Book 4
Mercenary

TRAVELLER

Science-Fiction Adventure in the Far Future

Game Designers' Workshop

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Science-Fiction Adventure in the Far Future

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Mercenary
TRAVELLER, Volume 4

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This booklet is an additional volume in the rules to Traveller, GDW's science-fiction role-playing game set in the far future.

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Mercenary Striker

Operating on a moderate-to-low tech level world (prbably TL 5-7), this trooper is serving as an artillery forward observer. The tech level 8 laser carbine (page 43) is used as a range finder and target designator, as well as a personal weapon in an emergency. A ballistic cloth flak jacket (page 41) is worn over the combat uniform, and the helmet has been modified to include a personal commo link and night vision enhancement gear (page 43). The carbine's small power pack is worn high over the shoulder blades and a light assault pack (not visible) is hung below it. Because of his role as forward observer, the large pockets of his fatigues and flak jacket are probably filled with a variety of colored smoke grenades (page 41) for signalling purposes.

Introduction

One area of personal endeavor for travellers is in the profession of mercenary. This volume is concerned with the requirements and restrictions of such work.

GENERAL BACKGROUND

In many respects, the expansion of man into one frontier after another, and its resulting effects on his social and governmental institutions, can be seen as an alternating series of instability and stability in the relative efficiency of transportation and communication. A society will expand into a new frontier as its transportation technology allows it to do so, and its expansion is generally limited only by the sophistication of its transport system. However, if communication technology has not kept up with transportation technology, stresses develop between the mother country/capital and the provinces. These stresses are resolved either by a technological advance in communication (the telegraph, for example, ended the possibility of secession by the western territories from the United States), by a severance of ties between the new territory and the home government (the gradual process of colonial independence in the western hemisphere in the 18th and 19th centuries), or the arrival of a new home government generally involving a much higher degree of local autonomy than had previously existed (the Persian system of Satrapies).

Traveller assumes a remote centralized government (referred to in this volume as the Imperium), possessed of great industrial and technological might, but unable, due to the sheer distances and travel times involved, to exert total control at all levels everywhere within its star-spanning realm. On the frontiers, extensive home rule provisions allow planetary populations to choose their own forms of government, raise and maintain armed forces for local security, pass and enforce laws governing local conduct, and regulate (within limits) commerce. Defense of the frontier is mostly provided by local indigenous forces, stiffened by scattered Imperial naval bases manned by small but extremely sophisticated forces. Conflicting local interests often settle thier differences by force of arms, with Imperial forces looking quietly the other way, unable to effectively intervene as a police force in any but the most wide-spread of conflicts without jeopardizing thier primary mission of the defense of the realm. Only when local conflicts threaten either the security or the economy of the area do Imperial forces take an active hand, and then it is with speed and overwhelming force.

The combat environment of the frontier, then is one of small, short, limited wars. Both sides must carefully balance the considerations of how much force is required to win a conflict with how much force is likely to trigger Imperial intervention. At the same time, both belligerents will generally be working with relatively small populations, with only a negligible number of combat experienced veterans. In this environment, the professional soldier will find constant employment. Small, poor states faced with invasion or encroachment will hire professional soldiers as cadres to drill and lead their citizen militias. Larger states will be able to afford to hire and equip complete mercenary contingents as strikers,

or spearhead troops. Small commando units will be in demand as industrial espionage is waged between mega-corporations virtually nations unto themselves. In addition, the hired soldier will always be in demand as security or bodyguard troops, as force remains the only true protection against force. The Golden Age of the Mercenary will have arrived.

REQUIRED MATERIAL

Much of *Mercenary* refers to rules and items of equipment found in *Traveller*. In addition to this book, the preceding books of *Traveller* (Books 1, 2, and 3) are required, as are two six-sided dice, paper, and pencil.

Additionally, players may find hexagonal paper useful (either mini-hex paper, or full sized hex grids) for mapping battlefields, planets, and other uses. Miniature figures may be used as a more detailed means of resolving small unit actions.

DIE ROLLING CONVENTIONS

The same die rolling conventions used in previous volumes of *Traveller* are in force in *Mercenary*. To briefly recapitulate:

Throw: That dice roll required to achieve a stated effect. If only a number is stated, it must be rolled exactly. A number followed by a plus (such as 8+) indicates that that number or greater must be rolled. Similarly, a number followed by a minus (such as 3-) indicates that that number or less must be rolled.

Number of Dice: Generally, a dice throw uses two dice. Throws requiring more (or fewer) dice are clearly stated. For example, a weapon which causes damage points equal to the result of the toss of four dice would be expressed as: 4D.

Die Modifiers: Die roll modifiers (abbreviated DM) are always preceded by either a plus or a minus. Thus, the notation DM +3 indicates that three is added to the die roll before it is compared to the required throw.

The Regular Army-O

"Oh the drums would roll, upon my soul
This is the style we'd go.
Forty miles a day on beans and hay
In the Regular Army-O."
— Traditional

The stock in trade of the mercenary is experience, and the regular army is the best source of experience available. While Traveller Book 1 provides a character generation system suitable for generating general adventurer characters, it intentionally neglects many of the specialized skills needed by professionals such as mercenaries. Consequently, the following more detailed character generation system is provided.

BACKGROUND

The armed forces of major worlds in Traveller are divided into three major branches: The Navy, Marines, and Army. Mercenaries will generally be from either the Marines or Army. The Army is divided into three major force commands: Close Orbit and Airspace Control Command, Nautical Force Command (the wet navy) and Ground Force Command. Only the last of these three will be considered in this book.

ACQUIRING SKILLS AND EXPERTISE

Many of the procedures used in Book 1 are retained in Mercenary. However, once a character has entered either the Army or Marines, and wishes to become a mercenary, an altered service generating procedure is followed.

Terms of Service: Upon enlistment, a character embarks on a term of service lasting four years. This adds four years to the character's age. Each time a character reenlists, it is for an additional four year term of service.

Each term of service is subdivided into four one year assignments. Characters will determine their new assignment each year and resolve all pertinent actions pertaining to it. At the conclusion of four assignments, a character has completed a term, and may attempt to reenlist.

Choice of Arm: Upon entering the service, a player may choose one of several arms. The Army consists of Infantry, Cavalry, Artillery, and Support. The Marines consist of Marine Infantry and Support. Players entering the service may not initially choose the Commando arm.

Basic Training: Basic training consists of a level 1 Gun Combat skill.

Advanced Training: The player rolls one skill from the column of the Military Occupational Specialty (MOS) Table corresponding to his chosen arm of service. Roll one die to determine the skill received. If the referee determines that the world on which the player is a member of the armed forces is a Tech Level 12 or higher, add one to the die roll.

Assignments: Following basic and advanced training, the player will determine his first assignment. Each term, a player will carry out four assignments. Basic and

advanced training constitute the first assignment of the first term. Resolution of assignments is carried out in three steps: determine general assignment, determine specific assignment, determine outcome of the assignment.

1. General Assignment: Locate the column of the General Assignment table corresponding to the player's arm of service. Roll a six-sided die to determine which general assignment is received. If the player has an intelligence of 8 or higher, he may (but need not) add one to the die roll. All officers may "buck for command" by subtracting one from the die roll.

If a result of either Command or Staff is received, the player has been assigned to an active duty unit. The terms Command or Staff have no other effects on enlisted men or non-commissioned officers. They will affect what skills an officer receives, if any. If a result of Special is received, the character is placed on one of several special assignments (see below).

2. Specific Assignments: Special assignments are handled in a separate section below. Unit assignments will consist of performing one of several missions. These consist of Raid, Counter Insurgency, Police Action, Garrison, Internal Security, and Ships Troops (Marines only). Roll two dice to determine a player's unit assignment.

3. Results: Four results must be rolled for in a unit assignment: Survival, Decoration, Promotion, and Skills.

Survival: Most activities involve some danger, and even accidents in training occasionally cause fatalities or injuries. To survive a unit assignment, a player must roll the indicated number or higher on two dice. If the indicated number itself is rolled, the player has been injured or wounded. Injuries and wounds have no effect except in the three assignments marked with an asterisk (Police Action, Counter Insurgency, and Raid). Each of these actions is officially classified as a combat action, and sustaining a wound or injury in such an assignment causes the player to be awarded the Purple Heart.

Decorations: If the player rolls the indicated number or higher, he is awarded the citation for Meritorious Conduct Under Fire (MCUF). If the player rolls a number at least three higher than the indicated number, he receives the medal for Conspicuous Gallantry (MCG). If a player rolls a number at least six higher than the indicated number, he recieves the Starburst for Extreme Heroism (SEH).

Promotion: Players are promoted by rolling the indicated number or greater on two dice. Where a number is listed in parentheses, commissioned officers may not roll for promotion. In any event, a commissioned officer may only receive one promotion per term. Enlisted and non-commissioned personnel may receive promotions as often as once per assignment.

Skills: If a player rolls the indicated number or greater, one skill may be rolled for. Enlisted men may roll for one skill either on the Army Life or the MOS table. Non-commissioned officers may roll for a skill on either the Army Life table, the MOS table, or the NCO Skills table. Officers holding a command assignment may roll on the Army Life table, MOS table, or Command table. Officers holding a staff assignment may roll on the Army Life, MOS or Staff tables.

In the case of a character in the marines, substitute the Marine Life table for the Army Life table. Marines serving as ship's troops may instead roll on the Shipboard Skills table. Whenever a marine rolls a blade skill, it must be taken as Cutlass unless the character successfully makes a saving throw against marine tradition. Throw 9+, DM - 3 if already cutlass-1; DM -6 if already cutlass-2 or higher.

SPECIAL ASSIGNMENTS

Enlisted men and non-commissioned officers have one set of possible special assignments, while commissioned officers have another. Determine which assignment a player receives by rolling once on the appropriate Special Assignment table. The means of resolving special assignments are listed below.

For *Enlisted Men and Non-Commissioned Officers:*

1. Cross-Training: The player rolls once on the MOS table of any other service arm than his own. He further notes that he has been cross-trained in that arm. Neither army nor marine personnel may cross-train as commandoes. Army personnel may not cross train as marines. At the conclusion of any term after a player has cross-trained in another arm, and provided the player successfully reenlists, the player may switch to that arm. Thus while the only combat arm that a marine may initially enter is infantry, it is possible to transfer into cavalry or artillery through cross-training.

2. Specialist School: The player has been chosen to receive specialist training in a specific field. The player rolls a single six-sided die and receives one level of expertise in the indicated skill.

Specialist School
1 Admin
2 Medical
3 Commo
4 Computer
5 Mechanical
6 Electronics

3. Commando School: The player has been chosen to attend Commando School and receive commando basic training. The player may receive up to eight skills as a result. Roll 5+ on one die for each of the following skills: Brawling, Gun Combat, Demolitions, Wilderness Survival, Recon, Vacc Suit, Blade Combat and Instruction. Marine commando trainees are not required to make a saving throw against marine tradition to avoid the onus of taking Blade skill in Cutlass expertise. At the conclusion of any term after a player has attended Commando School, and provided the player successfully reenlists, the player may transfer to the commando arm.

4. Protected Forces Training: Protected forces are those which operate in a naturally hostile environment, such as a vacuum. The player may acquire up to two skills. Roll 3+ on one die for each of the following: Vacc Suit, Zero-G Combat.

5 Recruiting: The player has been assigned to a recruiting station and receives an automatic recruiting skill.

6. OCS: The player has been sent to Officer Candidate School. Roll one command skill, one staff skill, and one additional MOS in the player's arm of service. Following completion of the assignment, the player is given a commission as a second lieutenant.

For *Commissioned Officers*

1. Intelligence School: The officer has been sent to Intelligence School and may receive up to four skills. Roll 4+ (one one die) for each of the following: Forgery, Bribery, Streetwise, and Interrogation.

2. Command College: The officer has been posted to Command College and may acquire up to three skills. Toll 4+ (one one die) for each of the following: Tactics, Leadership, and Recon.

3. Staff College: The officer has been posted to Staff College and may acquire up to three skills. Roll 4+ on one die for each of the following: Admin, Combat Engineering, Computer.

4. Commando School: The officer has been posted to Commando School.

Military Occupational Specialty (MOS) Table

Die Roll:	Arm: Artillery	Cavalry	Infantry	Marine	Support	Commando
1	FA Gunner	Vehicle	Gun Cmbt	Gun Cmbt	Vehicle	Gun Cmbt
2	FA Gunner	Vehicle	Gun Cmbt	Gun Cmbt	Cmbt Eng	Gun Cmbt
3	Vehicle	Vehicle	Hvy Wpns	Zero-G	Vehicle	Hvy Wpns
4	Mechanical	Hvy Wpns	Hvy Wpns	Zero-G	Mechanical	Demolition
5	Fwd Obs	Hvy Wpns	Vehicle	Hvy Wpns	Electronic	Survival
6	Computer	Mechanical	Recon	Fwd Obs	Medic	Recon
7	Electronics	Computer	Vacc Suit	Battle dress	Computer	Battle dress

DM +1 if tech level of world is 12+.

General Assignment

Die Roll:	Arm: Artillery	Cavalry	Infantry	Marine	Support	Commando
0	Command	Command	Command	Command	Command	Command
1	Command	Command	Command	Command	Command	Command
2	Command	Command	Command	Command	Staff	Command
3	Staff	Command	Command	Command	Staff	Command
4	Staff	Staff	Staff	Staff	Staff	Command
5	Staff	Staff	Staff	Staff	Staff	Staff
6	Special	Special	Special	Special	Special	Special
7	Special	Special	Special	Special	Special	Special

Note: All except officers treat staff and command results as unit assignment.

DM's: If Education 8+, DM+1 allowed. Officer may elect DM -1 (bucking for command).

Unit Assignment

Die Roll:	Arm: Artillery	Cavalry	Infantry	Marine	Support	Commando
2	Raid	Raid	Raid	Raid	Raid	Raid
3	Trng	Trng	Raid	Raid	Int'l Sec	Raid
4	Ctr Ins	Ctr Ins	Ctr Ins	Ctr Ins	Ctr Ins	Ctr Ins
5	Pol Act	Pol Act	Ctr Ins	Int'l Sec	Garr	Pol Act
6	Garr	Garr	Garr	Shp Trp	Garr	Int'l Sec
7	Garr	Garr	Garr	Garr	Garr	Garr
8	Garr	Garr	Garr	Shp Trp	Garr	Trng
9	Trng	Trng	Trng	Trng	Trng	Trng
10	Pol Act	Pol Act	Pol Act	Ctr Ins	Pol Act	Ctr Ins
11	Ctr Ins	Int'l Sec	Int'l Sec	Pol Act	Int'l Sec	Raid
12	Trng	Pol Act	Int'l Sec	Pol Act	Pol Act	Raid

Abbreviations: FA Gunner = Field Artillery Gunner. Fwd Obs = Forward Observer. Hvy Wpns = Heavy Weapons. Gun Cmbt = Gun Combat. Recon = Reconnaissance. Vacc Suit = Vacuum Suit. Zero-G = Zero-G combat. Cmbt Eng = Combat engineering. Trng = Training. Ctr Ins = Counter insurgency. Pol Act = Police action. Garr = Garrison. Int'l Sec = Internal security. Shp trp = Ship's troops. OCS = Officer's Candidate School.

Special Assignments

Die Roll:	Enlisted And NCO's	Officers
1	Cross Trng	Intelligence School
2	Specialist School	Command College
3	Commando School	Staff College
4	Protected forces	Commando School
5	Recruiting	Recruiting
6	OCS	Military Attache/Aide
7	OCS	

DM's: Marine enlisted and NCO's may add one if Educ 7+. Army enlisted men and NCO's may add one if endur 7+.

Assignment Resolution

Marine:

	Training	Int'l Sec	Pol Act	Ctr Ins	Raid	Ships Trps
Survival	auto	4+	5+	5+	6+	4+
Decoration	none	12+	8+	9+	5+	12+
Promotion	(6+)	(6+)	8+	9+	6+	(6+)
Skills	7+	none	7+	8+	5+	6+

–DMs: For survival, DM +1 allowed if any MOS skill level is 2 or greater. For promotion, DM +1 allowed if education 7+.

–Marines in garrison use the infantry garrison column.

Infantry, Cavalry, Artillery:

	Training	Int'l Sec	Pol Act	Ctr Ins	Raid	Garrison
Survival	auto	4+	5+	5+	6+	auto
Decoration	none	12+	9+	10+	6+	none
Promotion	(6+)	(6+)	8+	9+	6+	(7+)
Skills	7+	none	7+	8+	5+	none

–DMs: For survival, DM +1 allowed if any MOS skill level is 2 or greater. For promotion, DM +1 if education 7+.

Support:

	Training	Int'l Sec	Pol Act	Ctr Ins	Raid	Garrison
Survival	auto	4+	4+	5+	6+	auto
Decoration	none	none	10+	11+	7+	none
Promotion	(6+)	(6+)	9+	10+	7+	(7+)
Skills	8+	none	7+	7+	6+	none

–DMs: For promotion, DM +1 if intelligence 8+.

Commando:

	Training	Int'l Sec	Pol Act	Ctr Ins	Raid	Garrison
Survival	3+	4+	4+	5+	6+	auto
Decoration	none	none	9+	8+	5+	none
Promotion	(8+)	(7+)	8+	7+	6+	(9+)
Skills	6+	none	7+	6+	5+	none

–DMs: For survival, DM +1 allowed for any MOS skill level 2 or greater. For promotion, DM +1 if endurance 8+.

