	30	20	10
Knock Down	4			TOF	1	2	4

THROWN ROCKS, BOTTLES, AND BRICKS

So far this chapter has dealt with riot control equipment such as tear gas and plastic bullets. In the interest of balancing play between riot police and demonstrators, rules for thrown rocks, bottles, and bricks have also been included.

Accuracy

The **Odds of Hitting** a target with a thrown object are found using the standard rules. It cost 2 AC to throw an object and the thrower must be standing for anything but a toss. The Odds of Hitting for a toss follow the standard rules for grenade accuracy.

For throws of higher velocity intended to seriously injure the target, the following additional ALM is added based on the thrower's Throwing Skill Level.

Hard Throw Accuracy ALM

Throwing Skill Level	Hard Throw ALM	Throwing Skill Level	Hard Throw ALM	Throwing Skill Level	Hard Throw ALM
0	-10	3	-5	6	-2
1	-7	4	-4	7	-1
2	-6	5	-3	8	0

Example: Gil throws a bottle at a man standing 15 hexes away. His EAL is:

Aim Time	ALM =	-10	6AC Aim (Grenade Aim Time Table 4H)
SAL	ALM =	+9	Gil's Throwing Skill Level of 3
Range	ALM =	+13	Range 15 hexes, Table 4A
Hard Throw	ALM =	-5	Gil's Throwing Skill Level of 3
Target Size	ALM =	+7	Standing Exposed, Table 4E
	EAL =	14	Odds of Hitting = 27

"The steel core is included in our plastic bullets for the sole purpose of making the round visible on X-Rays. And no one even says thank you."

Neemis Enterprises
Press Release

Damage

The damage done by thrown objects is based on the thrower's **Maximum Speed (MS)** and **Throwing Skill Level**. The MS measures overall encumbered strength and agility while the Throwing SL represents his expertise at throwing objects. Throwing Skill Level is determined using normal role-playing rules, or can be assigned by the referee, as usual. To find the damage done to a target hit by a thrown object refer to the following **Thrown Object Impact Table** and find the **Impact Damage** (ID) done. The ID measures the impact of the blow. The greater the ID, the greater the potential physical damage. The Range value gives the distance in hexes the object can be thrown.

Thrown Object Impact Table

Object	Toss Base ID	Toss Range	Throw Base ID	Throw Range
.5 lb rock	1	9	3	21
1.5 lb rock	1	4	4	12
Empty Bottle	1	5	4	15
Molotov	2	3	5	10
Brick	2	3	6	8

The ID of the **Thrown Object Impact Table** is based on an average unencumbered person of 1st Skill Level. To correct it for the thrower's MS and Throwing SL enter the following **Thrown Object Damage Bonus Table**, cross-indexing the MS and Throwing SL to find the thrower's **Damage Bonus (DB)**. This Damage Bonus times the ID of the **Thrown Object Impact Table** gives the ID for the throw.

ID = Base ID X DB

Thrown Object Damage Bonus Table

	Thrower's Skill Level										
MS	**0**	**1**	**2**	**3**	**4**	**5**	**6-7**	**8-9**	**10-11**	**12-14**	**15+**
1		.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
2	.1	.1	.2	.3	.3	.3	.4	.4	.4	.5	.5
3	.2	.3	.4	.6	.6	.7	.7	.8	.9	.9	1.0
4	.3	.5	.7	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.7
5	.4	.7	1.1	1.4	1.6	1.7	1.9	2.0	2.2	2.3	2.5
6	.6	1.0	1.4	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.5
7	.8	1.3	1.9	2.6	2.9	3.1	3.4	3.7	4.0	4.3	4.6
8	1.0	1.7	2.4	3.3	3.6	4.0	4.3	4.7	5.1	5.4	5.8
9	1.3	2.1	3.0	4.1	4.5	4.9	5.4	5.8	6.3	6.7	7.2

To determine the PD done enter the following **Blunt Impact Damage Table**. To determine the Hit Location, (Head, Body, or Limb), roll a 00-99 number and find it in the left hand column. Now go to the top of the table and find the three Armor Lines. Choose the Armor Line which represents the target's armor for the proper hit location and read across that line until you find the ID. If the amount of the ID falls between 2 columns, use the column with the lower number.

Once the correct column has been chosen. follow it down into the body of the table, and cross index it with the Hit Location. The number given is the amount of Physical Damage (PD).

Blunt Impact Damage Table

		Impact Damage										
Rigid Armor		11	22	24	31	40	44	53	62	73	84	99
Flex Armor		4	7	8	11	15	17	20	24	28	32	39
No Armor		1	2	3	4	5	6	7	8	10	12	14
00-05	Head	1	2	4	34	2H	4H	7H	1K	2K	4K	6K
06-48	Body	1	2	3	6	11	18	27	37	61	1H	2H
49-99	Limb	1	1	2	4	8	15	19	23	43	72	1H

Example: Gil hits an opponent with a bottle. He rolls a 03 for the Hit Location and hits the man in the head. Gil's MS is 5 and his Throwing SL is 3. His Damage Bonus (DB) is therefore 1.4, so his throw does:

ID = 4 (base ID for bottle) X 1.4 = 6

The opponent is unarmored and takes a 400 PD wound to the head.

The preceding **Blunt Damage Table** is a simple version of that contained in the **Phoenix Command Hand to Hand Combat System**. Those wanting more detail may use the Blunt Damage Table of that supplement with the following armor classes.

Armor Class

PL	Rigid metal armor or Flak Vests
BR	Semi-rigid plastic armors (Motocross Gear and Faceshields)
ML	Flexible armor or Heavy Padding
LT	Heavy Clothing (Leather Jacket)
NO	Unarmored

3.4

MOLOTOV COCKTAILS

The trusty sidearm of revolutionaries, anarchists, and troublemakers worldwide, the Molotov Cocktail is little more than a rag, a bottle, and a little gasoline and oil. While there is obviously no "standard" Molotov Cocktail, the following rules assume that a durable bottle, of the sort used for liquor, has been filled with 3/4 liter of gasoline/oil mixture and that a simple flame source such as a rag has been attached.

The total weight of this Molotov Cocktail is roughly 2.5 pounds, and it is thrown in exactly the same manner as a brick, using the rules from Section 3.3. If it misses its target, then the Grenade Scatter rules are used to determine the landing hex. The chance that the bottle will break depends on the terrain in the landing hex, as shown in the following table. When a Molotov has been Thrown, Tossed, or Dropped, consult the **Molotov Breakage Table** and roll a 00-99 number. If less than or equal to the **Breakage Chance** is rolled, the Molotov breaks and the fire ignites. If the bottle does not break, the Molotov's wick will simply burn. "Dropped" indicates that the bottle has fallen, without extra propulsion, about 3 feet.

Molotov Breakage Chance

Delivery	Wood	Asphalt Concrete Metal	Gravel	Soil	Carpet Grass Forest	Earth
Thrown	86	98	40	20	02	30
Tossed	80	97	35	16	01	25
Dropped	60	96	26	08	00	16

Physical Damage

The fire caused by the Molotov Cocktail has a **Burn Duration** of 13 Phases and covers one hex. Total Physical Damage to any target in the hex is given in the following **Molotov Damage Table**. Cross index the exposed Target Size with the time in Impulses on the following table to find the Total PD inflicted. Incapacitation of armored vehicles follows standard rules for a Flamethrower in Section 1.2 and spreading of the fire is handled using the Fire rules of Section 1.3.

Molotov Damage Table

Target Size	Exposure Time in Impulses 1	2	3	4	5	6	8	10	15	20	30
PD TS 0	15	110	170	210	250	280	320	350	410	460	520
PD TS 4	110	850	13H	16H	19H	21H	24H	27H	31H	34H	39H
PD TS 7	61H	48K	73K	90K	10T	12T	13T	15T	17T	19T	22T

4

SILENT WEAPONS

This chapter covers weapons which are currently used in environments requiring silence and stealth, including silenced pistols and sub-machineguns, garrotes, bows, and crossbows.

4.1

SILENCERS

Crunch. Snap. Rattle. "The only surprise in this attack is that they haven't opened fire on us yet."

Draclod McDraco
Commando Extraordinaire

The following rules allow players to add silencers to pistols and sub-machineguns. In general, a silencer screws onto the weapon's barrel; consequently, a weapon must be specially modified in order to have a silencer mounted.

Silencers for pistols are designed for stealth and concealment, and because of this they must be small and light. These small silencers are designed to baffle the muzzle blast but will not decelerate the bullet to a subsonic level. For this reason, the weapon must fire a round with subsonic velocity to be effective and low power cartridges such as the 380 Auto are preferred. High velocity pistols would have to use special subsonic ammunition to be effective and operating reliability of the weapon would be degraded.

Silenced sub-machineguns are designed to fire standard ammunition. Since this ammunition often produces a bullet moving at supersonic velocity, the silencer has provisions for decelerating the bullet to a subsonic level. This is accomplished by having the bullet pass through a number of rubber rings. This feature makes the sub-machinegun silencers much bulkier than pistol silencers and is also a life limiting feature. Eventually the rings are worn and the bullet is no longer decelerated.

Sound Magnitude

The "Silenced Weapon" entry in the sound detection rules of **Phoenix Command** (Section 5.3) assumes that the weapon is a silenced automatic pistol or sub-machinegun. For a silenced revolver, use a Sound Magnitude of 70. This increase in sound magnitude is due to gas blowby through the revolver's cylinder to barrel gap. For minimum noise, an automatic pistol such as a High Standard loaded with a 22 Short can be fitted with a silencer and have its bolt welded closed. This provides a single shot disposable weapon with Sound Magnitude of 50.

Ballistic Data

Ballistic data for a number of common bullets is found in the **Silenced Ammunition Data Table (15A)**. Since the velocity of silenced ammunition is set due to noise requirements, all silenced weapons produce about the same ballistic performance. For this reason, the entries on **Table 15A** apply to all weapons of a given caliber.