SKILL TABLES

Die	Army Life	Marine Life	NCO Skills	Cmnd Skills	Staff Skills	Shipboard
1	Brawling	Brawling	Hvy Wpns	+1 Endur	Mechanic	Fwd Obs
2	+1 Str	Gambling	Mechanic	Gun Cmbt	Fwd Obs	Ship's Boat
3	Gambling	+1 Str	Tactics	Vehicle	Computer	Gunnery
4	+1 Dex	+1 Dex	Hvy Wpns	Hvy Wpns	Electronics	Vacc Suit
5	+1 Endur	+1 Endur	Mechanical	Leader	Medical	Gunnery
6	+1 Endur	+1 Blade	Tactics	Tactics	Instruction	Vacc Suit
7	+1 Pistol	+1 Educ	Leader	Tactics	Admin	
8	+1 Soc	+1 Soc	Leader	Leader	Admin	
9	+1 Soc	+1 Soc	Admin			
10			Instruction			
11			Admin			

DM's:

Army Life, Marine Life: +1 if junior commissioned officer; +2 if field grade officer; +3 if general officer.

NCO Skills: +1 if sergeant; +2 if gunnery sergeant; +3 if leading sergeant; +4 if first sergeant; +5 if sergeant major.

Command Skills, Staff Skills: +1 if field grade officer; +2 if general officer.

Shipboard: No DMs.

TABLE OF RANKS

Enlisted Ranks

E1: Private
E2: Lance Corporal

Non-Commissioned Officers (NCO)

E3: Corporal
E4: Lance Sergeant
E5: Sergeant
E6: Gunnery Sergeant
E7: Leading Sergeant
E8: First Sergeant
E9: Sergeant Major

Junior Commissioned Officers

O1: Second Lieutenant (Traveller rank 1)
O2: First Lieutenant (Traveller rank 1)
O3: Captain (Traveller rank 2)

Field Grade Commissioned Officers

O4: Major (Marine Force Commander) (Traveller rank 3)
O5: Lieutenant Colonel (Traveller rank 4)
O6: Colonel (Traveller rank 5)

General Officers

O7 Brigadier General (Traveller rank 6)
O8 Major General (Traveller rank 6)
O9 Lieutenant General (Traveller rank 6)
O10 General (Traveller rank 6)

Commando training is the same for officers as it is for enlisted men and NCO's.

5. Recruiting: The officer has been posted to a recruiting station and receives an automatic recruiting skill.

6. Military Attache/Aide: The player rolls a single die. On a roll of 1-4 he has been assigned as a military attache and receives an automatic promotion of one grade and +1 social level. On a roll of 5-6 he has been assigned as an aide to a general officer. He receives +1 social level and may choose his next assignment, selecting either command position, staff position, or any special assignment other than military attache/aide.

REENLISTMENT AND MUSTERING OUT

After completing four assignments, a player has completed one term, and may attempt to reenlist. Reenlistment is done as specified in Traveller Book 1, with the following additions. Army enlisted men and NCO's receive a DM of +2. Marine personnel who have been cross-trained in artillery or cavalry and announce their intention to either that arm of service upon reenlistment receive a DM of +1. At the conclusion of a player's last term, all mustering out benefits are received as described in Traveller Book 1. Ageing is also conducted in the same way.

CHANGING ARMS OF SERVICE

Enlisted personnel and non-commissioned officers may never change service except when allowed to do so by crosstraining or commando school. Officers may change arms of service with the single exception that they may not transfer to commandoes until after attending Commando School. All changes of arm of service must be made at the beginning of a term.

TERM SKILLS

Term skills as called for in Traveller Book 1 are not rolled for, nor rank and service abilities received, the skills received from specific assignments being substituted for these.

MULTIPLE SCHOOL ASSIGNMENTS

Players who recive several assignments to the same school are considered to be taking refresher courses and may attempt again to receive each of the listed skills, unless a player upon receiving such an assignment already has a skill level of 2 or higher in any one skill offered by the school. In this case, the player is assigned to the school as an instructor, and receives one automatic Instruction skill.

RESUMES

Upon completing the final term of service, each player should prepare a resume with the pertinent information an employer would have available on an applicant. The resume should consist of four parts.

1. General: The general section should include the six digit UPP, the branch of service enlisted in (army or marines), number of terms served, service arm enlisted in, any transfers to different service arms and when the transfer took place, and final rank.

2. Special Assignments: Each special assignment should be listed, although the results should not be.

3. Awards and Decorations: All decorations received should be listed. Each time that a player received a combat assignment, a combat service ribbon was awarded. Each time an officer held a command assignment in a combat unit he received a combat command ribbon. Decorations consist of all MCUF's, MCG's, SEH's, combat service ribbons, combat commands and purple hearts.

4. Equipment Qualified On: Each type of equipment on which the player has at least one level of expertise is listed, although the exact level of expertise on each type is not.

Exact skill levels are not listed on a player's resume, nor will the exact skill level of potential non-player employees appear on their initial resumes. Sample resumes may be found in the section on non-player characters.

SKILLS

All skills not listed or elaborated below remain as they are described in Traveller Book 1.

General Description	Specific Game Effects
Battle Dress: The individual has been trained extensively in the use of battle dress and the weapon systems normally associated with it.	Battle Dress expertise may be used as Vacc Suit expertise as outlined in Traveller Book 1. As indicated in Book 1, individuals with Vacc Suit expertise may also use battle dress, and this is not modified by this rule. However, a number of highly sophisticated weapon systems are designed for use specifically and exclusively with battle dress, and only Battle Dress expertise allows use of the weapon systems without danger of damage to the system. The specific weapon systems used are the PGMP-13 and the FGMP-14 as described in the section of this book entitled Ironmongery. Each time that a PGMP-13 or FGMP-14 is fired by an individual with no Battle Dress expertise, roll two dice for a mishap. On a roll of 7+, a mishap occurs, with a DM of -2 per level of Vacc Suit expertise above Vacc Suit-1. If a mishap occurs, roll one die. On a roll of 1-2, the individual has been knocked down by the recoil and temporarily (one combat round) stunned by the recoil. On a roll of 3-4 the individual has suffered injuries to his right shoulder rendering it useless until proper medical treatment is received. These injuries would consist of numerous torn ligaments and muscles as well as a broken collar bone. Subtract 1D from the player's dexterity. On a roll of 5-6, the individual is unconscious and suffering internal injuries resulting from the recoil and must receive medical attention in the near future to prevent death. Subtract 2D from the player's dexterity.

General Description	Specific Game Effects
Combat Engineering: The individual has practical experience as well as training in a variety of combat engineering skills.	Combat engineering involves the rapid construction of field fortifications, their camouflage, the assessment of their ability to withstand enemy fire, mine placement and clearance, and placement of untended ground sensors. Depending upon the situation, the referee must establish construction times of required field fortifications, with players possessing higher expertise being able to complete work more quickly. The referee should make available to players with higher engineering skills information as to which locally available materials are best suited to the construction of such fortifications. The higher the expertise of such a player, the lower the probability that fortifications, minefields, and sensors will be visually detected by enemy forces from a distance. Conversely, individuals with Combat Engineering expertise should be given favorable DM's for their chances of sighting such emplacements of the enemy.
Demolitions: The individual is trained and experienced in the handling, placement, and efficient use of explosives.	Individuals untrained in demolitions may suffer mishaps while handling or attempting to use explosive charges. Roll 2D for 10+ for a mishap, with a DM of -2 per level of Demolitions expertise and additional positive DM's for conditions such as sudden jarring, extreme heat, accidental detonation of fuses by radio signals, excessive haste in preparation of the charge, and so on. Mishaps, when they occur, are generally fatal. In addition to avoiding mishaps, demolitions experts of higher levels should be given the ability to cause significantly greater destruction with smaller charges, due to familiarity with proper placement, tamping, selection of the correct explosive for the task, etc.
FA Gunnery: The individual has been trained as a gunner on one of a number of field artillery weapon systems.	The player receiving FA Gunnery skill must select one of the field artillery weapon systems available and in use on this world. The referee will already have determined the Tech Level of the world and a general list of systems is provided in the Equipment section of this book. Additional skills may be taken as increased skill with the chosen weapon system or as basic skill in the use of a different available weapon system. Increased FA Gunnery skills provide not only familiarity with specific weapon systems, but also an acquaintance with the history of the development of artillery, thus allowing the player limited expertise with

more primitive systems. A player with a total of two FA Gunnery skills (either as a level two skill in one system or as a level one skill in two systems) would have a level one expertise with all systems introduced one Tech Level earlier. Players with three FA Gunnery skills would have a level-two expertise with all systems introduced one Tech Level earlier and a level-one skill with all systems introduced two levels earlier, etc.

Increased expertise allows more accurate fire in higher volumes from a weapon. For a weapon to be fired at all, at least one member of the crew must have expertise in its use. The overall efficiency of the gun crew is determined by adding the expertise of each of the crew members, and dividing by the number of men in the crew. Crew sizes are listed in the Ironmongery section of this book.

When correcting fire, crews with an average expertise of less than one subtract 2 from their chances of a successful correction. Crews with an average expertise of one or greater suffer no negative DM's. For each level of average crew expertise above one, add 3 to the chances of a successful correction. Correction procedures are given in Book 1, under Forward Observer skill.

Gun Combat: Gun Combat is a specific skill in the use of one of several military small arms.

Characters who acquire a Gun Combat skill must immediately choose one category of small arms to apply it to. There are seven distinct categories:

Combat Rifleman: The first Gun Combat skill acquired must be as a combat rifleman. Combat Rifleman skill may be applied to the use of the rifle, carbine, assault rifle, advanced combat rifle, and gauss rifle. Thus, a player with a level two Combat Rifleman expertise would fire each of the above weapons with a expertise of two.

Pistol: Pistol skill may be applied to both revolvers and automatic pistols.

Submachinegun: Submachinegun skill is applied to submachineguns only.

Laser Weapons: Laser Weaponry skill may be applied to both laser carbines and laser rifles.

Zero-G Weapons: Only characters who already have Zero-G Combat expertise may take Zero-G Weapons upon receipt of a Gun Combat skill. Zero-G Weapon skills may be applied to accelerator rifles and snub pistols.

General Description	Special Game Effects
	High Energy Weapons: High energy weapons include all man portable plasma and fusion guns. High energy weapon skills may be applied to all of these except for the PGMP-13 and FGMP-14 (which may only be used by individuals in battle dress). All characters who have battle dress expertise may apply their High Energy Weapons skill to these two weapons, even if the Battle Dress skill was acquired after the High Energy Weapons skill. *Auto Weapons:* Auto Weapon skill may be applied to auto-rifles, light machine guns, and heavy machine guns. All gun combat skills are used as described in Traveller Book 1.
Heavy Weapons: The individual has been trained in the use of one or more heavy infantry support weapons, either ground mounted or vehicle mounted.	Players who achieve Heavy Weapons skills must immediately apply them to one heavy infantry support system listed in the back of this book. The system must be in use at the tech level chosen by the referee. Players enrolled in the cavalry arm when this skill is obtained must choose expertise in a vehicle mounted weapon. Additional Heavy Weapons skills are subject to the same criteria, but may be taken either in the same weapon system or a different one. Expertise in indirect fire weapons (such as mortars) is handled identically to FA Gunnery expertise. Direct fire heavy weapons require a crew of a gunner with some familiarity with the weapon and may or may not require additional assistants. The assistant gunners need not be experienced to carry out their functions. Gunner expertise will affect the accuracy of the weapon, as detailed under the weapon descriptions.
Instruction: Individuals have extensive training in instructing students in a clear and lucid manner and providing motivation for learning.	Players with Instructional expertise are capable of training recruits to carry out basic military functions. A player must have at least Instruction-1 to conduct any training at all. The more involved effects of training large bodies of men and the effects of differing levels of Instructional expertise are covered in the recruiting section of the book. In addition to general training functions, players with Instructional expertise may impart knowledge of certain well-understood skills to other players. Players may impart skills to other players up to a level of one less than their instructional skill and one less than their own skill level in the skill being taught. Thus, a player with Instruction-4, Recon-5 and Demolitions-2 could

teach another player Recon-3 and Demolitions-1.

Each level of each skill taught requires six weeks of instruction during which the referee should severely curtail both players' activities, or a six month course with other activities somewhat less curtailed. At the conclusion of the course, the learning player must roll 9+ on two dice to achieve the skill, with a DM of +1 for Intel 8+ and +2 for Intel 10+.

Players cannot teach the instructional skill to other players. Since the greatest asset an individual has is his pool of skills, the referee should excercise great caution in allowing players to hire non-player characters as instructors.

Interrogation: The individual is practiced in the psychological arts of interrogation as a tool of Intelligence-gathering.

The individual will be able to extract more information from a prisoner than would normally be possible. For the most part, this does not involve a direct psychological or physical assault on the prisoner, but instead results from the ability of the interrogator to derive informational pieces of a puzzle by attitude, word usage, and seemingly meaningless pieces of information. The interrogator will have a high ability to tell when a prisoner is lying and to piece together hints from a large number of interrogations.

When one prisoner has a particularly vital piece of information, the interrogator will be better able to tell what approach will achieve the best results (up to and including psychological and physical assault) the higher his expertise. Unlike most skills, pairs of interrogators may add their skill levels to achieve better results.

The referee should take these effects into account by determining what general level of information an interrogator will derive from a series of interrogations, and present it to him as his conclusion, since conclusion-drawing on the basis of partial information is an integral part of training. The referee should additionally generate die rolls for the likelihood of faulty conclusions or inability to detect incorrect information and roll secretly for those events, applying DM's for the interrogator's expertise, and any use of electronic lie detection equipment or drugs. In the case of individual interrogations, a die roll should be secretly established for the prisoner to break, modified by the expertise of the interrogator.

General Description	Specific Game Effects
Recon: The individual is skilled in military scouting.	In encounter situations, the referee will set the die roll needed for each side to spot the other. Players with Recon skills should have a correspondingly lower chance of being seen and a higher chance of spotting the enemy in advance. Additionally, players with Recon skill will be able to determine the number of troops that recently passed through an area by tracks, trampled vegetation, etc, with higher levels of expertise being able to more narrowly bracket the number of troops.
Recruiting: The individual is familiar with the most effective means of approaching individuals and presenting proposals for employment, couched in terms most likely to produce acceptance.	Players with Recruiting expertise will affect both the quality and quantity of recruits which will respond to a request for applications. The specific effects are presented in the Recruiting section of the rules. Players with recruiting skills will also have a higher chance of obtaining non-player hirelings for specific tasks, with Recruiting-1 having approximately the same effect on hiring as Leadership-4 as explained in Book 1 of Traveller. As a general delineation, characters with Leadership-4 will tend to indiscriminately attract all within the range of their personality, while players with Recruiting skills would receive favorable DM's on seeking specific hirelings suited to specific tasks.
Survival: The individual is familar with both the theory and practice of living off the land.	Players with Survival expertise are adept at locating food and water, constructing or finding natural weapons and shelter, and finding their way across country, in a wilderness. The referee should give favorable die rolls to such players for each of the above, based on the environment they are in. (The likelihood of Survival skills, no matter how good, allowing a player to find breathable air in a vacuum are rather slight.)
Vehicle: The individual is a trained driver.	Players who obtain Vehicle skills must immediately decide whether to take the skill as a wheeled vehicle skill, tracked vehicle skill, or grav vehicle skill. Such skills apply to all vehicles in the chosen category. Expertise in a vehicle allows a player to avoid mishaps while driving a vehicle of that type in the same manner as outlined in the Air/Raft skill explanation given in Book 1. To the list of potential mishaps should be added any kind of combat situation. Mishaps may involve throwing a tread, broken axles, collisions, and so on, at the referee's discretion.

General Description	Specific Game Effects
Zero-G Combat: The individual has been trained to fight in a zero-G environment.	Virtually all weapons involve some recoil, and in a zero-G environment this recoil can disorient or render helpless individuals not trained to compensate for it. When fighting in a zero-G environment, any individual has a chance of losing control of his movement/position each combat round. Roll 10+ on two dice to avoid losing control. Apply the following DM's: Firing a weapon: -4. Firing a low-recoil (Zero-G) weapon: -2. Using a handhold: +5. Striking with a blade weapon, pole-arm, fist or similar: -6. Wearing battle dress: +2 per level of Battle Dress skill. Note that laser weapons have no recoil. For each level of Zero-G Combat expertise: +4. Dexterity of 9+: +2. Dexterity of 11+: +4. Using a handhold reduces dexterity for the purposes of weapon accuracy by four. Individuals who lose control may not fire until they have reoriented themselves and regained control. Roll 10+ each subsequent combat round to regain control, with all DM's above in use except that handholds may not be used nor may weapons be fired.

SAMPLE RESUMES

The following characters were generated using the Mercenary Character Generation sequence. Each listing is followed by a list of the actual skills which the character possesses.

1. Resume: A25767, Army, one term. Enlisted in Infantry. Final Rank - Corporal.

Special Assignments: Protected Forces Training.

Awards and Decorations: One combat service ribbon, one purple heart.

Equipment Qualified On: ACR, Grav Vehicle, Vacc Suit.

Skills: ACR-1, Grav Vehicle-1, Vacc Suit-1, Zero-G Combat-1.

2. Resume: 539667, Army, seven terms. Enlisted in infantry, transferred to commandos after third term. Final Rank - Lieutenant Colonel.