4.2

BOWS AND CROSSBOWS

Bows and Crossbows are contained in the **Archery Data Table (15B)**. Data is similar to that of small arms and is used in the same manner. Weapon aim, reload, and Odds of Hitting use the standard small arms rules. Note that the minimum Aim Time for bows is 2 AC. This includes the action of drawing the bow. Values specific to Archery weapons are discussed below.

Strength + Skill Level (STR + SL)

Bows and Crossbows are manually operated. As such various weapons have minimum Strength and Skill requirements. The **Str + SL** value gives the minimum total Strength Characteristic plus Archery Skill Level the shooter must have to use the weapon. For example, a Compound Hunting Bow has a Str + SL value of 13; for a character to use this weapon, his Strength plus his Archery Skill Level must be equal to or greater than 13. As in all cases, the Skill Level may be determined using role-playing guidelines, or may be assigned by the referee, depending on the setting of the game.

"Just because the arrow has your name on it doesn't mean it's a present, Angus."

Gil the Treacherous

Impact Damage (ID)

The ID value given below the PEN measures **Impact Damage** and is used in the **Phoenix Command Hand to Hand Combat System**.

Physical Damage

Damage follows standard rules, with the following exceptions. If the player is using **Target Points**, the DC is assumed to be one less than that listed in **Table 15B**. If **Broadheads** are being used, the initial damage follows standard rules but additional penalties due to excessive blood loss are applied. This penalty is one-third the initial PD inflicted per Phase until First Aid is applied. Knockout Roll due to this blood loss occurs at the end of each subsequent Phase.

Sound Magnitude

The **Sound Magnitude** measures noise levels and is used in the Sound Detection rules of **Phoenix Command** (Section 5.3, 3rd Edition). For bows and crossbows, the Sound Magnitude is 60 for weapons without sound dampers and 57 for modern hunting weapons with sound dampers.

Example:

Angus takes a broadhead with EPEN 1 and DC 2 in the thigh. The initial damage is 6 PD. Ten phases later, a medic arrives and stops the bleeding. At this point Angus has taken a total of 6 + (10 phases X 6 / 3) = 6 + 20 = 26 PD, and has had to make a Knockout Roll each phase.

For those who are not familiar with the various types of modern and archaic bows, a Recurve Bow features a reverse curve at each end of the bow, the Longbow is the traditional single-curved bow of medieval England, Compound Bows are modern developments which use a system of pulleys to ease the drawing and holding of an arrow, while Crossbows are essentially short bows, mounted horizontally on a stock, and using mechanical assistance to ease fire.

4.3

STRANGULATION AND GARROTES

Strangulation and **Garrotes** are commonly used in movies and books to silently dispatch guards. This section will discuss such tactics and cover the physical damage resulting from strangulation and choke holds. There are three categories of Strangulation: Strangle Holds, Choke Holds, and Garrotes.

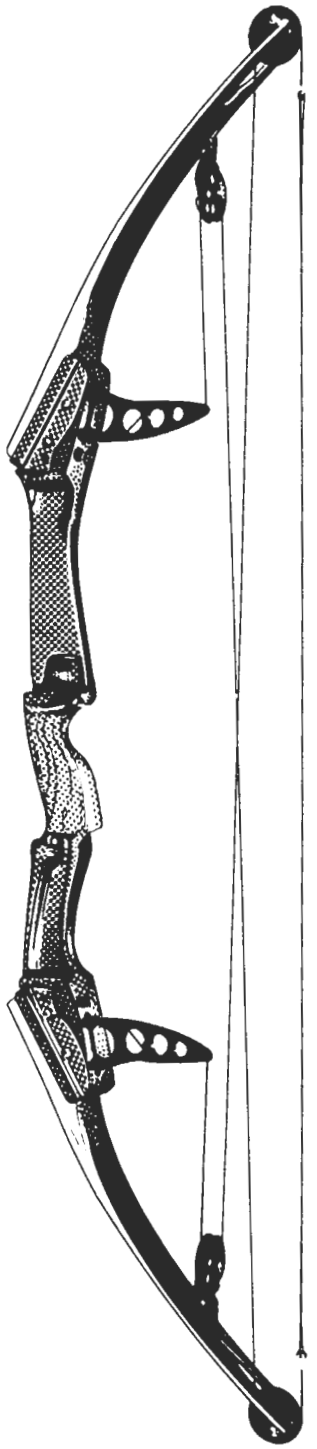
"You're not through Until he's blue"

Gil the Treacherous

Strangle Holds

A **Strangle Hold** is the most common form of asphyxiation found in movies and books. Here the attacker uses his hands, stick, or cloth to close off the opponent's throat preventing him from breathing. In general, this is done from behind when the target has been surprised, or when the target is pinned. In such a case, the chance the attacker can get the target into a Strangle Hold uses our standard **Action / Reaction System** with a **Base Odds** of 15 - SL. For those unfamiliar with our Action / Reaction system found in our role-playing games, the chance of success is 15 minus the target's Hand to Hand Combat Skill Level plus the attacker's Hand to Hand Combat Skill Level. The attacker must roll less than or equal to this chance on the sum of three six-sided dice to succeed. If the attacker succeeds, the target is in a Strangle Hold. Each Phase following, the target may attempt to escape using a Base Odds of 6 - SL. The target can struggle for for a number of Phases equal to his Health characteristic plus a 0-9 roll. After this time period, the target begins to asphyxiate and takes damage given under Physical Damage later in this section. Note that as the target struggles, he is free to use both hands.