Special Assignments: Cross Training in Cavalry and Artillery, Commando School, Instructor at Commando School, Staff College.

Awards and Decorations: Six combat service ribbons, five combat commands, three MCUF's, one purple Heart.

Equipment Qualified On: ACR, Tracked Vehicles, Grav Vehicles, Tech 12 MRL, Vacc Suit, Grenade Launcher, Demolitions.

Skills: ACR-4, Tactics-2, Tracked Vehicle-1, Grav Vehicle-1, Tech 12 MRL-1, Vacc Suit-1, Leader-1, Demolitions-1, Grenade Launcher-1, Survival-1, Combat Engineering-1, Instruction-1.

Tickets

A ticket is a specific mission contracted for between a client/patron and a mercenary leader or mercernary corporation. The ticket will take the form of a legal contract, and (since mercernaries have become an accepted part of frontier life) tickets have the force of law and violation of the terms of the ticket generally leads to some form of legal redress.

LEGAL CONDITIONS OF THE TICKET

All tickets will specify conditions of payment, type of service required, the financial support initially available to raise the force, and will generally include a provision for a repatriation bond.

Conditions of Payment: The agreed upon payment to a mercenary organization will either consist of up-front money (a fee paid in advance of the operation) or a success only payment. In the case of up-front money, successful completion of the mission is not required, although a good-faith attempt obviously is. As a general rule, up-front money will only be offered to established mercenary units (who have a reputation for honesty), and will be somewhat less financially rewarding than a success-only ticket. Mercenaries with exemplary reputations will sometimes be offered up-front money with a success bonus.

Type of Service Required: Mercenaries are hired for a variety of reasons, but broadly speaking, there are four categories of service: cadre, commando, striker, and security force. Mercenaries hired as cadres will generally provide training personnel for local forces and provide a high proportion of officers and senior NCO's. Commando units will be hired to carry out a specific raid, or serve as a raiding force throughout a campaign. Striker units are complete mercenary units hired to provide spearhead forces to a largely indigenous army. Security forces are hired to safeguard a specific installation or group of installations for the duration of an anticipated crisis.

Financial Support: In some cases, a patron will undertake to equip a mercenary unit for its task. This is often done if the mission requires specialized equipment not generally used (vacc suits, for example, or the provision of a high degree of mechanization or air mobility). Such a contract is generally referred to as a *Long Ticket.* Equipment aquired under financial support provided by a long ticket remains the property of the patron. Often a bonus is paid (from 1 to 6% of purchase value) for equipment remaining intact at the end of the mission.

The more common form of ticket is the *Short Ticket,* where the mercenary organizer is completely responsible for the equipping of his force. Short tickets are especially common on low tech level worlds with limited financial resources.

Repatriation Bond: Occasionally, the party with which a mercenary organization made its contract will cease to exist (for example, a government hires a mercenary unit and in the course of the campaign is overthrown). To guard against such an eventuality, a repatriation bond is generally posted in an escrow account in a neutral bank with sufficient funds to provide low passage off-planet to the personnel of the contingent. Upon the conditions of the repatriation clause be-

coming operant, mercenaries become non-combatants and are given free transit to the nearest spaceport. Repatriation clauses are almost universally respected.

HIRING ON

Players who do not have their own mercenary units may hire on to other mercenary units. Before attempt to hire on, it is first necessary to obtain information about units currently hiring. This may be done through the standard patron encounter system, with mercenaries able to provide complete information on all units hiring nearby and with Rumors, Marine Officers, Army Officers, and Navy Officers generally able to provide partial information about local units.

Once a player locates a unit, the referee determines the primary mission of the unit by rolling on the Mission Table. The mission of the unit will strongly influence its hiring policies. The referee next rolls to determine the reaction of the mercenary commander to the character. On a roll of 2 through 4, the offer of service is immediately rejected, sometimes accompanied by grisly promises of what the mercenary commander will do to the player if he ever sees him again. On a roll of 11 or 12, employment is immediately offered. All other results will affect employment as DM's. These DM's, along with others listed below, are applied to the character's employment roll. To be hired, a player must roll 9+ on two dice. In addition to the reaction DM's, a player will apply prior service DM's and mission DM's.

MISSION TABLE

1	Commando
2	Cadre
3	Striker
4	Striker
5	Security
6	Security

EMPLOYMENT DM'S

5	-2
6	-1
7	—
8	+1
9	+2
10	+3

Prior Service DM's: The Following results of prior service modify the result for hiring on.

Rank: If the player is a member of the army or marines, subtract rank from the die roll. The rank a player held if the player was a product of the Mercenary Character Generation System is the player's Traveller rank. Thus, a former marine captain (rank 2 in Traveller) would subtract 2 from the die roll.

Terms: A former member of the marines or the army adds one to the die roll per term of service served.

Mission DM's: The following results of missions modify the result for hiring on.

Cadre: Players who have never served as instructors at a school during their terms of service subtract 3 from the die roll. Players add 1 to the die roll for each time that they have served as an instructor. Players add 1 to the die roll for every two combat commands on their record.

Commando: Players who have never served in the Commando arm subtract 4 from the die roll. Players add 1 to the die roll for every three CSRs.

Striker: Players add 1 for each Combat Command and 1 for each CSR on their record.

Security: No DM's are earned for service on security missions.

Salaries: Players, once hired, will be put on the payroll and will receive a share of the final payment for the operation. Total payments to a mercenary unit, after salaries and expenses have been paid, are divided up into equal shares. Members of the unit receive differing amounts of shares depending upon their rank. The Salary Table indicates both monthly salary and number of shares for each rank up to colonel. As a matter of tradition, mercenary officers do not usually hold general officer rank.

Before shares are determined, the ticket holder, (generally the unit commander and his business partners) deduct 50% as profit. Salaries of deceased members of the unit are paid to next of kin or designated recipient. Only surviving members of the unit receive shares.

SALARY

Rank:	*Salary:*	*Shares:*
Private	300	1
Lance Corporal	400	2
Corporal	450	3
Lance Sergeant	500	3
Sergeant	550	4
Gunnery Sergeant	600	4
Leading Sergeant	700	5
First Sergeant	800	6
Sergeant Major	1000	7
Second Lieutenant	1000	5
First Lieutenant	1200	6
Captain	1400	7
Major	1600	8
Lt Colonel	1800	9
Colonel	2000	10

Ranks: All members of a mercenary unit, whether player characters or non-player characters, must be assigned a rank. Established conventions define the minimum rank an individual may hold based on both prior service and job description. Characters which were formerly junior officers (of rank 1 or 2) in the army or marines must at least be made non-commissioned officers (corporal or above).

Private— no special skills or responsibilities.
Lance Corporal— non-commanding specialist, such as vehicle driver or gunner.
Corporal— fire team leader, or vehicle or gun commander.
Lance Sergeant— assistant squad leader or fire team commander.
Sergeant— squad leader.
Gunnery Sergeant— platoon senior NCO.
Leading Sergeant— platoon leader or company senior NCO.
First Sergeant— battalion senior NCO.
Sergeant Major— regiment, brigade or force senior NCO.
Second Lieutenant— platoon leader.
First Lieutenant— platoon leader, company commander or executive officer.
Captain— company commander.
Major— company commander, battalion commander or executive officer, task force commander, or other suitable field grade officer position.
Lieutenant Colonel— battalion commander, or brigade, regiment or force commander or executive officer.
Colonel— brigade, regiment, force or division commander.

Characters who were formerly marine or army field grade officers (rank 3,4 or 5) must at least be made junior officers (second lieutenant or above). Characters army or marine general officers (rank 6) must at least be made field grade officers (major or above). Job descriptions of each rank provided above and elaborated on in the Recruiting section of the rules.

When a player character hires on to a mercenary unit, his rank will be determined by his minimum rank and modified die roll for hiring. For every one number higher than the required number to be hired, a player is hired at one rank higher. If hired immediately, roll one six sided die, the number rolled being the number of ranks higher than the minimum hired at. For example, a former Army Captain is hired immediately due to favorable reaction by the unit commander. The Captain rolls a five on the die. As a former junior officer, his minimum rank would be Corporal. Adding five to this, the former Captain is hired on as Sergeant Major, probably the senior NCO of the mercenary unit.

General example of hiring on: Jordan has served two terms in the Marines using the *Mercenary* character generating system. During his first term, he drew assignments to an Internal Security unit, a Garrison unit, Protected Forces training, and OCS. Entering his second term as a second lieutenant, he was posted as a staff officer to an Internal Security unit, he commanded a unit in a police action, was staff officer to a unit assigned as ships troops, and was finally posted to staff college. While serving in the Internal Security unit, he was awarded the MCUF. He has one CSR and one commbat command, both received as a result of the police action.

Jordan applies for employment in a mercenary unit recruiting for a Striker mission. The referee rolls a 9 for the unit commander's reaction, thus giving Jordan a +2 modifier for employment. Jordan subtracts one from the die roll for holding rank 1, and adds two to the die roll for having served two terms. Consulting the mission DM section, Jordon subtracts one more from the die roll for his rank, adds one for his CSR, and adds one more for his combat command. Thus, his total DM is +4 (+2-1+2-1+1+1=+4). Jordan rolls a 9 modified to 13. This is four above that needed to be hired, and thus Jordan is hired as a first sergeant.

REMUNERATION

The amount paid to a mercenary unit will vary greatly depending upon the severity of the mission, whether the contract involves a success-only payment clause, how much of the expense of logistically maintaining the unit is assumed by the patron, etc. However, as a guide, the lowest that a mercenary unit will generally receive in actual cash payment (assuming up front money, all maintainence expenses covered by the patron, a low threat mission, and no particular reputation for excellence by the mercenary unit) would be about CR 60000 per month or part thereof per platoon. Since the payroll of a fifty man platoon will run in the neighborhood of CR15000, this would leave about CR 22500 as profit and a like amount as shares. A battalion-sized unit with a good reputation working on a success-only contract for high stakes could easily receive several millions in payment.

SAMPLE TICKETS

Five sample tickets are given below, one of each type, and a "Dream" ticket. These may be used or similar ones created by the referee.

Striker Mission:

Background: Marastan (planetary characteristics - D8687715) has for over a century classified as an Imperial Reservation, with access to the world severely limited. With a total population in the thirties of millions and a relatively primitive state of technological development, Marastan has preferred reservation status as the only viable means of preventing mass immigration to this garden world, which would inevitably spell the end of the autocratic rule of the handful of clan hetmen who now largely control the destiny of the scattered clan settlements.

The discovery of fabulously rich mineral deposits on the major continent of Marastan changed the local political picture dramatically. Major industrial concerns began applying pressure on the Imperial government to open Marastan to off-world development and several clan hetmen, probably heavily bribed, added their voices to the appeal. The empire relented and set a formal entry date of Marastan to full member status in the Imperium. On that date, an Imperial survey ship will arrive and determine the governmental type or types that will control the surface of the world, based on actual existence and ownership of territory at that time. The official entry date is set at three months hence, and on Marastan the scramble for the mineral riches begins.

Mission: Clan Hardretter, backed by the industrial concern Ling Standard Products, is contracting for a mercenary striker battalion to supplement its own six battalions of hastily raised militia/constabulary. Although technically in violation of the still-operant reserve regulations, no serious repercussions are expected as most of the other clans are also believed to be importing small mercenary contingents as well. A force much in excess of a battalion, however, would probably trigger Imperial enforcement of the reservation laws, and perhaps significantly delay entry into the Imperium.

The battalion's mission will be to actively take the field against the major clans by both neutralizing their own mercenary contingents and conducting selected raids against their governmental centers. Thus the battalion must have some commando capabilities, preferably a small raiding force. Rather than attempt to gain actual physical control of the actual mineral sites scattered widely about the continent, Hardretter aims at quick blows to the brain of several major clans in an attepmt to force their adherance to a coalition, headed by Hardretter, capable of welding together a planet-wide government.

To play down the influence of Ling Standard and their involvement in the scheme, little up-front money is available. Hardretter will, however, provide a .1% interest in the world wide mineral rights, on a success-only basis, to the battalion, and agrees to provide all logistic support to the battalion while on-planet except for the provision of munitions and spares for equipment, as these cannot be produced on-planet. Munitions and spares will be provided off-world by Ling Standard to the battalion at 10% of list provided all unused material reverts to Ling Standard upon conclusion of the mission. Ling Standard also pledges to redeem the .1% interest in mineral rights for CR 30000000 if desired.

Commando Mission:

Background: Poroszlo (planetary characteristics - A867A74A) is an advanced, highly populated, balkanized world, bitterly torn on the issue of economic and industrial concentration. The Private Ownership bloc, comprising about two fifths

of the nations and well over half the population of Poroszlo, severely limits the size of corporate concerns and intensively regulates them, fearing the ability of large multi-world concerns to influence and dominate local governments. The Free Commerce bloc, containing fewer nations, but generally more industrialized and technologically advanced, does not impose such limits. Although all-out war has been avoided, constant brushfire wars erupt in the smaller nations of the world, as each side seeks to convert the other (the PO bloc out of paranoia that increasing industrial control will threaten their own political freedom, the FC bloc at the behest of the industrial concerns that largely control them).

Less than a decade ago, free elections in the nation of Stepozhevac voted in a Free Commerce government, largely in response to the promise of large industrial development by programs financed by outside corporations in payment for the right to develop large bauxite reserves of the country. With a population somewhat in excess of 60 million, Stepozhevac's estimated GNP is only CR 42.63 billion, and the nation can only be described as underdeveloped.

After installation of a Free Commerce government, the bauxite deposits were rapidly developed, but most foreign assistance was channeled into modernization of the armed forces. Approximately one year ago, a junior officer coup seized control of the government, disarmed nearly half the armed forces, expropriated foreign industrial holdings, and declared for the PO bloc.

Mission: Through neutral parties, several industrial consortiums are hiring a number of mercenary contingents to augment the army of Morovic, Stepozhevac's northern neighbor, for a rapid campaign against the ruling junta. The campaign will consist of two phases. Phase one will comprise seven distinct and simultaneous operations: six commando raids and one striker incursion. Each commando raid will aim at seizing one of the six main mining camps nestled on the southern slope of the Karamak Mountains, which form the northern border of the country with Morovic. Each raid will be in company strength. The striker incursion will be in brigade strength, southwest of the mountains, and will aim at attracting Stepozhevaci reserves. Phase two will consist of relief of mercenary units by main force Morovici units. The intent of the operation is to bring down the junta and replace it with a pro-FC government.

The ticket offered calls for a company strength light commando force to seize Camp number 5 and hold it against counterattacks for two days. CR 3 million is offered up front, with an additional CR 2 million success bonus. Transport will be financed by the patron, with a 10% of purchase price bonus for all equipment remaining intact at the end of the operation. Stepozhevac's armed forces possess a variety of surplus equipment mostly from tech levels 8 and 9. Camp 5's garrison consists of an air cavalry battalion equipped with air/rafts and ACR's (a quantity of which were received before the coup), but generally only a company is present at the camp, the bulk of the battalion being employed in counter-insurgency work against tribesmen in the Karamak Mountains. Counterattacks in battalion strength can be expected by tech level 7 and 8 mechanized elements starting 12 - 24 hours after the initiation of hostilities. Due to the value of the installations siezed, large scale bombardments are not expected, nor is the use of tactical nuclear weapons, although non-persistant chemical agents may be used. It is expected that Morovici forces will achieve local air superiority for the duration of the campaign, although

tactical air support will be concentrated exclusively with the striker incursion.

Cadre Mission:

Background: Aramis (planetary characteristics - B6597726) consists of a small industrial fief on long term lease to Peabody Instrument, several coastal enclaves on the only moderately large continent of the planet, and a large out-back, thinly populated with no formal government. Recently, raids by outbackers on several of the coastal enclaves have increased, apparently supported by arms shipments from 'Clave Detmender, whose motives in this action seem vaguely aggressive, albeit ill-defined. Short of manpower and funds, local militia units have formed to protect out-lying settlements and farms and launch occasional punitive raids, but are hampered by a lack of any formal military experience. Large purchases of modern equipment are beyond their means, as are mass hirings of mercenary units. 'Clave Belcherferus decides to hire a small mercenery cadre to train and lead its militia.

Mission: 'Clave Belcherferus has a total population of 23000, of which 8000 are technically enrolled in the militia. This represents virtually all male and female manpower between the ages of 17 and 30, and obviously cannot be mobilized at any one time. The militia is currently organized into about thirty-five companies of from 150 to 200 each, with each company drilling once a month and serving a one week action duty once every four months. Thus, two companies are available to meet raids, provide security detachments and intensively train at any one time. This represents a severe strain on the civilian economy, and only in extreme emergencies, or for an extremely important operation, would more companies be mobilized.

'Clave Belcherferus offers double standard salaries to a small cadre unit, not to exceed twenty men, to train and lead the militia. Local ranks enjoyed by the unit will include three field grade commissions, eight junior officer commissions, and the remainder as NCO's. All active companies and platoons will be commanded by mercenary officers, with native commanders serving as deputy commanders. In the case of mobilization of larger forces, mercenary officers will command companies and field grade officers will command task forces, with the senior mercenary officer exercising overall command, within limits imposed by the government. Normal salaries will be paid to individual mercenaries, with additional salaries to the unit for profit and disbursement of shares.