A Strangle Hold is not the best way to eliminate a guard silently or quickly. There will be alot of thrashing about and it will take some time to subdue him, but it has the advantage of capturing the opponent relatively unharmed. This sort of hold is generally used by police forces, when they need to incapacitate a suspect but do not wish to harm him. Most people will cease struggling and go quietly rather than actually being strangled into unconsciousness.



Choke Holds

A Choke Hold cuts the flow of blood to the brain and is a much quicker way of subduing an opponent, although it is much more life threatening. The **Base Odds** of getting a person in a Choke Hold are 10 - SL, again assuming the target is being surprised from behind or is immobilized. As with Strangle Holds, the target's base odds to escape each Phase are 6 - SL. If the attacker fails his attempt to get the target into a Choke Hold, the target has been grabbed and is in the attacker's control. The target is free to scream and struggle and the basic 6 - SL escape odds apply. The target has both his hands free for action, while the attacker may try again next Phase.

Physical damage and incapacitation to a target in a Choke Hold are covered under Physical Damage later in this section. Note that this is not an ideal way to silently subdue a guard. It is more applicable to situations in which you have the opponent outnumbered and do not care how much noise he makes. This hold is also used sometimes in police situations, but is far more controversial; some police maintain that it is safer (for the officer involved) and more expedient than the strangle hold, while certain community groups claim that it is a form of police brutality.

Garrotes

Garrotes come in many forms, but the basic Garrote is a simple wire with a handle on each end. By placing it around a person's neck and constricting, the target is placed in a mechanical Choke Hold and also suffers serious physical wounds. This is an ideal way to remove a guard, provided his continued health or survival are not considered relevant. As with Choke Holds, the **Base Odds** of getting a garrote around a surprised target from behind are 16 - SL. The garrote will remain in a closed condition once applied, resulting in the death of the target unless the attacker specifically takes the time to remove it. A Garrote takes 3 AC to remove. During this time, the target continues to take damage.

Physical Damage

The **Physical Damage** and **Shock Points (SP)** inflicted by a Strangle Hold or by asphyxiation are given in the following **Asphyxiation Table**. This damage is total PD or SP from the beginning of asphyxiation, and Knockout would follow standard rules each Impulse. The Shock Points are used to determine Knockout and Incapacitation as the result of asphyxiation. The Physical Damage points are used to determine recovery from an asphyxiated condition using normal wound recovery rules with the following exception. If First Aid and **Cardio Pulminary Resuscitation (CPR)** are administered within two minutes of removing the asphyxiated condition, the PD Total resulting from asphyxiation can be divided by 3. If CPR is not administered within this time period, normal wound recovery rules apply with the Total PD value.

Asphyxiation Table

Asphyxiation Time (Imp)	Total SP	Total PD	Asphyxiation Time (Imp)	Total SP	Total PD	Asphyxiation Time (Imp)	Total SP	Total PD
1	1	-	8	29	-	20	120	12
2	4	-	9	35	3	24	150	16
3	7	-	10	41	4	28	200	20
4	10	-	12	54	5	36	290	30
5	14	-	14	68	6	44	390	40
6	19	-	16	83	8	60	620	60
7	24	-	18	100	10	80	960	100

"And now, students, I will demonstrate my new breakthrough in anaesthesia. Nurse, hand me my Garrote."

Professor Doctor Oscar Schneiderbunk, M.D.

Asphyxiation Table			
Asphyxiation Time (Phases)	**Total PD**	**Asphyxiation Time (Phases)**	**Total PD**
20	100	80	800
24	130	96	1000
28	160	112	1300
36	200	144	1900
44	300	176	2600
60	400	240	4200
80	800	320	6500

Choke Holds do twice the Physical Damage and Shock Damage listed in the **Asphyxiation Table**. Garrotes also do double damage in addition to 20 PD in the first Impulse.

Example:

Gil sneaks up behind a guard and attempts to place a garrote around the guard's neck. Gil is 3rd Skill Level in Hand to Hand Combat while the guard is 2nd Level. Gil's chance of success is therefore 16 - 2 (guard's Skill) + 3 (Gil's Skill) = 17. Gil rolls a 4 , 5, and 2 on three six sided dice for a sum of 11. He succeeds in getting the garrote around the guard's neck. On the next Impulse, the guard takes 20 plus 2 (double Asphixiation SP) = 22 SP and 20 PD. The guard's KV is 20, so he must make his Knockout Roll at over KV. The guard rolls a 46 and makes his Knockout Roll. In the next Impulse his SP total is 20 plus 8 = 28 SP and he must again make his Knockout Roll. He rolls a 20 and fails his Knockout Roll and is Incapacitated. At this point he has Taken 20 + 0 = 20 PD. If Gil were to remove the Garrote he would probably survive. If Gil leaves the Garrote closed, he would asphyxiate.

Gil decides to remove the Garrote. This takes him 3 AC and is done in 3 Impulses. At this point the Garrote has been on a total of 5 Impulses and the guard has taken 20 + 0 = 20 PD.

4.4

INFILTRATION

The Spotting rules in PCCS are designed for general battlefield spotting, rather than the moment-to-moment tension of an infiltration environment. When a character is attempting to sneak into an enemy base he can be undone by a casual glance, or saved by a moment's inattention on the part of an unsuspecting guard. The following rules are designed to be used in situations where secrecy is vital, and the vigilance of the defenders is the center of attention. It is assumed that the infiltrators are attempting to sneak up behind a sentry, to incapacitate him and move into the enemy camp beyond. The rules are equally valid in other situations; the key elements are one or more infiltrators, attempting to escape the attention of a guard.

For the infiltrating character or characters, the speed at which they move is critical. If they move very slowly, they greatly reduce the chance that they will be heard by the enemy, but they are more likely to be seen when they cross open areas. The following table shows the closest an infiltrator can come to a guard, depending on his movement speed.

Safe Movement Speed	
Movement Speed	**Hexes to the Nearest Guard**
1 / 4 HPP	Over 1
1 HPP	Over 2
2 - 3 HPP	Over 9
4 HPP	Over 40
5+ HPP	Over 50

For example, if the nearest guard were 9 hexes away, the maximum safe speed (the speed at which the infiltrator will definitely not be heard) is 3 Hexes per Phase. The above table assumes that it is night, outdoors, dirt is underfoot, there is moderate background noise, and the guard is in a state of normal alert. Players should use the Sound Detection rules to modify this table if necessary.

As shown by this, it is clearly possible to sneak right up behind an unsuspecting target. The primary danger in this situation is that the target may look around during the several phases it takes to make an approach. The chance that a guard will break his normal pattern of observation is given on the following table.

Guard Perception Table		
Guard Status	**Chance of Looking Around** **Per Phase**	**Per Impulse**
Critically Preoccupied	00	-
Preoccupied	02	00
Normal	15	03
Expecting Alarm	60	20
Fully Alert	80	33

Rolls may be made on this table each Phase or each Impulse, depending on how critical the infiltrator's behavior is. If the guard looks around, then he will change his facing by 2 hexsides for a phase, and then return to his usual position. Roll randomly to determine which direction he looks; odd is left, even is right. When determining his chance of spotting the infiltrator, assume that he is making a 180 degree scan. Note that since he is not turning completely around, he will still have a blind spot. Incidentally, characters attempting to cross an area which is under surveillance may take advantage of this table; they may be able to move while the guard is looking in the other direction for a moment or two.

The difficulty for the infiltrating player is to balance speed with silence. It is not always possible to know where opposing guards are stationed, or if there are any stray personnel wandering about. It is also impossible to judge at what moment a guard may elect to look in your direction. Not surprisingly, the best tactic is usually to station yourself adjacent to the guard's path, so that it is not necessary to cover very much distance before reaching him. On the other hand, a clever guard will not routinely walk close to a large, badly lit clump of bushes, or across the mouth of a dark alley.

Full use of the Spotting and Sound Detection rules, combined with these guidelines for guards scanning their areas, should allow players to enact a wide variety of infiltration scenarios.

Rifle Grenade Data Table / 13A

Rifle Grenade	Physical Data			Range From Burst in Hexes C	0	1	2	3	4	5	6	8	10
M17 Rifle Grenade / WW II / USA	L	9	PEN	2.3	1.1	1.0	1.0	1.0	.9	.9	.9	.8	.7
	W	1.6	DC	10	2	2	2	2	2	2	2	2	2
The M17 rifle grenade was used in WWII and can be fired	AT	12	BSHC	*2	2	-1	-6	-9	-11	-13	-14	-16	-18
from any standard 22mm launcher. It uses a Ballistite	R	70	BC	43H	340	96	30	16	10	7	5	3	2
Cartridge for propulsion and has an Impact Fuse.													
M9A1 Anti-Tank Rifle Grenade / WW II / USA	L	11	PEN	770	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.5
	W	1.3	DC	10	3	3	3	3	3	3	3	2	2
The M9A1 was introduced in WW II and can be fired from	AT	12	BSHC	*3	4	0	-4	-7	-9	-11	-12	-14	-16
any standard 22mm launcher. It is representative of Anti-	R	90	BC	87H	530	130	42	22	14	9	7	4	3
Tank rifle grenades used in WW II and the Korean War.													
M31 Anti-Tank Rifle Grenade / USA	L	17	PEN	27H	4.2	4.1	4.0	3.8	3.7	3.5	3.4	3.2	3.0
	W	1.6	DC	10	5	5	5	5	5	5	4	4	4
The M31was introduced in the mid 1950s. It can be fired	AT	12	BSHC	67	0	-5	-10	-13	-15	-17	-18	-20	-22
from any standard 22mm launcher and is representative	R	60	BC	25K	11H	246	70	36	22	15	11	7	5
of Anti-Tank rifle grenades of the 1950s and 1960s.													
FN - AP/AZ 32 ZA or XA / Rifle Grenade / Belgium	L	14	PEN	11H	2.6	2.4	2.0	1.7	1.4	1.2	1.0	.7	.5
	W	1.1	DC	10	2	2	2	2	1	1	1	1	1
The AP/AZ 32 is representative of modern anti-personnel	AT	10	BSHC	*3H	*4	*1	27	11	6	3	2	1	0
and anti-vehicular rifle grenades. Data shown is for direct	R	40	BC	69H	451	122	38	19	12	8	6	4	3
fire 7.62mm Ballistite cartridge or 5.56mm ball ammo.													
Luchaire / Anti-Tank Rifle Grenade / France	L	15	PEN	51H	3.8	3.7	3.6	3.4	3.3	3.1	3.0	2.8	2.6
	W	1.2	DC	10	5	5	4	4	4	4	4	4	3
This grenade is representative of modern anti-tank rifle	AT	10	BSHC	98	0	-4	-9	-12	-14	-15	-17	-19	-20
grenades. With 7.62mm rifles a Ballistite cartridge is	R	40	BC	19K	896	212	62	31	20	14	10	6	4
used. 5.56mm rifles may use normal ball ammunition.													