Security Mission:

Background: Jokotre (planetry characteristics B6548D97) has for generations been ruled by a religious dictatorship based on the worship of Ram, a local deity. Each true believer must make a pilgrimage to the holy lands once during his life, and the ruling hierarchy has decided that this year, the one thousandth anniversary of the deification of Ram, would be an auspicious time for the highest government leaders to do so, particularly as it would serve to increase flagging popular support for the regime. The pilgrimage will be complicated by two factors, however. First, an active insurgency movement would leap at the chance to destroy the ruling hierarchy at one blow. Second, no true believer may carry weapons into the holy land without being permanently defiled. While true believers, in the strictest meaning of the term, may be rare, so dogmatic has the regime become to maintain power that no member of the armed forces can reasonably be expected to volunteer for such a mission. The only practical solution is to provide security guards from heathen

off worlders, who do not care if they are defiled, and are less likely to accept bribes to assassinate any member of the ruling hierarchy.

Mission: The ticket offered is a success-only contract (obviously) for a company-sized security force. The force will escort the motorcade of officials and their dependents, about 400 in all, from the border of the holy land across country to the shrines (a distance of 400 miles) and back. At the border, security will be taken over by main-force Jokotre units. No other pilgrims will be allowed to enter the holy lands during the mission, and strong Jokotre security elements will be deployed along the borders for weeks in advance to enforce the decree. Outside security will be sufficient to prevent aerial or vehicular intervention and prevent large scale incursions, but the infiltration of light insurgent units cannot be ruled out. The motorcade will travel in ATV's, of which six will carry auto cannons for use by the security detail. No heavier armament will be available due to a wish to keep a very low profile in regards the security arrangements. Payment on completion of the mission will be CR 500000.

The Dream Ticket:

Background: Aramanx (planetary characteristics - B6579746) is a highly populated, balkanized, somewhat backward planet. While extensively industrialized, its remote location and limited export potential has limited its technological progress. Sternmetal Horizons, LIC, has recently (within the last decade) embarked upon a program of exploitation of the world along ambitious lines. Deciding that a straight economic take-over of the politics of the planet would involve far too great an outlay of funds, Sternmetal has systematically invested in Lovrenyi, a smallish (population 37 million) industrialized nation in the midst of the most heavily industrialized and settled continent. Sternmetal will introduce a small but well-equipped mercenary contingent to supplement indigenous Lovrenyi troops and defeat the conventional armies of the major powers, thus enabling imposition of terms favorable for wholesale infiltration of their economies by Sternmetal investment.

Mission: A CR 50 million success only ticket is offered for a heavily reinforced mechanized striker battalion, equipped to tech 9 or 10 level, augmented by at least a company of armor, several batteries of artillery with advanced counter-battery capabilities, a small aerial contingent, and heavily equipped with man-portable and vehicle-mounted anti-tank and anti-aircraft weapons. Indents may be made against the CR 50 million fee for amounts up to CR 30 million to provide equipment, all equipment reverting to Sternmetal Hirizons, LIC in the event of failure. The force will provide stiffening for the army of Lovrenyi (eight semi-motorized infantry divisions, several battalions of armor and armored cavalry) as well as form a breakthrough force capable of rupturing defense lines, carrying out deep penetrations, and employing overwhelming firepower to annihilate large concentrations of enemy troops in short amounts of time. Enemy forces can be expected to amount to 40 to 60 divisions, mostly infantry, with a number of brigade-sized armored units. Nuclear weapons will not be employed, although limited use of chemical weapons will be permitted. Despite apparent overwhelming enemy force, extensive use of jamming of primitive radio communications should enable the striker force to achieve successive local concentrations of overwhelming firepower and seriously disrupt any concerted enemy offensive. Employment of forces larger than reinforced battalion strength with supporting arms is not deemed advisable.

Recruiting

Players will often find it necessary to hire non-player characters to carry out a mission, and may wish to hire such characters as body guards, personal security detachments, etc. The following procedures are used to recruit, train, and organize non-player characters.

Obtaining Recruits: Players on planet may attempt to recruit by placing ads in appropriate periodicals, by word of mouth, etc. A player or players who attempt to find recruits do so by spending two weeks advertising and interviewing recruits. Players may be assisted in this by non-player characters in their employ who have recruiting skills.

Four categories of hirelings may be obtained: raw recruits, veterans, veteran officers, and mercenaries. Raw recruits consist of non-player characters with no prior military experience. These could be veterans of the scouts, navy, merchants or other service. To this end, Traveller Supplement 1, titled 1001 Characters can be of some assistance.

RECRUITING MATRIX

Value	Tech Level	Law Level	Govt type
0	no	+3	–
1	no	+2	–
2	no	+2	–
3	no	+1	–
4	no	+1	–
5	-1	–	–
6	-1	–	–
7	–	-1	+2
8	–	-1	–
9	–	-2	–
10	+2	-2	–
11	+2	-2	–
12	+2	–	–
13	+1	–	–
14	+1	–	–
15	+1	–	–
16+	no	no	no

The presence of the notation "no" indicates that players may not recruit on that world. A dash indicates no die roll modification.

Raw recruits may also be drawn from the police category, from the thug category, etc, from the supplement, or they may be rolled for according to the standard Traveller character generation rules. Veterans consist of members of the marines and army not generated by the Mercenary character generation system and who did not attain commissioned officer rank. If the supplement is used, these may also be drawn from the trooper section. Veteran officers are former officers of the marines or army not generated by the Mercenary character generation system. Mercenaries are hirelings generated by the Mercenary character generation system, and although none are included in the non-player character supplement, a small number are included in this book.

Recruiting is carried out by rolling separately for each category of recruits to determine the number of each which apply for employment. The number which apply is determined by rolling a specified number of dice and applying DMs to each die rolled.

Number of Dice Rolled: For raw recruits, the number of dice rolled is equal to the population number of the planet minus four. Thus, on a population level 6 world, two dice would be rolled. For veterans, roll dice equal to the population level minus five. For veteran officers and mercenaries, roll dice equal to the population number minus six.

After the correct number of dice have been rolled, a DM is applied to each die. The DM is determined by consulting the Recruiting Matrix, and referencing the appropriate planetary values; note all DMs indicated and sum them for a total. In addition, the recruiting expertise of the player or players will provide a DM. For each player with a recruiting skill of 1 engaged in recruiting, add one to the die rolls for raw recruits. For each player with a recruiting skill of 2, add one to the rolls for raw recruits and for veterans. For each with recruiting 3, add one to all rolls. For each player with recruiting 4, add two to all rolls. For each player with recruiting 5, add three to all rolls, etc. Non-player character employees with recruiting skills assisting a player may use their recruiting skills in the same manner.

Recruiting, as indicated above, takes two weeks. At the end of that time, players may continue to recruit on the planet for additional two week periods, repeating the above procedure each time. However, in each additional period of recruiting, subtract one from each die. The negative modification is cumulative; in the fourth period, three would be subtracted from each die in addition to all other DMs.

Reactions: Referees may wish to roll on the reaction table (Traveller book 3, p. 23) for each recruit, although this will generally prove very time consuming and is not recommended. It is recommended that the referee roll once for each key hireling, key hirelings including all mercenary characters and all veteran officers. The leadership level of the hiring player (or that of the highest single leadership level of one of several hiring players) should be applied as a positive DM on the reaction roll. Whether the characters decide to enlist should be dependent on this die roll. Characters with a reaction roll of 9 or higher will almost certainly enlist. Characters with a roll of 6 through 8 may or may not enlist, depending on the mission, financial rewards, a referee-generated die roll, etc. Characters with a roll of 5 or less will never enlist except to sabotage the unit or do harm to the employers. The reaction roll, of course, should be kept secret from the hiring player or players. Unusally high or low rolls should be noted by the referee as a guide to future loyalty and conduct of the hireling.

TRAINING THE RECRUIT

After hiring recruits, players may wish to train them. Two types of training are possible, basic training and skill training.

Basic Training: Basic training is only necessary for raw recruits, but is generally essential for them. Basic training involves weapon familiarization and small unit tactics. Only personnel with instructional expertise may conduct basic training, but all such personnel may do so, regardless of what other skills they have. Each basic training class may be conducted by one or two instructors operating in conjunction. Basic traing requires six weeks, and the number of trainees who may be

instructed in each class is equal to six times the instructional expertise of the instructor. If two instructors are used, add their instructional skills and add one to the total skill level. Thus, two instructors, each with skill level one instructional skill would have a total skill level of three and could instruct eighteen trainees. Trainees upon completion of their basic course are considered to have one experience point (see the section on Organization for an explanation of experience points) and familiarization with the use of small arms. Small arms familiarization does not count as a skill level, but avoids the negative DM for lack of gun combat skill.

Skill Training: Single instructors may teach trainees specific skills. Each skill class must be taught by an instructor with instructional skills of 2 or greater, and with a skill level of two or greater in the subject taught. Each such class takes six weeks, and at the end of the period each student receives a level one skill in the subject taught on a die roll of 9+ on two dice. The following DMs are applied: student intelligence of 8+, +1; student intelligence of 10+, +1; +1 per level of instructional expertise above 2.

Each skill class consists of up to six students, normally, but may be increased beyond this at the cost of a decreased DM for sucessful completion. For each six students added to the class, apply a DM of - 1 to the completion die roll for each student in the course.

Students may be given additional courses in the same skill to raise their skill above level one, but no student may learn a skill greater than one less than the instructor's skill level in the subject taught or one less than his instructional skill. Thus a character with Instruction-4 and Demo-4 could train students to the level of Demo-3.

ORGANIZATION

Upon completion of training (if any), characters hired as part of a mercenary unit must be organized. All units are formed from two basic organizational building blocks, the individual and the team. Individuals are single characters operating on their own. Teams are groups of four or fewer characters operating in concert. If using miniature figures, individuals would be mounted on separate bases while teams would be mounted on a single base. Recomended base sizes are ½" square for individuals and 1" square for teams. As a general rule, only unit leaders, senior NCO's, etc will be mounted as individuals, while most combat troops will be mounted as teams. Player characters will generally be represented by an individual, as will especially skilled soldiers in special units (men in battle dress, commandos, and so on).

Units: Players have some flexibility in forming units, but the following is presented as a general guide. Radical departure from the standard organizational scheme should require training of the men to aquaint them with unfamilar tactics, organization, and chain of command.

Fire Team: A fire team is the smallest organizational unit, commanded by a junior NCO (almost always a corporal) and consists of four men. The team leader should be mounted on the team base.

Squad: A squad will consist of two or three fire teams. A squad is commanded by a Lance Sergeant or Sergeant. The squad leader will command one of the fire teams in addition to commanding the squad.

Section: A section generally consists of two squads, and is an intermediary step

between squad and platoon. Sections are often omitted from organizations. A section is commanded by a Sergeant or Gunnery Sergeant, who may either be mounted as an individual leader or serve as one of the two squad leaders in the section.

Platoon: A platoon consists of up to three squads or two sections. A platoon is commanded by either a Lieutenant or a senior NCO (generally a Leading Sergeant). A platoon may also have a unit senior NCO, who should be one grade above the highest squad or section leader in the platoon (generally either a Gunnery Sergeant or Leading Sergeant). A platoon may also have a runner/commo specialist/guard with its headquarters element. The platoon leader, unit NCO, and specialist may be mounted either as a team or as individuals.

Company: A company consists of several platoons and is generally commanded by a Captain, although companies may be commanded by Lieutenants and Majors as well. Companies may have unit senior NCO's, generally Leading Sergeants or First Sergeants. The company commander and unit senior NCO would be considered individuals, while additional headquarters personnel (commo specialists, etc.) could be mounted as either individuals or teams, depending on their function.

Battalion: A battalion consists of several companies commanded by a field grade officer, generally no higher in rank than a Lieutenant Colonel. Battalions on occasion are commanded by captains. Battalions may have unit senior NCO's, generally First Sergeants or Sergeant Majors, and may also have a battalion executive officer of field grade or below. Headquarters personnel may be mounted as individuals or as teams depending on their function.

Units Above Battalion Level: Units larger than battalions will seldom be used in the type of environment mercenaries are employed in, and when used will generally be combined arms task forces tailored to a specific mission. Players thus have a great deal of flexibility above battalion level, but in forming such units, and even in determining the size of smaller units, referees should bear in mind the principle of *span of control.* As a general rule, a unit should consist of no more than three to five sub-units. Command efficiency and unit coordination will begin to deteriorate if any more than five sub-units are directly controlled by a single headquarters.

Experience and Morale: After a player has organized his mercenary units, the referee should determine the morale of each basic organizational component (each individual and each team). Ideally, this should not be revealed to the player until combat is first joined, although with large mercenary units, referees may find this quite impractical.

To determine the morale of an individual, total the individual's experience points. Experience points are awarded for the following:

Raw Recruits: A raw recruit has no experience points unless he has undergone basic training. If he has undergone basic training, he has one experience point.

Veterans and Veteran Officers: Each such individual receives one more experience point than the number of terms served. Thus, an individual with three terms of service in the marines would have four experience points. Each such individual also receives one experience point per level of Tactical expertise skill.

Mercenaries: Individuals with characteristics generated by the Mercenary character generation procedure receive one experience point per combat service ribbon, purple heart, level of tactical skill, and MCUF. Two experience points are received per MCG. Three experience points are received per SEH.

After the individual's experience points are totalled, roll one die and add it to the total points. The result is the individual's *morale rating.* The morale rating will be used to determine how well the individual will respond under conditions of stress, and is essentially the number that must be thrown, *or lower,* with two dice to avoid panic. Express morale ratings as a number followed by a minus, for example 8-.

To determine the morale level of a team, a procedure similar to that for individuals is followed. The experience point totals for each member of the team are determined as above, with some modifications. The experience point total of the highest ranking character in the team is the upper limit of experience points for each other member of the team. For example, a platoon headquarters mounted as a team contains a Lieutenant with five experience points, a Gunnery Sergeant with ten experience points, and a Lance Corporal with two experience points. The Gunnery Sergeant would count as having only five experience points, as the Lieutenant with only five points outranks him. In a team containing a character of NCO rank or above, the highest ranking figure receives, in addition to the experience points listed above, one experience point per combat command (Mercenary-generated former officers only). Once the total experience points for each member of the team has been determined, sum them and divide by the number of figures in the team (rounding down), thus obtaining an average experience number. Roll one die and add this to the average experience to determine the final morale rating.

Morale Bonuses: Unit commanders from squad level up have a morale bonus equal to their level of leadership expertise. This morale bonus is not added to their morale, or the morale of the team they are a member of. However, if friendly individuals and/or elements in their immediate vicinity which are part of the unit they command are called upon to make a morale check, the unit commander may add his morale bonus to those units. If the leader or the team to which he belongs also makes a morale check, that check is made first, the morale bonus only being applied to other individuals and elements if the leader successfully passes his own morale check. If he fails his morale check, his leadership level is applied as a negative morale modifier to all nearby stands of units.

Medics: While mercenaries anticipate considerable danger from their chosen line of work, needless death or suffering is anathema. Provision of minimum levels of medical care for wounds and injuries is necessary to the continued maintainance of the morale of a unit. Each platoon must have medical skill points available to it at least equal to 10% of the platoon's strength. Medical skill points may be provided by the skills of combatants in the unit, or by specifically designated medics, or by a combination of the two. For example, a 50 man platoon would require 5 medical skill points. If three members of the platoon had Medic-1, the additional two points would have to be provided by a specifically designated medic. Personnel designated as medics double their skill level for purposes of determining the number of skill points provided. In the above example, one medic with a skill level of Medic-1 would provide the two needed medical skill points. Medics are non-combatants, and as such may not be armed or required to carry out any function other than care of the wounded.

Each company must have, in addition to the medics provided by each platoon, a casualty clearing station with at least one designated medic with a skill of Medic-2 or higher. Medical requirements above company level are dependent primarily upon

outside factors, such as availability of local medical facilities, ability to rapidly clear casualties to such facilities, etc. In the absence of local medical facilities, units of company size or larger should have as a minimum one surgeon and several assistants.

Failure to provide adequate medical care should result in reductions in the morale levels of elements and individuals, in amounts determined by the referee based on the situation (but at least -1).

Heavy Weapons Teams: Heavy weapons teams will consist of two or more men. Morale is determined by averaging the experience points of the team members. Each heavy weapons team must have a designated gunner with at least a level one skill in the weapon used; gunners must be classed as lance corporals or above. Weapons teams with more than four members must have a gun crew commander with a rank of at least corporal.

Ranks: Hirelings and other player characters must be assigned ranks within the highest command structure of the unit. Player characters are free to accept any rank offered by another player character, but non-player characters must be offered ranks equal to or greater than the minimum acceptable ranks listed in the earlier section covering hiring on. Characters must be assigned responsibilities roughly appropriate to their ranks, as arbitrated by the referee. All doctors (Medic-3 or higher) must be made commissioned officers.

Miscellaneous Support Personnel: Mercenary units will accumulate equipment over time (weapons, vehicles, personal armor) and this equipment must be maintained. The referee should from time to time impose breakdowns on the player's equipment, with mechanics required to repair the equipment. The presence of full-time mechanics and electricians in the unit should reduce the rate of breakdowns, and decrease their severity when they occur.

Gaining experience: At the conclusion of each mercenary mission, all personnel who came under fire gain one experience point, which will increase the morale of units in subsequent actions provided a large number of personnel stay with the unit.

Unit Senior NCO's: Units of platoon size and greater commanded by a commissioned officer may also contain a unit senior NCO. The unit senior NCO is attached to the unit headquarters and is generally responsible for discipline, training, and the smooth functioning of non-combat administrative activities within the unit. In a combat situation, the unit senior NCO will assist the unit commander in making combat decisions, assist in carrying out orders, etc. At the platoon level, the platoon sergeant (the unit senior NCO) will sometimes command part of the platoon while the platoon leader commands the other part.

While unit senior NCO's are not necessary, the provision of qualified personnel in these positions carries certain advantages. If a unit has a unit senior NCO, the tactical skill of the unit commander is considered to be his skill level plus that of his senior NCO, although the senior NCO may not more than double the commander's original level of tactical expertise. This added tactical skill may only be used when the two characters are operating together (in close physical proximity – mounted on the same stand or stands touching). When operating together, both may add their leadership levels to obtain a combined higher morale bonus. The unit senior NCO adds his full leadership level to the morale bonus, regardless of the leadership level of his commanding officer. When operating separately, both characters may employ their leadership levels as separate morale bonuses.

Battles

There are three means of resolving a mercenary mission: the standard *Traveller* adventure/combat system, the abstract system included later in this section, and a free-form system created by the referee. All three are discussed to a greater or lesser extent, but it should be born in mind that these are intended only as a general guide to the referee, not as a definitive miniatures rules set.

THE TRAVELLER COMBAT SYSTEM

The expanded weapons tables included in this section integrate the additional small arms and supporting weapons into the basic Traveller combat system. In addition, the following additions and changes are used.

Morale: While the standard Traveller morale rule (book 1, page 33) may still be used in random encounters of a small nature, parties engaged in purely military functions (including military units encountered by player-characters) should use a modified morale system. Morale for an individual or a fire team is determined as described in the Organization section of this book. The morale number is the number or less that must be rolled on two dice to pass a morale check. While referees may wish to impose morale checks for a variety of special cases (such as non-player hirelings continuing to accompany player-characters in the face of almost certain destruction), the following general events should always trigger a morale check.

1. Unexpected Fire: If an individual or fire team is fired upon unexpectedly (from ambush or from individuals not previously considered threatening) a morale check is necessary to determine whether they will return fire and follow orders given to them. Failure of the morale check will cause them to go to ground to take cover, scatter to cover, run away, or surrender, depending on the situation. Surrender should be based on the apparent hopelessness of the situation, the amount by which the individual or team missed their morale throw, and the perceived willingness of the belligerents to take prisoners.

2. Casualties: Whenever a unit of platoon size or smaller takes casualties, all elements of the unit in the immediate vicinity should take a morale check. Failure of the morale check should result in the unit taking cover, halting of the advance, actual retreat, or surrender, again depending upon the circumstances listed above. The referee should apply DM's to the roll based on the seriousness of the casualty (a light wound will not effect morale as much as a death). Additionally, the death of a commanding officer or NCO should cause a negative DM equivalent to his normal morale bonus due to leadership.

Full Automatic Fire: Certain weapons are capable of either semi-automatic or full automatic fire. These weapons are shown on the weapons charts with the two DM's in each column separated by a slash. The first DM is used when the weapon is fired semi-automatically; the second is used on full automatic fire settings. Each full automatic burst, in addition to the higher hit probabilities, allows two chances of a hit on a designated target. Gauss rifles firing ten round bursts receive three chances

of a hit on the designated target, as do weapons which are fired exclusively in the full automatic role (light machine guns, auto-cannons, and VRF gauss guns).

Group Hits by Automatic Fire: Regardless of the designated target of a weapon which is firing with automatic fire, non-evading targets adjacent to the original target area are also attacked by the weapon's burst of fire. A DM of -3 is imposed to hit. From a normal four round burst, no more than two adjacent targets may be hit. From a ten round burst or greater, four adjacent targets may be hit.

Additional Damage from HE Rounds: After normal hits have been determined (including resolution of group hits from automatic fire, if used), blast effects may cause damage to individual targets adjacent to the target hit. Roll for hits as if fired at normally, but apply half damage.

Flechettes: All flechette rounds fored at long, very long, or extreme rane use the Group Hits by Shotgun rule (book 1, page 39).

High Energy Weapons: All PGMP's and FGMP's fired at very long or extreme range use the Group Hits by Shotguns rule.

Zero-G Firing: Projectile throwing weapons fired in a zero-G environment do not lose accuracy with range to the same extent as normally. At medium, long, and very long range, such weapons use the DM for either short or medium range, whichever is more favorable.

Panic Fire: At medium range or less, players may voluntarily chose to use panic fire, if firing small arms slug throwers. Panic fire uses all rounds in the weapon, and hits are resolved as if the weapon were being fired at its highest setting (four round bursts, etc). The player may take up to three normal fires (or less, depending on how much ammunition is left in the weapon when panic fire is initiated), all of which are made at a DM of -2. When firing rifles treat them as assault rifles on automatic setting Players firing carbines treat them as submachine guns.

Extreme Range Firing: Certain weapons may fire at ranges longer than very long. The extreme range for such weapons is listed with the weapon description. Weapons fired at extreme range do so using the modifiers for very long range with an additional DM of -4. Only players with expertise in the weapon may fire at extreme range. To fire at extreme range, players must be stationary and prepared to fire from a rest (log, tree limb, bunker embrasure, etc). Vehicles must be stationary for weapons to be fired at extreme range. High energy weapons (FGMP's and PGMP's) inflict quarter damage at extreme range.

Hand Grenades: Hand grenades may be thrown only at targets which are at medium range. Each character may throw one grenade per combat round, during which time he is considered to be evading. No expertise or range modifiers are used in determining hits, but the target modifiers of a 4 cm RAM HE grenade are used. Grenades use the Additional Damage from HE Rounds rule. This rule specifically applies to concussion/fragmentation grenades. Referees may introduce other varieties at their option.

THE ABSTRACT SYSTEM

The abstract mission resolution system is particularly valuable in resolving a mercenary mission involving large numbers of troops on one or both sides and in which player characters are not primary participants (serving as NCOs in an infantry battalion, for example).

The abstract system is conducted in two parts: *preparation* and *resolution.*

Mission Table

1	Commando
2	Cadre
3	Striker
4	Security
5	Security
6	Security

Element Engaged

1	down 3
2	down 3
3	down 2
4	down 2
5	down 1
6	down 1
7+	full

Unit Size Table

	Fire team	(4)
	Squad	(9)
0	Section	(19)
1	Platoon	(41)
2	Platoon	
3	Company	(127)
4	Company	
5	Company	
6	Battalion	(452)
7	Battalion	
8	Reinforced Bn	(635)
9	Brigade	(1500)

Firing Matrix

Firing Unit: **Target Unit:**

	Indiv:	*Fire Team*	*Sqd:*	*Sect:*	*Plt:*	*Co:*	*Bn:*	*Rein. Bn:*	*Bde:*
Indiv	E	-1	-2	-4	-6	-7	-7	-7	-8
Fire Tm	+4	E	-1	-2	-4	-5	-6	-7	-8
Sqd	+5	+1	E	-1	-2	-4	-5	-6	-7
Sect	+6	+2	+1	E	-1	-2	-4	-5	-6
Plt	+7	+3	+2	+1	E	-1	-2	-4	-6
Co	+8	+5	+4	+2	+2	E	-1	-2	-4
Bn	+9	+8	+6	+4	+3	+2	E	-1	-2
Rein. Bn	+10	+10	+8	+6	+5	+3	+1	E	-1
Bde	+11	+11	+10	+8	+7	+5	+3	+2	E

Encounter Type

-3	Own Surprised
-2	Own Attacking
-1	Own Attacking
0	Own Attacking
1	Own Attacking
2	Firefight
3	Firefight
4	Firefight
5	Firefight
6	Enemy Attacking
7	Enemy Attacking
8	Enemy Attacking
9	Enemy Attacking
10	Enemy Surprised

Fire Results Table

-2	No Casualties
-1	1%
0	1%
1	5%
2	5%
3	10%
4	10%
5	20%
6	20%
7	30%
8	40%
9+	50%

Personal Casualty Table

5%	3+
10%	4+
20%	5+
30%	6+
40%	7+
50%	8+

Preparation: Preparation consists of determining the most important characteristics of the two opposing forces. These characteristics consist of mission, tech level, size, and efficiency.

1. Mission: Roll once on the mission table (in the Hiring On section of Tickets) to determine if the players unit is on security, commando, or striker mission. For the opposing force, roll a six-sided die. If the result is 1-3 the opposing force is an indigenous military unit. On a roll of 4 - 6, it is another mercenary unit. In this case, roll again to determine its mission.

2. Tech Level: Roll a six sided die for the tech level of both forces. Apply the following DM's:

Mercenary unit (except cadre) – +6.
Cadre unit – +5.
Indigenous unit – +4.

3. Size: Roll one die and consult the unit size table. Apply the following DM's:
Commando unit – -1.
Striker unit – +1.
Cadre unit – +2.
Indigenous unit – +4.

The result on the unit size table will indicate the military unit employed by each force. The number in parentheses following the unit type is the number of combat effectives in the unit.This number will be used later in mission resolution. The listing for a squad is also included for mission resolution, even though it is impossible to initially field only a squad.

After determining size, the referee should record each unit's preservation level. The preservation level is 40% of the unit's effective strength. Thus, a 452 man battalion has a preservation level of 181. This means that the unit will surrender or withdraw from action after sustaining 181 casualties.

4. Efficiency: To determine a unit's efficiency, roll one die and add two to the roll for mercenary units other than cadre units. Add one for cadres; use the unmodified roll for indigenous troops.

Resolution: Mission resolution is conducted in a series of combats, each between part or all of the two opposing forces. Each such action will result in casualties to one or both forces. When one force suffers casualties equal to or exceeding its preservation level, it surrenders or withdraws, allowing the other side to complete its mission. Each combat is resolved in four steps.

1. Element Engaged: Determine the element engaged in the combat from each force by rolling a six sided die and applying the following DM's: commando or security mission – +2; indigenous troops – -2. The result will read out either as *full* (indicating that all the force is engaged) or *down N* with N being the number of levels lower than the size of the force the committed element represents. Thus, a battalion which received a *down 2* result would commit a platoon. A platoon which received a *down 3* result would commit an individual soldier.

2. Encounter Type: Roll one six sided die to determine the encounter type. Apply the following DM's: if own committed element smaller – +1; if enemy committed element smaller – -1; if own efficiency higher than enemy efficiency, DM + the difference; if enemy efficiency higher than own efficiency, DM - the difference; if own on security mission, DM +1; if enemy on security mission, DM -1; if own on striker mission, DM -1; if enemy on striker mission, DM +1. The type of

encounter will have a great effect upon the resolution of combat.

3. Combat Resolution: Combat resolution consists of rolling once on the fire results table to determine casualties. In a firefight or attack encounter, both sides will roll once to inflict casualties on the opposing force. In a surprise encounter the surprised side will not fire. A six sided die is rolled once to determine fire casualties, subject to several DM's. A DM is generated based on the relative size of the committed element as shown on the firing matrix. Firing units are listed on the left side while target units are listed across the top. The intersection of the two shows the appropriate DM. Thus, a battalion firing at a platoon would fire with a DM of +3, while the platoon would fire with a DM of -2. Two additional DM's are applied. A DM of -2 is applied to fire from the attacking unit. The difference in tech levels of the opposing forces is also applied as a positive or negative DM in every fire. Thus a tech level 7 unit firing on a tech level 6 unit would fire with a DM of +1, while the tech level 6 unit would return fire with a DM of -1.

Casualties read out as percentage losses by the engaged element. Fractional losses of .5 or more round up, while all others round down. For example, a section (19 men) receives 10% casualties, amounting to 1.9 men, rounded to 2.

4. Personal Casualties: If the force a player character is in suffers 5% casualties or greater in combat, there is a chance the player character will be wounded, or worse. The personal casualty table gives the number on two dice which must be rolled to avoid a wound. If the number immediately below the specified number is rolled, the player has been killed. If any number below that is rolled, the player has been wounded.

THE FREE-FORM SYSTEM

The free-form system of mission resolution is best used to resolve larger conflicts involving player characters. No precise rules can, or should, be given here, as much of the realism of the system derives from the on-the-spot interaction between the referee and the players.

Ironmongery

This section on equipment is designed to accomplish two things. First, it will give prices and descriptions of a variety of small arms, light support weapons, and miscellaneous personal equipment in a form similar to that used in Traveller. These are obviously only intended to be representatives of the type of equipment available at each tech level, and serve as a general guide to cost and lethality for the referee. Since players will occasionally encounter larger well-equipped forces, either in mercenary adventures or normal travelling, a second part of this section gives a brief overview of the general types of equipment in use at different tech levels. These include small arms, infantry support weapons, combat vehicles, and artillery.

PART I: EQUIPMENT

A. Small Arms:

Slug Throwers

The following weapons are standard military issue and become available at the stated tech levels. These weapons, as a general rule, cause casualties by propelling a metal slug at high velocities toward the target, causing damage on impact by kinetic energy.

Assault Rifle: A lighter and less expensive military version of the automatic rifle, the assault rifle fires a 6mm, 5 gram bullet at velocities of 900 meters per second. A magazine containing 30 rounds is inserted into the underside of the assault rifle, ahead of the trigger guard. Reloading takes one combat round, during which the firer is treated as evading. The weapon may either be fired automatically (four rounds per pull of the trigger) or semi-automatically (one round per pull of the trigger). The fire setting may be changed at the end of each combat round.

The assault rifle has an integral carrying grip/sight, and is generally provided with a sling as well. Belt fed versions are not available, and special sights may not be attached without considerable modification of the basic design.

Length: 850 mm. Weight, unloaded: 3000 grams (loaded magazine weighs 330 grams). Base price: CR 300 (loaded Magazine: CR 20). Tech level 7.

Advanced Combat Rifle: A progressive development of the assault rifle, the advanced combat rifle (ACR) fires either a 9mm, 5 gram high explosive (HE) bullet at 900 meters per second, or a 9/6mm, 3 gram discarding sabot (DS) bullet at 1200 meters per second. A magazine containing 20 rounds is inserted into the underside of the weapon behind the pistol grip. Reloading takes one combat round, during which the firer is treated as evading. The weapon may fired either automatically or semi-automatically (as with the assault rifle).

Standard equipment includes an electronic battlefield sight, incorporating both light amplification and passive IR, visual magnification, and a laser rangefinder which may also be used as a target painting device. The weapon is also gyroscopically stabilized during firing. A sling is provided, and the muzzle of the rifle includes an integral flash suppressor and adaptor for launching a 40mm RAM shoot-through grenade (see below).

Length, exclusive of grenade: 750mm. Weight, unloaded: 3500 grams (loaded magazine weighs 500 grams). Base price: CR 1000 (loaded HE Magazine CR 20, Loaded DS magazine CR 25). Note, due to the high per round cost, solid slug ammunition is often manufactured locally, at a base price of CR 15 per magazine. When firing slug ammunition, use the range modifiers of the ACR and the target modifiers and damage levels of the assault rifle. Extreme range, 1000 meters. Tech level 10.

Gauss Rifle: The ultimate development of the slug thrower, the gauss rifle generates an electromagnetic field along the length of the barrel which accelerates a 4 mm, 4 gram needle

bullet to velocities of 1500 meters per second. The round itself consists of a dense armor piercing core surrounded by a softer metal covering, ending in a hollow point, giving the round both high stopping power and a good armor piercing capability. Flight along the barrel is nearly frictionless, with spin stabilization imparted through magnetic bias.

A 40 round magazine is attached behind the pistol grip, and each pull of the trigger fires one, four, or ten rounds. The firing setting may be changed at the end of each combat round.

Standard equipment on the gauss rifle includes a battlefield sight similar to that used on the ACR, a RAM grenade adapter, gyrostabilization, and a sling. Reloading by replacement of an empty magazine or RAM grenade takes one combat round, during which the player is considered to be evading. Power is provided by a disposable power pack included in each magazine.

Length, exclusive of grenade: 750 mm. Weight, unloaded: 3500 grams (loaded magazines weigh 400 grams). Base price: CR 1500 (40 round magazine and battery pack: CR 30). Tech level: 12. Extreme range: 1260 meters.

Snub Pistol: The snub pistol is a low velocity revolver designed for use on shipboard and in a zero-G environment. It fires 10 mm, 7 gram bullets at velocities of 100 to 150 meters per second. No magazine is used, six individual cartridges being inserted into the revolver separately. Reloading takes one combat round, two combat rounds if the firer is evading. Standard rounds include a tranquilizer round, gas round, high explosive round, and a high explosive shaped charge round to defeat personal armor. The snub pistol is a standard shipboard security weapon generally loaded with five tranquilizers and one gas round.

More expensive pure combat versions of the snub pistol are available, generally in the automatic pistol configuration with extended magazines holding up to twenty rounds.

Length: 100 mm. Weight, unloaded: 250 grams (weight of six cartridges, regardless of type, is 30 grams). Base price for revolver: CR 150 (six cartridges, regardless of type, cost CR 10). Combat version costs CR 150. Loaded 20 round magazines weigh 125 grams and cost CR 40. Tech level 8.

Accelerator Rifle: Designed specifically for zero-G combat, the accelerator rifle fires a 6 mm, 5 gram bullet at an initial muzzle velocity of 100 to 150 meters per second which upon leaving the barrel is accelerated by a secondary propelling charge to velocities of 700 to 800 meters per second. Normally the rifle fires bursts of three rounds per pull of the trigger, but may be adjusted to fire single rounds at the end of any firing round. A fifteen round magazine is inserted in the bottom of the weapon in front of the trigger guard, and reloading takes one combat round.