White Phosphorus Grenade Data Table / 13B

White Phosphorus Grenade	Physical Data		Range From Burst in Hexes	C	0	1	2	3	4	5	6	8
M19A1 / Rifle Grenade / USA	L	11	BWPHC	*3H	*4	*1	21	9	4	3	2	
	W	1.5	PD Body	14	13	12	10	9	8	7	7	
Typical WP Rifle Grenade for smoke and anti-personnel	AT	12	PD Limb	4	3	3	3	2	2	2	2	
use. This grenade was introduced in 1944 and is still in	R	100	PDs TS 0	36H	160	7						
use. A burning type smoke grenade has a Dur of 30 and	Smk	4	PDs TS 4	27K	12H	52						
none of the anti-personnel effects.	Dur	3	PDs TS 7	20T	89H	390						
M15 WP / WP Grenade / USA	L	6	BWPHC	*3H	*4	*4	24	10	5	3	2	1
	W	1.9	PD Body	48	43	40	35	32	29	27	25	22
This bursting typeWhite Phosphorus Grenade is repre-	AT	4	PD Limb	9	8	7	7	6	6	6	5	5
sentative of hand thrown grenades used in WW II and in	R	11	PDs TS 0	10K	450	20	1					
modern arsenals. It has a 4 second delay fuse and is	Smk	4	PDs TS 4	76K	34H	150	8					
used for its smoke and anti-personnel effects.	Dur	3	PDs TS 7	57T	25K	11H	56					

Claymore Mine Data Table / 13C

Mine	Physical Data		Range From Burst in Hexes	C	0	1	2	3	4	5	6	8	10	14	20	30	40
M18A1	L	8	PEN	7.0	6.8	6.6	6.1	5.7	5.3	4.9	4.5	3.9	3.4	2.5	1.6	.8	.4
Claymore Mine	W	3.5	DC	10	6	6	6	5	5	5	4	4	3	3	2	1	1
	AT	120	BSHC	*700	*175	*74	*28	*15	*10	*7	*5	*3	*2	*1	53	24	13
USA	FL	V	BC	66K	23H	430	112	55	34	24	17	11	8	4	2	1	1