Length: 800 mm. Weight, unloaded: 2500 grams (loaded magazine weighs 500 grams). Base price: CR 900 (loaded magazine costs CR 25). Tech level 9.

High Energy Weapons

The following weapons are classified as high energy weapons causing casualties by projecting beams of super-heated plasma at the target thus subjecting it to both thermal and kinetic energy.

Plasma Gun, Man Portable-12 (PGMP-12): The first light energy weapon (other than lasers), the weapon consists of a power pack carried on the firer's back, the weapon itself, and a flexible power link. The power pack powers a laser ignition system in the weapon itself which heats hydrogen fuel to a plasma state. The plasma is contained in the ignition chamber briefly and then released through a magnetically focused field along the weapon's barrel. The high initial velocity plasma jet is 2 cm in diameter but begins to dissipate immediately. Each power pack has sufficient energy to discharge 40 plasma bolts before recharging is necessary. Each pull of the trigger discharges one plasma bolt. Because of the considerable recoil, the PGMP-12 may only be fired every other combat round. Recharging requires four hours connected to a high energy source (such as a ship's power unit).

Length: 800 mm. Weight of weapon: 6000 grams. Weight of power pack: 3000 grams. Base price: CR 10000 (extra power packs: CR 2500, commercial cost to recharge: CR 50). Tech level 12. Extreme Range 750 meters.

PGMP-13: A high gain light plasma gun designed exclusively for use with battle dress. Of similar general configuration to the PGMP-12, the PGMP-13 may only be fired by an individual wearing battle dress and only when the firer is stationary and firmly braced in one of several standard firing positions. This allows the suit's normal strength enhancement units to function as a recoil carriage. Instead of a conventional stock, the PGMP-13 has a recoil cylinder termin-

ating in a computer link to the battle dress. The computer link engages when placed in the PGMP socket integral into the battle dress (placed over the upper right or upper left chest/shoulder). The weapon may not be fired unless the socket is engaged. Engagement projects crosshairs on the faceplate for targeting. The weapon may be fired every combat round. The power pack is a small fusion reactor with effectively unlimited fuel for combat purposes (but requires periodic refueling and routine maintainance every 24-36 hours, depending on amount of use).

Length: 900 mm. Weight of weapon: 900 grams. Weight of power pack: 7000 grams. Base price: CR 65000 (extra power packs: CR 50000; refueling: CR 20). Tech level: 13. Extreme range: 1000 meters.

PGMP-14: The final development of the light plasma gun, the PGMP-14 incorporates a gravitic field generator which enables personnel not in powered armor both to carry the weapon and to fire it, since the weapon's computer system automatically biases the field to provide near total recoil compensation. It is otherwise similar to the PGMP-13 in performance.

Length: 800 mm. Weight of weapon: 9000 grams (50 grams with field generator on). Weight of power pack: 1600 grams (90 grams with field generator on). Base price: CR 300000 (extra power pack: CR 250000; Refueling: CR 50). Tech level: 14. Extreme range: 1000 meters.

Fusion Gun, Man Portable - 14 (FGMP-14: Similar in design and function to the PGMP-13, the FGMP-14 differs only in that it contains the plasma slightly longer until a fusion reaction begins to take place. The weapon is somewhat more powerful than a plasma gun, and may only be used by individuals wearing battle dress.

Length: 900 mm. Weight of weapon: 1000 grams. Weight of power pack: 9000 grams. Base price: CR 100000 (extra power packs: CR 65000; Refueling: CR 50). Tech level:14. Extreme range: 1500 meters.

FGMP-15: Incorporating a gravitic field generator similar to that used on the PGMP-14, with a weapon system similar to that of the FGMP-14, the FGMP-15 is the most powerful man-carried direct fire weapon covered in these rules.

Length: 800 mm. Weight of weapon: 1000 grams (50 grams with field generator on). Weight of power pack: 2000 grams (110 grams with field generator on). Base price: CR 400000 (extra power pack: CR 300000; Refueling: CR 70). Tech level 15. Extreme range: 1500 meters.

B. Support Weapons

The following weapons cover a small selection of representative support weapons, both man-carried and vehicle mounted. Heavy Weapons skill is still needed to efficiently operate them.

Slug Throwers

Slug throwers of this class are heavier and more powerful versions of small arms.

Light Assault Gun (LAG): Essentially a heavy rifle, the LAG fires a 20 mm, 30 gram bullet at velocities of 400 to 500 meters per second. A magazine containing 5 rounds is inserted into the underside of the weapon, ahead of the trigger guard. Reloading takes one combat round, during which the firer is treated as evading. One round is fired per pull of the trigger. Ammunition includes HE, flechette, and 20/9 mm discarding sabot rounds.

The LAG is provided with a sling to assist carrying. Due to the weight and recoil of the weapon, individuals with a strength of less than 9 (unless wearing battle dress) suffer a DM of -2 when firing the LAG.

Length: 900 mm. Weight, unloaded: 4000 grams (loaded magazine weighs 500 grams). Base price: CR 600 (loaded magazine: CR 20). Tech level 8.

Light Machine Gun (LMG): A heavier belt fed version of the automatic rifle, the LMG fires a 6 mm, 5 gram bullet at velocities of 900 meters per second with a practical rate of fire of 200 rounds per minute (50 rounds per combat round). Ammunition is provided in 100 round belts. Reloading requires three rounds if the weapon is manned by a single individual, one round if a loader is present. If a loader is present, he may link two 100 round belts to form a 200 round belt on the spot. This may not generally be done ahead of time as each belt is carried in its own ammo box. Linked 200 round belts are often provided ahead of time if the weapon is emplaced in a defensive fieldwork or is vehicle mounted.

Each pull of the trigger fires a 10 round burst, up to five of which may be fired in any one combat round. Each burst may be directed at a different target, provided all are within a 45° firing arc. If more than 2 bursts are fired per combat round, there is a chance that the LMG will overheat and jam. Roll 2D 13+ to jam, DM +1 per extra burst fired, with DM's cumulative and carried over to successive firing rounds. Thus, firing four bursts would cause a DM of +2. Firing four bursts the next combat round would cause a DM of +4. Accumulated DMs are reduced by one for each turn in which the LMG is not fired. If the weapon jams, roll 2D 10+ to clear it, DM +1 per level of Heavy Weapons skill. Roll to clear the jam once per combat round.

The LMG is provided with a bipod, and generally must be fired while prone with the bipod extended, although the weapon can also be fired from any convenient rest (bunker embrasure, log, etc). Tripods may be purchased, use of which allows the weapon to fire at targets at extreme range and extends the weapon's arc of fire to 90°.

Length: 1100 mm. Weight, Unloaded: 5500 grams (100 round belt: 2500 grams; tripod mount: 3500 grams). Base price: CR 1200 (100 round belt Cr 120, tripod CR 250). Extreme range (when tripod mounted): 1000 meters. Tech level 6.

(Note: at tech level 5, a more primitive version of the machinegun becomes available. This version is water cooled, weighs 6000 grams without tripod, must be used with a tripod, may only fire up to four bursts per combat round, and may jam if more than one burst is fired per combat round.)

Auto-Cannon: A linkless feed, fully automatic weapon, the auto-cannon fires a 100 gram round at velocities of 1200 meters per second with a practical rate of fire of 200 rounds per minute. Ammunition is provided in 200 round drums, two of which may be attached to the weapon at any one time. Two different ammunition types may be used, one in each drum, and drum selection may be changed at the conclusion of each combat round. Replacing an empty ammunition drum requires four combat rounds. If a loader is present, this may be done while the weapon is being fired from the other drum. Ammunition provided includes HE, and 20/9 mm discarding sabot. Every tenth round in an HE drum is an incendiary round.

The weapon fires 10 round bursts, up to 5 of which may be fired per combat round. Bursts may be directed at different targets within the weapon's arc of fire. The weapon is available in three different configurations: turreted, towed, and pintel mount. The turreted version has a 180° arc of fire while the other versions have a 90° arc of fire. Turreted and pintel mounted weapons must be mounted on vehicles, while the towed version is provided with a cruciform platform for firing emplaced.

Length: 1500 mm. Weight, unloaded: 400 kilograms (turret), 300 kilograms (pintle mount), 1000 kilograms (towed). (200 round drum, 100 kilograms). Base price: CR 12000 (turret), CR 10000 (towed), CR 7500 (pintle mount). (200 round drum, CR 1000). Extreme range: 2000 meters (except pintle mount, 1000 meters). Tech level 8.

(Note: a variety of more primitive automatic cannons ranging from 20 mm to 60 mm are available beginning with tech level 6, generally more bulky and less effective.)

Very Rapid Fire (VRF) Gauss Gun: A cryogenically cooled rapid fire support weapon, the VRF gauss gun fires a 4 mm, 4 gram needle bullet to velocities of 4500 meters per second with an effective rate of fire of 4000 rounds per minute. Firing operation is similar to that of the gauss rifle. The weapon fires 100 round bursts, up to 10 of which may be fired in any one combat round. Each burst may directed at a separate target within the firing arc of the weapon. The weapon is only available in the turreted configuration, and requires special modifications to the vehicle carrying it. The turret normally gives a 180 degree arc of fire, although a more sophisticated turret (costing an additional CR 50000) provides a 360 degree arc of fire.

If more than four bursts are fired in a turn, there is a chance of a stoppage. Roll 2D 12+ for a minor stoppage and 15+ for a major stoppage. (Roll only once with the die roll indicating no stoppage, minor stoppage, or major stoppage.) Apply a DM of +1 per additional burst fired, and -1 per level of Heavy Weapon skill. If a minor stoppage develops, the weapon may not fire for from 2 to 12 combat rounds (roll two dice, and subtract the gunner's expertise from the total). If a major stoppage develops, the weapon may not fire again until major maintenance has been performed.

Ammunition is provided in 1000 round hoppers, which are loaded directly into the weapon's ammunition bay. The ammunition bay of a VRF gauss gun vehicle will generally hold up to 30000 rounds although this will vary somewhat with vehicle size. Reloading is not necessary until all rounds in an ammunition bay have been expended. Reloading generally takes in excess of one hour.

Grenade Launchers

Grenade launchers project medium caliber grenades at targets, relying on the destructive power of the grenade's warhead, rather than the kinetic energy of the round impacting against the target.

Early Grenade Launcher: Functioning on a high/low pressure propulsion system, the early grenade launcher fires a 40 mm grenade to ranges of 500 yards. The early grenade launcher resembles a break open shotgun, carrying only one round in the weapon. Reloading requires one combat round, during which the firer is treated as evading. Early grenade launchers fire only HE rounds, using the semi-automatic fire modifiers of the RAM grenade, but causing only 6D damage. They are incapable of reaching to extreme range (ie beyond 500 meters).

Length: 750 mm. Weight, unloaded: 3000 grams (40 mm grenade weighs 200 grams). Base price: CR 200 (10 round grenade bandolier costs CR 50). Tech level 7.

(Note: At tech level 6, 7, and 8 a variety of specialized anti-tank grenade and rocket launchers are also in use, ranging from one-shot disposable grenade launchers to tube launched rockets.)

Auto-Grenade Launcher: Essentially an upgrading of the early grenade launcher for vehicular use, the auto grenade launcher fires 40 mm grenades at a practical rate of fire of 100 rounds per minute. The weapon is available in two configurations: pintel mount and turret mount. The turret mount version is fed from a 200 round ammunition bay, while the pintel mount is fed from a 16 round drum. Reloading of the ammunition bay requires fifteen to twenty minutes. Replacement of an empty drum requires three combat rounds if only a single gunner is manning the weapon, one combat round if a loader is present.

Each pull of the trigger fires a four round burst, up to six of which may be fired per combat round (subject to ammunition supply). Each burst may be targetted on a separate target within the firing arc of the weapon. Pintle mounts have a firing arc of 90 degrees; turrets have an arc of 180 degrees. Auto grenade launchers fire only HE Grenades, using the automatic fire modifiers of the RAM grenade, but only cause 6D damage. Fire beyond 500 meters is not possible.

Length: 900 mm. Weight, unloaded: 6000 grams (each 40 mm grenade weighs 200 grams; 16 round drum weighs 3500 grams). Base price: CR 1400 (crate of 20 grenades for the ammunition bay, CR 100. 16 round drum CR 85). Turret installation costs CR 500. Tech level 7.

Rocket Assisted Multi-purpose (RAM) Grenade Launcher: Incorporating rocket assistance to give the round superior range and flat trajectory capability, the RAM grenade is fired both from special launchers and as rifle grenades from the ACR and Gauss rifle. The RAM grenade launcher fires 40 mm RAM grenades at initial velocities of 150 to 200 meters per second, the grenade's booster charge accelerating it to velocities of 500 to 600 meters per second. A three round magazine is inserted in the top of the weapon behind the pistol grip. Each pull of the trigger fires one grenade. Reloading requires one combat round, during which the firer is treated as evading. Rounds available include HE, flechette, and high explosive armor piercing (HEAP). HEAP rounds have followup sensors to enable multiple hits.

The weapon includes an integral electronic sight with both passive IR and light amplification, as well as a laser painting and range finding device. A sling is provided to assist carrying. RAM rifle grenades are similar, although not interchangeable, with ammunition for the grenade launcher. Grenades fired from both rifles and from the launcher use the semi-automatic DM's of the RAM grenade, and have the same extreme range listed below.

Length: 900 mm. Weight, unloaded: 4000 grams (40 mm RAM grenades weigh 450 grams each 3 round clip weighs 1400 grams). Base price: CR 400 (3 round clip or 3 round bandolier of rifle grenades costs CR 50). Extreme range: 1000 meters. Tech level: 8.

RAM Grenade Auto-Launcher: Essentially a modified version of the earlier grenade auto-launcher, the RAM auto-launcher is available as either a turreted or pintel mount. The turreted version is fed by two 150 round ammunition bays, the pintel mount by two 20 round drums. In both cases the two feed systems are generally loaded with different ammunition types, and the gunner may select which ammunition type will be used in each burst. Reloading times are the same for the earlier auto-launcher, as are rates of fire.

Length: 900 mm. Weight, unloaded: 6500 grams (each 20 round drum of RAM grenades weighs 9000 grams). Base price: CR 2200 (20 round drums CR 350). Turret installation costs CR 700. Tech level: 8. Extreme range: 1000 meters.

Miscellaneous Equipment

It is obviously impossible to cover all possible equipment used in military actions in the period spanned by the tech levels covered in Traveller. A representative sample have been given of light man-carried and vehicle mounted weapons. The following are a few selected additional items with brief descriptions and prices covering a variety of additional possible acquisitions.

Hand Grenades: The modern hand grenade appears at tech level 5 and is generally available thereafter. Hand grenades may only be used against targets at medium range. One grenade may be thrown per combat round, during which the thrower is treated as evading. A player may elect not to evade, in which case a DM of +1 to hit is applied. No specific weapon skill is required to use grenades, but a required and advantageous dexterity level is noted on the weapons table. A basic throw of 7+ to hit is required, with no range modifiers used and the target modifiers of the LAG flechette round used. Additionally, the following tech level modifiers are used: Tech level 5 & 6: DM -2 (4D damage). Tech level 7 & 8: DM -1 (6D damage). Tech level 9+: DM 0 (8D damage). All grenades are thown at a single target and use the Additional Damage from HE Rounds rule.

All grenades weigh 1 kilogram and cost CR 200 for a case of 20. In addition to assault grenades (covered above) a variety of smoke grenades are available for signalling and obscuration, and specialized grenades (gas, anti-tank, etc.) are sometimes used. Referees must devise specific rules for the use of specialized grenades.

Flak Jacket: A flak jacket is a less expensive military version of ballistic cloth armor, generally covering only the torso and groin. It is available at Tech level 7, costs CR 100, and is treated as Cloth +1, except where that modification would cause it to be less effective than Mesh, in which case it is treated as unmodified Cloth.

Combat Environment Suit: A neck to toe air-tight loose fitting suit constructed of ballistic cloth generally worn open at the neck and wrists, the combat environment suit can be sealed by donning gauntlets and a clear flexible plastic head bag, thus giving complete protection against most chemical agents, tainted atmospheres, biological agents, and a moderate defense against radiation. Heat buildup in the suit is handled by a simple cooling system, solid state and woven into the garment, which eliminates all IR signature except from the exposed face, hands, and heat exhaust. The heat exhaust is a very pronounced IR source, but it can be dampened to nil by use of a chemical chill can, easily inserted into the cooling system by the soldier. Each chill can will eliminate exhaust signature for between 45 minutes and 2 hours, depending on outside temperatures and exertion. At the end of the time, the spent chill can is disposable. Total reduction of IR signature is achieved by the gauntlets and head bag mentioned above. Reduction of IR signature will prevent long range detection of personnel by IR equipment, and will defeat IR homing anti-personnel rounds, but will not prevent detection in the immediate vicinity of the enemy, as each soldier will appear as a very visible dark spot against the overall IR background of foliage, landscape, etc.

The combat environment suit is treated as Cloth -1. It is available at tech level 10, and costs CR 1000. At tech level 12 the chameleon suit becomes available for CR 1500, which selectively bleeds heat to match the background IR level, effectively rendering the soldier invisible to IR sensors.

Combat Armor: Similar in construction to battle dress, combat armor provides comparable protection and (unlike the combat environment suit) may be pressurized for use in vacuum or conditions of extremely low air pressure. Combat armor dampens heat signature in the same fashion as the combat environment suit. Combat armor is not powered and thus troops so equipped may not fire high energy weapons designed exclusively for use with battle dress (PGMP-13 and FGMP-14).

Combat armor is available at tech level 11, costs CR 20000 and is treated as battle dress when fired at. At tech level 12, combat armor is available in chameleon configuration for CR 25000.

Radio Jammers: First available at tech level 6, made portable by tech level 7-8, and increasingly sophisticated thereafter. Available in short range, compact versions (man-portable, CR 20000) with ranges of up to 10 Km, and ranging up to long range versions (emplaced or shipmounted, 1-5 tons, CR 50-200000) capable of jamming large areas of a planetary surface from orbit. Most jammers are not effective against tight beam laser communication.

Tac Missiles: Described elsewhere, the more primitive tac missiles cost CR 200 with launcher systems costing CR 1000. Increasing sophistication will push the price up to CR 1000 per missile and CR 10000 per launcher system at tech level 12. Launcher systems weigh from 50 (tech level 7) to 1000 kilograms (tech level 12+) with missiles ranging from 10-100 kilograms.

Recon Drones: About the size of a ground car, small recon drones carry a wide array of radar and visual sensors and are piloted from a remote location. Most are grav vehicles, and thus highly maneuverable. Available at tech level 9 and above. Base price CR 2000000. More expensive versions may be obtained with hardpoints for weapons mounts.

Computer Fire Control System: Artillery fire control is greatly enhanced by the use of computerized systems First available at tech level 8, systems cost CR 6000000 with man portable terminals costing CR 10000 each. Prices for the basic system at each tech level are half the amount of the ship's basic computer at that level. Thus, at tech level 13, the basic system would cost CR 30000000 (the same as half the model 7 computer). Cost of terminals remains constant, with each tech level's terminals progressively refined. The basic system weighs the same as the ship's computer model available at that level, and is generally carried in its own vehicle.

Light Air defense Missiles: Disposable one shot surface to air missiles are available at tech level 8 and above. Each weighs between 10 and 25 kilograms. Base price for the tech level 8 missile is CR 20000 and can range up to CR 1000000 at higher tech levels. Even the best of the missiles has only a moderate lethality against aircraft of its own tech level, but is generally very lethal against more primitive aircraft. (Generally, but not always. A tech 8 heat seeking missile is virtually worthless against a tech 6 piston powered aircraft).

Map Box: Available at tech level 9 and above, the map box is a compact (250 x 250 x 10 mm, expanding to 1000 x 1000 x 10 mm when opened, weighing 1 kilogram) storage system for computer generated maps of a world. Scale may be adjusted. Most inhabited planets have insert chips available for CR 150. When not available, two orbital sweeps of the world are required to obtain the necessary photographs to construct a map chip. Blank map chips are available for CR 30. Base price of the map box is CR 2500.

Battle Computer: Available at tech level 9 and up, the battle computer is a man-portable system (backpack weighing 15-20 kilograms) capable of collating intelligence estimates and providing approximations of enemy forces. It can be linked to untended ground sensors via communications links to increase its potential, and can provide visual displays overlaid on maps when interfaced with a map box. When linked to a communicator, it can direct laser communication beams at one of several preprogrammed targets (such as relay satellites) and automatically switch to back-up relays if primaries are jammed or rendered inoperable. Base price is CR 100000.

Nuclear Dampers: A common term, dampers units actually may be used to increase or decrease the stability of atomic nuclei. Projecting from two separate stations, the intersection of the two transmitted broadcasts produces a series of nodes and anti-nodes. In the area of the nodes, the strong nuclear force is enhanced, making the nucleus more stable. In the area of the anti-nodes, the strong nuclear force is depressed, making the nucleus much less stable. Anti-nodes are focused on incoming nuclear warheads, causing them to shed neutrons at low energy levels, rendering the warhead inoperable. The range of the damper field is proportional to the distance separating the two projectors. At tech level 13, the ratio is 100:1 (thus a separation of 50 meters would yield a range of 5 kilometers). At tech level 14 and above, the ratio is 1000:1. Battlefield damper batteries customarily consist of two projector vehicles (CR 20000000 each) and a target acquisition/fire direction vehicle (CR 75000000). The latter may be omitted if a wide array of target acquisition devices and a computerized artillery fire control system is available as a substitute. Smaller damper field units are available to transport fissionable material with a short half life both to lengthen the half life and reduce radiation. Such units focus the nodes on the material carried, and weigh from 1 to 10 tons (cost, CR 1000000 for the 1 ton version plus CR 100000 per additional ton; capacity is 3 tons of material per ton of equipment weight). The damper is later developed into a disintegrator weapon, beginning at tech level 16.

Anti-laser Aerosols: The first anti-laser aerosols are available at tech level 8 and provide temporary protection (eight combat rounds) for a fire team or vehicle sized target from laser fire, target designation, or accurate range-finding. Each such aerosol bottle weighs 1 kilogram and costs CR 10. At tech level 9, multi- wavelength lasers are capable of defeating aerosol and smoke obscuration to a large degree (weapons do half damage, conventional weapons using range finders or target painting fire with an additional DM of -2). At tech level 10, prismatic aerosols are introduced which provide complete protection from all lasers for four combat rounds for a fire team or vehicle sized target. Weight and cost si the same as for conventional

rounds for a fire team or vehicle sized target. Weight and cost are the same as for conventional aerosols. For conventional and prismatic aerosols, protection is only provided for one combat round for a moving target. Note that wind will reduce the effectiveness of all aerosols, depending upon its velocity.

Notes on Prices and Tech Levels

The following corrections to the prices in Traveller should be implemented.

All price changes consist of lowering the price of selected transportation systems by one or more decimal places. Thus, a vehicle listed as costing CR 40000 and noted as being reduced one decimal place will cost CR 4000. Ground Car (-1), ATV (-2), AFV (-2), Hovercraft (-1), Primitive Biplane Aircraft (-1), Helicopter (-1), Air/raft (-1), Grav Belts (-1). Additionally, Mesh and Cloth should be reversed on the tech level table (Book 3, p. 10).

In general, prices will tend to drop by 5-15% at each tech level after the level of introduction of an item, with examples of the item sold at the regular base price generally incorporating improvements or representing deluxe models. Most items of a military nature can, on worlds with a population level of 9+, be purchased in quantity at a discount. While discounts vary from world to world, a general average provides discounts of 20%, 40% and 60% at volume. Small arms and support weapons must be purchased in lots of 20 (a case) to receive the 20% discount, lots of 100 to receive the 40% discount and lots of 1000 to receive the 60% discount. Vehicles must be purchased in lots of 10 to receive the 20% discount, lots of 50 to receive the 40% discount, and lots of 100 to receive the 60% discount. Ammunition must be purchased in lots of 500 units (clips, drums, cases, etc.) to receive the 20% discount, lots of 1000 units to receive the 40% discount, and lots of 10000 units to receive the 60% discount.

PART II: OVERVIEW OF EQUIPMENT

Infantry Small Arms and Personal Equipment:

Tech level 5: The standard small arm is the bolt action rifle, similar to the rifle described in Traveller Book 1, but with a lower rate of fire. Gas masks are standard, as are steel helmets. Steel mesh body armor is available, but its bulk and weight make it impractical for all but a few special purposes. Hand grenades are in wide use.

Tech level 6: The bolt action rifle remains the standard infantry small arm, generally superceded by the semi-automatic rifle throughout the period. The carbine and SMG achieve wide military use. Primitive rifle grenades are widely used, some with limited anti-tank capability.

Tech level 7: The main infantry weapon becomes the assault rifle. Ballistic cloth flak jackets are introduced, but due to expense, do not yet enjoy universal use. The rifle grenade passes from use, replaced by a variety of light support weapons.

Tech level 8: The assault gun remains standard, but is supplemented by the laser carbine. The laser carbine has limited weapons potential, but is used primarily as a target designator and range finder. Ballistic cloth flak jackets are in universal use.

Tech level 9: The more powerful and robust laser rifle replaces the laser carbine and has a much greater lethality. Most lasers are multi-color to defeat smoke and aerosol obscuration. Laser ablative clothing is available for infantry, although expense precludes universal use. In-helmet communications, light amplification, and passive IR detection equipment are available, although again not universally in use.

Tech level 10: The basic infantry weapon becomes the advanced combat rifle capable of firing a 4 cm RAM grenade. Personal uniform consists of the combat environment suit, and all helmets incorporate radio communication gear and IR/light amplification night vision sensors.

Tech level 11: Combat armor is available which can be pressurized for operation in a vacuum, or hostile environment, but expense precludes general issue.

Tech level 12: The gauss rifle is introduced in limited numbers as a sniper weapon, expense precluding general issue. The individual grav belt is occasionally used for scouting purposes.

Tech level 13: All infantry is generally now in combat armor and equipped with gauss rifles. Battle dress is issued to selected assault troops.

Tech level 14: A higher proportion of the infantry is equipped with battle dress, and the standard small arm for such troops becomes the PGMP-13.

Tech level 15: Most infantry is by now equipped with battle dress and has converted to the FGMP-14. The gauss rifle remains the standard arm of non-powered troops.

Infantry Support Weapons

Tech level 5: Both the machine gun (as opposed to earlier gatling and volley guns) and the trench mortar are introduced as the primary infantry support weapons. Both are bulky and tend to be concentrated in separate units. Mortars fire only HE and smoke rounds.

Tech level 6: Both the light machine gun and the automatic rifle are introduced as squad level support weapons. Lighter mortars are available to company and platoon sized units and are capable of firing chemical rounds. The increase in the importance of armored vehicles leads to the introduction of a variety of anti-tank infantry support weapons, the most important of them being the one-shot disposable anti-tank grenade launcher and the individual loaded anti-tank rocket launcher. Both weapons rely on the hollow charge principle (referred to in this book as high explosive armor piercing or HEAP). Light, low velocity field guns are used at the regimental/brigade level as infantry support pieces, firing HE, smoke, and chemical rounds. Towards the end of the period HEAP rounds are also added.

Tech level 7: The first battlefield guided tactical missiles (tac missiles) are introduced.They have a maximum range of about 2-3 kilometers, are equipped with a HEAP round, and are flown to the target remotely by the gunner. In the early part of the period, recoilless weapons are in wide use, but are soon superceded by tac missiles and improved anti-tank grenade launchers. For close support the early grenade launcher is introduced. Mortars almost completely replace infantry support guns.

Tech level 8: The RAM grenade replaces the early grenade launcher and most specialized anti-tank grenade launchers. Mortars are now capable of firing cluster bomblet rounds. The tac missile's guidance system now requires that the operator track only the target, not that he guide the missile. Advanced forms of the tac missile incorporate laser target designation.

Tech level 9: Tac missiles now range up to 4 kilometers and incorporate follow-up IR sensors to achieve successive hits on composite armor. RAM grenades are also equipped with follow-up sensors. Mortars incorporate early ballistic adjustment to confuse counter-battery radar equipment.

Tech level 10: Tac missiles range to 5 kilometers and incorporate teleguidance. Warheads for tac missiles are expanded to include HE, flechette, and chemical capability. Mortars are now capable of delivering small nuclear warheads, but expense, storage, and doctrine make this a non-standard round.

Tech level 11: Tac missile warheads now include small nuclear weapons, range to 6 kilometers and incorporate inertial target memory and homing. LMG's have almost totally disappeared as support weapons. Mortars are almost completely replaced by inexpensive disposable remotely triggered rocket launcher (MRL) units. Representative units are 1 meter square and hold around 100 6 cm rockets. Each launcher can be manually placed or airdropped, and upon activation is brought into register by the battery fire control center. Since the launchers are disposable, no effort is made to confuse counter-battery radar. HE, smoke, cluster bomblets, HEAP, and HEAP follow-up rounds are available.

Tech level 12: The PGMP-12 is introduced as a high energy squad support weapon, in many units replacing the grenade launcher. Most other support is provided by gunships integrated at the squad and platoon level.

Tech level 13: The PGMP-13 is introduced as a support weapon in battle dress equipped units. The throw-away missile is introduced, incorporating televisual guidance and visual as well as inertial target location.

Tech level 14: At the squad level the PGMP-14 replaces the PGMP-12, while battle dress equipped units receive the FGMP-14 in place of the PGMP-13.

Tech level 15: The FGMP-15 becomes the standard squad support weapon.

Artillery Weapons

Tech level 5: Field artillery included a variety of breechloading pieces between 7 and 40 cm in bore diameter, with most weapons under 15 cm being of the quick firing (recoil cylinder) variety. Most artillery is horse (or equivalent) drawn, fire control is primitive, and counter-battery target acquisition is virtually non-existant. Ammunition consists of HE, smoke, and chemical rounds.

Air defense artillery systems are almost completely improvised, consisting of machine guns and a few light field guns adapted for high angle fire. Target acquisition is entirely visual.

Specialized anti-tank artillery does not exist, although light field guns are widely used in this role when necessary.

Tech level 6: All tube weapons are now quick firing with field artillery in the 7-10 cm range, medium artillery in the 12-15 cm range, and heavy artillery in the 15+ cm range. The basic rounds remain HE, smoke, and chemical. The first crude multiple rocket launchers are introduced. Toward the end of the period the large strategic missile is introduced, although it is not capable of carrying a nuclear warhead. Fire control and forward observation and adjustment are improved, with counter-battery target acquisition based on primitive sound and flash ranging. Air defense artillery now consists of a wide variety of specially designed guns of all calibers from 2 cm up. Radar is available for target acquisition, but it is bulky, generally static, and not available for fire direction. Anti-tank artillery consists of high velocity guns in the 3-9 cm range generally firing solid shot.

Tech level 7: Field artillery consists of weapons in the 10-15 cm range, medium artillery of weapons in the 17-20 cm range, and heavy artillery from 20 cm up. Heavy artillery is capable of delivering nuclear warheads, as can strategic missile systems. A variety of field artillery missile systems with ranges of up to several hundred kilometers are introduced capable of delivering nuclear warheads, HE, or chemical payloads. Most artillery is self-propelled on tracked chassis. Counter-battery work is assisted by radar and by mechanically assisted sand and flash ranging. Cluster bomblet munitions are available for artillery and flechette rounds are used for close support. The MRL is upgraded with provisions for greater mobility, accuracy, and faster reloading. Air defense artillery now includes a variety of radar directed guns on self-propelled chassis for close defense, and the air defense missile is introduced for long-range and high altitude protection. Air defense missiles tend to be bulky and incorporate initial radar guidance with final intercept generally being accomplished by IR sensors. Special anti-tank artillery is gradually phased out and replaced by tac missiles.

Tech level 8: Weapons of 15 cm and larger can now deliver tactical nuclear devices, and guided rounds are available which home on laser painted targets. Towards the end of the period, teleguided munitions are introduced. The first computer fire control system is introduced with remote terminals placed with forward observers to speed response time and flexibility. Air defense artillery now includes man portable air defense missiles, all heat seekers. Larger air defense missiles are more compact and lethal, and are available for forward area defense on self-propelled chassis. Rapid fire radar-directed auto-cannons provide most point defense.

Tech level 9: Heavy conventional artillery is gradually replaced by mass driver (MD) guns, large magnetic linear accelerators which, although requiring large amounts of power, are capable of long range, high muzzle velocities, and rapid rates of fire. All artillery munitions are capable of pre-programmed deviations in ballistic paths to confuse counter-battery radar. Course deviation programs are provided by more sophisticated computer fire control systems. Counter-battery radar itself is upgraded to allow multiple simultaneous tracks and graceful load-shedding capabilities, making it virtually impossible to overload by massed fires. Improved sound and flash ranging arrays are available, and are supplemented by satellite surveillance, all integrated by the fire control system. Man-portable air defense missiles now have an effective range of 4 kilometers and a head-on engagement capability. Larger missile systems incorporate televisual guidance. Ladar (laser based radar) replaces radar.

Tech level 10: Field artillery is now entirely MD guns or MRL's, in both cases self-propelled on high speed grav vehicles, and with firing controlled completely by computer fire control systems. In vertical envelopment situations, artillery support is provided exclusively by remote controlled, disposable, static MRL units dropped by air. Man-portable air defense missiles incorporate teleguidance and range to 5 kilometers. In point defense the conventional gun is partially replaced by the plasma A gun on large grav mounts. While self-propelled, the unit must be landed and deployed for firing due both to the high energy usage and recoil associated with firing. Long range missiles are supplemented by maser units (coherent microwave projectors) designed to cause pilot casualties rather than structural damage. The premier point defense weapon becomes the VRF gauss gun, with much medium range work done by beam and pulse gatling lasers.

Tech level 11: Field artillery is increasingly supplanted by remotely piloted drone missiles, although conventional MD guns and MRL's are still in wide use. The plasma B gun is now in use in the air defense role, with lighter A gun mounts supplementing the point defense capabilities of VRF gauss gun units. All fire control systems are improved by direct verbal communication by forward observers and fire direction officers with the system. The more mobile A gun is now

very often used in a direct support role as well as in its previous role of air defense weapon.

Tech level 12: Both the plasma C gun and the heavier fusion X gun are introduced in the air defense and general direct fire role. The now highly mobile A gun completely supplants the VRF gauss gun in the point defense role. Conventional artillery is almost completely supplanted by drone missiles.