Flamethrower Data Table / 14A

Flamethrowers	Physical Data		Aim Time AC	Aim Time Md	Burn Time Rng	Burn Time Dur	Burn PD Total		Time in Impulses 1	2	3	4	6	8	12	16	20
Flammenwerfer / Germany	W	40	1	-21	5	22	PDj	TS 0	190	300	380	450	540	610	710	780	840
	AW	12	2	-11	10	20		TS 4	14H	23H	29H	33H	40H	46H	53H	59H	63H
This flamethrower was used by	#Shots	10	3	-9	15	18		TS 7	11K	17K	21K	25K	30K	34K	40K	44K	47K
German Engineer teams during	Time	20	4	-7	20	14	PDb	TS 0	14	110	160	200	260	300	360	400	430
WW II. It used gasoline and had a	Depth	1	5	-6				TS 4	100	800	12H	15H	19H	23H	27H	30H	32H
semi-automatic action (ROF = *).	Range	20						TS 7	770	60H	91H	11K	15K	17K	20K	22K	24K
M2A1 / USA	W	70	1	-21	5	36	PDj	TS 0	240	380	480	560	680	760	890	990	11H
	AW	27	2	-11	10	35		TS 4	18H	29H	36H	42H	51H	57H	67H	74H	79H
The M2A1 was introduced late in	# Shots	5	3	-9	15	34		TS 8	14K	21K	27K	31K	38K	43K	50K	55K	59K
WW II. Data is for gasoline as a	Time	20	4	-7			PDb	TS 0	17	130	200	260	330	380	450	500	540
fuel. It has a semi-automatic ac-	Depth	2	5	-6				TS 4	130	10H	15H	19H	24H	28H	34H	38H	41H
tion (ROF = *)	Range	15						TS 7	970	75H	11K	14K	18K	21K	25K	28K	30K
M9A1-7 / USA	W	50	1	-21	5	35	PDj	TS 0	220	350	440	510	610	690	810	890	960
	AW	24	2	-11	10	34		TS 4	16H	26H	33H	38H	46H	52H	60H	67H	72H
The M9A1-7 replaced the M2A1 in	# Shots	5	3	-9	15	33		TS 7	12K	19K	24K	28K	34K	39K	45K	50K	54K
the mid 1950s. Data is for thick-	Time	20	4	-7	20	31	PDb	TS 0	15	120	190	230	300	340	410	450	490
ened fuel. Like the M2A1, it has a	Depth	2	5	-6	25	28		TS 4	120	910	14H	17H	22H	26H	30H	34H	37H
semi-automatic action (ROF = *).	Range	30			30	24		TS 7	870	68H	10K	13K	17K	19K	23K	25K	27K
LPO-50 / USSR	W	51	1	-23	10	23	PDj	TS 0	170	270	350	400	490	550	640	710	760
	AW	18	2	-12	20	20		TS 4	13H	21H	26H	30H	36H	41H	48H	53H	57H
Current issue flamethrower in the	# Shots	3	3	-9	25	17		TS 7	97H	15K	19K	23K	27K	31K	36K	40K	43K
Russian army. It has a three shot	Time	18	4	-7	30	13	PDb	TS 0	12	100	150	180	240	270	320	360	390
semi-automatic action (ROF = *).	Depth	2	5	-6	35	8		TS 4	90	720	11H	14H	18H	20H	24H	27H	29H
Data is for thickened fuel.	Range	40	7	-4	40	2		TS 7	690	54H	82H	10K	13K	15K	18K	20K	22K

Minigun Data Table / 14B

Minigun	Physical Data		Aim Time AC	Aim Time Mod	Ballistic Data		Range in 2 Yard Hexes 10	20	40	70	100	200	300	400	600
M134 / 7.62mm NATO / USA	L	30	1	-31	FMJ	PEN	21	20	19	17	15	11	8.0	**5.8**	**3.0**
	W	346	2	-21		DC	8	8	8	8	7	7	6	**5**	**2**
The M134 Minigun was adopted in 1967 and is			3	-15	JHP	PEN	20	19	18	16	15	11	7.7	**5.5**	**2.9**
a scaled down version of the 20mm Vulcan	RT	26	4	-10		DC	9	9	9	9	9	8	8	**7**	**4**
Cannon. Data to the right is for a pedestal	ROF	*54	5	-8	AP	PEN	29	28	26	24	22	16	11	**8.1**	**4.2**
mounted gun operating from an electrical	Cap	4000	6	-6		DC	8	8	8	7	7	6	6	**5**	**2**
power source (not included). The weapon has	AW	260	7	-5											
a single automatic fire setting of 6000 rounds		Blt	8	-4		MA	.2	.2	.2	.3	.4	.9	1	**2**	**3**
per minute. Data is for all 6 barrels in a parallel	KD	10	9	-3		BA	61	53	45	37	33	23	17	**13**	**8**
setting, common in ground emplacements.	SAB	0	11	-1		TOF	0	0	1	2	2	5	8	**11**	**18**
XM214 / 5.56mm NATO / USA	L	27	1	-29	FMJ	PEN	16	16	14	12	11	6.9	4.4	**2.8**	**1.2**
	W	85	2	-19		DC	6	6	6	6	5	4	3	**2**	**1**
The XM214 Six-Pac provides a high rate of fire			3	-13	JHP	PEN	16	15	14	12	10	6.7	4.3	**2.7**	**1.1**
weapon for boats, vehicles, and ground em-	RT	40	4	-9		DC	8	8	8	7	7	6	5	**2**	**1**
placements. Data to the right is for a tripod	ROF	*36	5	-7	AP	PEN	23	22	20	18	15	9.8	6.3	**4.0**	**1.6**
mounted weapon operated from a recharge-	Cap	1000	6	-6		DC	6	6	6	5	5	4	3	**1**	**1**
able electric battery pack. The battery can fire	AW	30	7	-4											
3000 rounds, recharges in 15 minutes, and		Mags	8	-3		MA	.2	.2	.2	.3	.4	.9	1	**2**	**3**
weighs 14 pounds. The XM214 either *3 or *36	KD	4	9	-2		BA	60	51	42	35	30	20	15	**11**	**6**
ROF & is fed from 2 - 500 round Cassettes.	SAB	0	10	-1		TOF	0	0	1	1	2	5	7	**10**	**18**

Silenced Ammunition Data Table / 15A

Ammunition		Range in 2 Yard Hexes 10	20	40	70	100	200	Ammunition		Range in 2 Yard Hexes 10	20	40	70	100	200
22 Long Rifle (LR)	PEN	.9	.8	.6	.5	.3	.1	9 x 18mm	PEN	1.2	1.1	.9	.7	.5	.2
5.45 x 18mm	DC	1	1	1	1	1	1	9mm Parabellum	DC	2	2	1	1	1	1
	BA	47	39	31	24	19	10	38 Auto Colt	BA	45	37	27	20	15	6
	TOF	1	1	3	5	8	19	38 Super	TOF	1	1	3	5	8	18
7.62mm Tokarev	PEN	1.1	1.0	.9	.6	.5	.2	38 S&W Special	PEN	1.7	1.6	1.4	1.1	.9	.5
7.63mm Mauser	DC	1	1	1	1	1	1	38 Special	DC	2	2	2	1	1	1
	BA	46	38	29	22	17	7	357 Magnum	BA	49	41	33	26	21	12
	TOF	1	1	3	5	8	19		TOF	1	1	3	5	7	17
8mm Taisho 14	PEN	1.4	1.3	1.1	.8	.6	.3	10 x 20mm	PEN	1.9	1.8	1.5	1.3	1.0	.5
	DC	2	1	1	1	1	1	41 Magnum	DC	3	3	2	2	1	1
	BA	48	40	32	25	19	10		BA	48	41	33	26	21	12
	TOF	1	1	3	5	8	18		TOF	1	1	3	5	7	17
380 Auto	PEN	1.0	.9	.7	.5	.3	.1	45 Auto	PEN	1.5	1.4	1.2	.9	.7	.3
	DC	2	2	1	1	1	1	45 Long Colt	DC	4	4	3	2	1	1
	BA	41	32	23	15	10	1	44 S&W Special	BA	45	36	27	20	15	5
	TOF	1	1	3	5	8	20	44 Magnum	TOF	1	2	3	5	8	19

Archery Data Table / 15B

Medieval Weapon	Physical Data		Aim Time AC	Mod		Range in Hexes 10	20	40	Modern Weapon	Physical Data		Aim Time AC	Mod		Range in Hexes 10	20	40
Recurve	L	36	2	-11	PEN	1.0	.8	.6	Compound	L	48	2	-14	PEN	.7	.6	.4
Horsebow	W	2.0	3	-10	ID	2.2	1.9	1.4	Target	W	9.8	3	-8	ID	1.6	1.3	.9
	RT	12	4	-9	DC	2	2	2	Bow	RT	22	4	-5	DC	2	2	2
	AW	.14	6	-8	BA	37	29	20		AW	.09	6	-3	BA	45	36	27
	Str + SL	8	8	-7	TOF	3	6	14		Str + SL	8	8	-2	TOF	3	7	15
Recurve	L	48	2	-11	PEN	1.3	1.1	.8	Compound	L	38	2	-11	PEN	1.0	.8	.5
Hunting	W	2.3	3	-10	ID	3.0	2.5	1.8	Bow	W	6.8	3	-9	ID	2.3	1.9	1.3
Bow	RT	12	4	-9	DC	2	2	2		RT	12	4	-7	DC	2	2	2
	AW	.14	6	-8	BA	37	29	20		AW	.09	6	-6	BA	43	35	26
	Str + SL	13	8	-7	TOF	3	5	12		Str + SL	11	8	-5	TOF	3	6	12
English	L	60	2	-11	PEN	2.5	2.2	1.8	Compound	L	42	2	-11	PEN	1.3	1.1	.8
Longbow	W	1.8	3	-10	ID	5.8	5.2	4.1	Hunting	W	7.5	3	-9	ID	3.0	2.5	1.8
	RT	12	4	-9	DC	2	2	2	Bow	RT	12	4	-7	DC	2	2	2
	AW	.19	6	-8	BA	39	31	22		AW	.11	6	-6	BA	44	36	27
	Str + SL	18	8	-7	TOF	2	5	10		Str + SL	13	8	-5	TOF	3	5	12
Light	L	24	1	-28	PEN	.8	.7	.6	Light	L	26	1	-21	PEN	.9	.8	.6
Crossbow	W	15.2	2	-18	ID	1.9	1.7	1.3	Crossbow	W	4.6	2	-11	ID	2.2	1.9	1.5
(manual)	RT	24	3	-11	DC	2	2	2	(manual)	RT	18	3	-9	DC	2	2	2
	AW	.11	6	-6	BA	38	30	22		AW	.11	6	-5	BA	45	37	29
	Str + SL	8	10	-3	TOF	3	7	14		Str + SL	8	10	-2	TOF	3	6	14
Heavy	L	34	1	-30	PEN	3.9	3.3	2.4	Hunting	L	36	1	-23	PEN	2.1	1.9	1.6
Crossbow	W	23.4	2	-20	ID	9.0	7.7	5.6	Crossbow	W	6.5	2	-13	ID	4.9	4.5	3.6
(windlass)	RT	60	3	-14	DC	3	3	3	(manual)	RT	20	3	-10	DC	2	2	2
	AW	.19	6	-6	BA	38	29	20		AW	.14	6	-5	BA	45	38	30
	Str + SL	8	10	-3	TOF	2	4	9		Str + SL	13	10	-2	TOF	2	5	10