Tech level 13: The first damper fields are introduced, enabling limited neutralization of incoming nuclear warheads. The fusion Y gun is introduced in the direct fire role, with the light plasma B gun taking over point defense. Gravitic compensators enable the heaviest fusion guns to fire on the move, and long-range direct fire by fusion guns executing popup maneuvers becomes standard.

Tech level 14: Much more sophisticated dampers enable virtually complete protection of operational areas from nuclear warheads. The fusion Z gun is introduced in the direct fire role.

Tech level 15: The primary direct fire weapon becomes the battlefield meson accelerator. Although much smaller than meson accelerators used in planetary defense, it is still by battlefield standards large, bulky, and extremely lethal. By now, the standard point defense and direct support weapon becomes the fusion Y gun. Drone missiles enjoy an increase in use as the appearance of meson accelerators linked to an increasingly sophisticated computer target acquisition and fire direction system makes the long-range popup increasingly impractical.

Military Vehicles

Tech level 5: The first armored vehicles are introduced. Tanks are slow and unreliable. Armor is proof against fragmentation and most small arms, and some protection against very small HE rounds (grenades and guns below 4 cm), but most field guns are capable of easily dealing with them. Armored cars are also available, with armor providing partial protection against small arms and fragmentation. Tanks carry either machine guns or low velocity guns in the 2-5 cm range. Armored cars carry only machine guns. Armor is of machinable steel.

Tech level 6: Tanks are considerably more reliable and have a top speed of around 50 kph. Armor is hardened, and face-hardening and spaced armor are itroduced in the middle of the period. Main armament consists of high velocity guns in the 5-9 cm range. Armored cars have a top speed of around 90 kph and personnel carriers (usually half-tracked) are introduced with light armored protection for infantry passengers.

Tech level 7: Tanks now incorporate vertical stabilization of the gun to enable shorter halts for firing. Main armament is now in the 7 - 12 cm range. Specialized HEAP and discarding sabot rounds are available for anti-armor work, and flechette rounds are available for anti-personnel use. In the latter part of the period the first laser range finding systems and primitive ballistic computers appear. Armored cars generally mount guns in the 5-9 cm range. Armored personnel carriers provide overhead protection and are generally fully tracked. Many APC's mount armament comparable to that of armored cars, or tac missiles. Some tanks mount gun/launcher systems in the 15 cm range capable of firing either low-velocity conventional rounds or tac missiles. Most vehicles mount IR night vision equipment, with some using light amplification.

Tech level 8: Both horizontal and vertical stabilization are in use allowing firing of main armament of tanks at speeds up to 40 kph. Top speed for tanks is about 90 kph, with armored cars up to about 120 kph. Tank main armament is in the 10-15 cm range with more sophisticated battle computers. Many guns are smooth bores for firing high velocity fin stabilized rounds. Toward the middle of the period the first laser tanks are introduced, mounting a bulky cryogenically cooled pulse gatling-laser in a non-rotating mount. Ablative anti-laser vehicle armor is available, as are anti-laser aerosols, although the latter are expensive. Most laser tanks mount coaxial auto-cannons to scrub ablative armor off target vehicles, thus limiting the effective range of the laser to that of the auto cannon. Composite armor with a high resistance to penetration is available, although its expense initially limits its use to main battle tanks (MBT). A special piggy-back HEAP round is capable of achieving multiple hits on the same location, giving a limited composite armor-defeating capability, but the primary means of knocking out MBT's becomes direct hits from high caliber HE rounds resulting in crew deaths from concussion. The air/raft comes into limited military use as a utility transport craft.

Tech level 9: The main armament of all MBT's is now stabilized in all planes and incorporates automatic range-target adjustments from the ballistic computer. Main armament remains in the 12-15 cm range, mostly hyper-velocity smooth bores, with the capability of launching small nuclear warheads, although expense, round storage, and doctrine make this a non-standard round. All tanks use auto-loaders on the main armament providing a much higher

rate of fire. MBT's generally mount improved cavity-B armor, while many light armored vehicles and armored personnel carriers are partially or wholly encased in cavity-A armor. Gun/launchers can deliver a large variety of rounds, but still cannot deliver hyper-velocity munitions of the giant 12-15 cm guns. Wider use is made of the air/raft, generally armed and armored and referred to in the military configuration as the grav sled. It is still primarily used as an airmobile personnel carrier. All vehicles incorporate ground surveillance radar. An improved laser tank mounts its armament in a fully rotating turret, the armament consisting of either a pulse gatling-laser or beam laser, in either case multi-colored, enabling it to defeat most smoke and aerosol obscuration. Toward the end of the period the first grav tanks are introduced.

Tech level 10: Track-laying tanks are now completely supplanted by grav tanks and lighter wheeled armored fighting vehicles. Grav tanks mount gun/launcher systems and/or beam lasers, with some super-heavy varieties mounting the first heavy plasma A guns. Larger grav tanks mount high density armor with significantly increased resistance to penetration. Light armored cars mount gun/launcher systems or VRF gauss guns. The grav sled is used very widely in the personnel carrier role, but large numbers of fast wheeled APC's are still used. Most vehicles are equipped with cavity-B armor. All vehicles have an advanced target acquisition and fire control system integrated with the vehicles ballistic computer which consists of ground surveillance radar and televisual scanning which identifies moving objects, trains the gun, and visually displays the target information for the gunner. The gunner identifies the target as friend or foe. Once identified as friend, the system will ignore the target as long as it remains in range of the system's sensors. If identified as foe, the gunner may fire, or initiate any of a number of tiered priority pass orders (return to target when in range, return after next target engaged, etc.) The system may be keyed to seek targets of specified configurations (such as MBT's, infantry etc.) and may be manually overridden at any time for direct gunner selection. Often the radar and visual sensors are mounted in extensible pods to allow observation and target acquisition from complete vehicle defilade.

Tech level 11: All combat vehicles are now grav powered. The grav tank generally utilizes the more compact plasma A gun and/or tac missile racks. Very heavy grav tanks mount the plasma B gun. Light grav sleds are used for scouting, generally mounting tac missiles and auto-cannons. Close support sleds mount VRF gauss guns and tac missiles. All vehicles have pronounced free-flight capability.

Tech level 12: All vehicles have sufficient free-flight performance that ground combat vehicles effectively no longer exist, having merged with aircraft. The primary weapon of the heavy gunships include plasma B guns, VRF gauss guns, and tac missiles. VRF gauss guns are also widely mounted on personnel carriers, as are plasma A guns.

Tech level 13: The first damper fields allow protracted storage and transportation of elements with short half-lives. The first major use of the damper field militarily is to anable the manufacture, storage, and transportation of 2 cm californium rounds, fired from auto-cannon mounts in remotely piloted drones. Each round is hollow and collapses on impact, the collapsed round having sufficient mass to go critical, thus causing a small nuclear explosion. More conventional gunships mount plasma C guns or fusion X guns along with missiles.

Tech level 14: More sophisticated damper fields render the californium drones obsolete. Gunships now carry fusion Y guns or rapid pulse X guns.

Tech level 15: Gunships mounting rapid pulse X guns and heavier Z guns are virtually indistinguishable from orbital craft. Lower performance personnel carriers mount rapid pulse X and Y guns and missile systems.

Rotary Wing Aircraft (Helicopters)

Tech level 6: The first helicopters are introduced, generally for communication, observation, and rescue/evac missions. Generally unarmed, they are occasionally fitted with LMGs and used as troop carriers in counter-insurgency work.

Tech level 7: Assuming a wider variety of roles, helicopter troop carriers all but replace paratroopers as specially-designed gunships mount auto-cannons and auto-grenade launchers.

Tech level 8: Both faster and more compact, the gunship now carries tac missiles and becomes the most lethal tank killer on the battlefield.

Tech level 9: Having reached the limit of its development potential, the helicopter is gradually superceded by grav vehicles in its military role, although it continues in service as a less expensive option at this tech level.

Field Artillery

The chart to the right lists some of the basic characteristics of various artillery and mortar systems available at various levels. In all cases, the tech level listing indicates both when the system is introduced and through what tech level it is in general use. The crew column lists the number of crew members needed to operate the weapon. The price column gives the cost of the weapon followed by the cost of one round. The weapon cost is in thousands of credits while the round cost is in credits. The weight column lists the weight of the weapon in kilograms followed by the weight of a single round in kilograms. The range column lists the maximum effective range of the weapon in kilometers. The ROF column lists the number of times the weapon may by fired by an experienced crew per combat round. The burst column lists the radius of burst of a single round/discharge of the weapon in meters.

Mortars: Mortars have a basic chance of 7+ to hit any personnel within the blast radius of the mortar round, using the target characteristic DMs of a 4 cm RAM grenade HE round and doing 6D damage. The ROF is the number of rounds that may be fired per combat round for the first three minutes of firing. After that, crew fatigue will reduce the ROF to the number of rounds shown per minute. At each tech level past the initial introduction, add one to the burst radius for light and medium mortars, add two to the burst radius of heavy and very heavy mortars, and add 10% to the range of all mortars.

Howitzers: Howitzer fire is resolved as for mortars. Howitzers experience the same ROF limitations as mortars until auto-loaders are available. Howitzer-type weapons are also available in flat trajectory gun configurations at each tech level at which howitzers are available. Guns have half again the range of howitzers, at twice the weight and cost. Round cost is 50% higher. Add to range and burst radius as for mortars.

Mass Driver Guns: MD guns do not experience the ROF limitations of mortars or howitzers. MD guns attack targets as mortars and howitzers. At each subsequent tech level, add two to the burst radius and 10% to the range.

High Energy Weapons: Plasma (A, B, and C) guns and fusion (X, Y, and Z) guns all weigh approximately 4000 kg at their tech level of introduction. One tech level later they weigh 2000 kg. One tech level later they weigh 500 kg and their ROF increases to 5. All high energy weapons hit on a roll of 8+. Targets within the blast radius are attacked using the target DMs for a PGMP-12 and, if hit, suffer 10D damage. All targets within half the blast radius are attacked using the target DMs for a FGMP-14 and -15 and, if hit, suffer 20D damage.

Meson Accelerator: All targets within the burst radius of the meson accelerator are destroyed.

MRLs: MRLs attack as per mortars and howitzers, with range and burst radius increases per tech level done in the same manner. ROF is the number of tubes generally employed, although this may vary greatly. All tubes may be salvoed in a single combat round.

Cluster Bomblet Munitions: Mortars, MD guns, and MRLs may fire cluster bomblet munitions at tech levels where they are available. When firing cluster bomblet munitions, double the burst radius and use the target modifiers for the 4 cm RAM grenade flechette round.

Artillery Table

System:	Tech Level:	Crew:	Price:	Weight:	Range:	ROF:	Burst:
Lt Mortar	6-10	3	.3/20	20/4	1.5	5	3
Md Mortar	5-10	6	7.5/35	40/6	2.5	4	5
Hvy Mortar	5-10	9	15/50	300/15	4.5	3	10
Very Hvy Mortar	5-10	12	40/100	3500/100	6	1	20
Lt Howitzer	5-9	6	5/50	1000/6	7	4	2
Field Howitzer	5-9	8	10/75	1800/15	11	3	4
Med Howitzer	5-9	10	20/100	4000/40	11.5	2	9
Hvy Howitzer	5-8	12	40/200	18000/100	12	1	18
Lt Mass Driver	11	8	500/35	18000/15	20	10	25
Med Mass Driver	10-11	10	1500/50	30000/40	22	10	30
Hvy Mass Driver	9-11	12	4000/150	70000/150	24	10	35
A Gun	10-15	5/3/1	1000	4000	5	2	5
B Gun	11-15	5/3/1	1500	4000	8	2	8
C Gun	12-15	5/3/1	2000	4000	12	2	10
X Gun	12-15	5/3/1	3000	4000	18	2	12
Y Gun	13-15	5/3/1	5000	4000	21	2	15
Z Gun	14-15	5/3/1	10000	4000	31	2	21
Meson Acc.	15	12	30000	60000	50	2	50
Lt MRL	11-15	1	.5/30	60/5	10	100	3
MRL	6-11	10	5/50	1800/50	12	40	10
Remote MRL	10-11	3	5/60	1000/20	20	100	20

RANGE MATRIX

Attacker's			*Defender's Range*			*Wound*
Weapon	**Close**	**Short**	**Medium**	**Long**	**Very Long**	*Inflicted*
Assault Rifle	-4/-4	+1/+1	-1/+2	-2/0	-4/-3	3D
Light Assault Gun (LAG)						
Discarding Sabot	-8	0	+2	+1	-2	4D
High Explosive	-4[1]	+1[1]	+1	0	-1	4D
Flechette	-4[1]	+1[1]	+3	+2	-1	2D
Advanced Combat Rifle (ACR)						
Discarding Sabot	-4/-4	+1/+1	0/+2	-1/+1	-2/0	3D
High Explosive	-4[2]	+1[2]	-1/+1	-2/0	-4/-2	4D
Gauss Rifle	-4/-4	+1/+1	+2/+4	+3/+5	0/+1	4D
Accelerator Rifle	-8/-8	-6/-6	+2/+4	+1/+2	no	3D
Snub Pistol						
High Explosive	no	+2	-8	no	no	4D
HEAP	+1	+2	-8	no	no	4D
Tranq	+1	+2	-8	no	no	variable
4 cm RAM Grenade						
High Explosive	no	no	+3/+6	+2/+6	-4/+1	8D
Flechette	no	no	+3/+6	+2/+5	-4/0	3D
HEAP	no	no	+2/+4	0/+2	-6/-4	8D
LMG	no	-6	+4	+2	0	3D
Auto-Cannon						
Discarding Sabot	no	no	+6	+4	+2	6D
High Explosive	no	no	+6	+4	+2	8D
PGMP-12	no	no	+2	+1	0	10D[3]
PGMP-13 and 14	no	no	+3	+3	+2	12D[3]
FGMP-14 and 15	no	no	+4	+3	+3	16D[3]
VRF Gauss Gun	no	no	+8	+5	+2	10D[4]

1. Treat HE and Flechette LAG shots at close and short range as rifle shots for armor and hits.
2. Treat HE ACR shots at close and short range as carbine shots for armors and wounds.
3. Wounding is halved at very long range, and quartered at extreme range.
4. Wounding is halved at extreme range.

WEAPONS MATRIX

Attacker's Weapon	*Defender's Armor* Nothing	Jack	Mesh	Cloth	Reflec	Ablat	Battle
Assault Rifle	+2/+4	+2/+4	- 1/+2	- 3/- 1	+2/+4	0/+2	- 5/- 4
Light Assault Gun (LAG)							
Discarding Sabot	+3	+3	+2	+1	+3	+3	0
High Explosive	+3	+3	0	- 2	+3	+1	- 4
Flechette	+5	+5	0	- 3	+5	+2	- 5
Advanced Combat Rifle (ACR)							
Discarding Sabot	+3/+5	+3/+5	0/+3	- 2/ 0	+3/+5	+1/+5	- 3/- 1
High Explosive	+2/+4	+2/+4	0/+2	- 3/- 1	+2/+4	+2/+4	- 4/- 3
Gauss Rifle	+4/+7	+4/+7	+2/+5	+1/+3	+4/+7	+4/+7	- 2/ 0
Accelerator Rifle	+3/+4	+3/+4	0/+1	- 2/- 1	+3/+4	+1/+2	- 5/- 4
Snub Pistol							
High Explosive	+2	+2	- 1	- 3	+2	0	- 8
HEAP	+2	+2	+1	- 1	+3	+2	- 3
Tranq	- 1	- 1	- 4	- 6	- 1	- 4	no
4 cm RAM Grenade							
HE	+4/+6	+4/+6	+2/+4	+1/+3	+4/+6	+4/+6	- 2/ 0
Flechette	+7/+9	+7/+9	+3/+5	- 2/ 0	+7/+9	+3/+5	- 6/- 4
HEAP	+2/+4	+2/+4	+2/+4	+2/+4	+2/+4	+2/+4	0/+2
LMG	+6	+6	+2	- 1	+6	+3	- 3
Auto-Cannon							
Discarding Sabot	+6	+6	+6	+6	+6	+6	+4
High Explosive	+6	+6	+6	+6	+6	+6	+2
PGMP-12	+2	+2	+2	+1	+2	+2	0
PGMP-13[1] and 14	+4	+4	+4	+4	+4	+4	+1
FGMP-14[1] and 15	+4	+4	+4	+4	+4	+4	+3
VRF Gauss Gun	+7	+7	+7	+7	+7	+7	+5

1. Battle Dress required to fire PGMP-13 and FGMP-14.

DEXTERITY REQUIREMENTS

Weapon	*Required Dexterity* Level	DM	*Advantageous Dexterity* Level	DM
Hand Grenade	7	- 2	11	+1
Assault Rifle	5	- 1	8	+2
Light Assault Gun	7	- 2	10	+2
ACR	6	- 2	8	+2
Gauss Rifle	7	- 2	10	+2
Accelerator Rifle	6	- 1	9	+1
Snub Pistol	7	- 2	10	+1
Grenade Launcher	8	- 3	11	+1
LMG	7	- 2	10	+2
Auto-Cannon	7	- 2	10	+2
PGMP-12 and 14	8	- 2	11	+1
PGMP-13	7	- 1	10	+1
FGMP-14	7	- 1	10	+1
FGMP-15	8	- 2	11	+1

WEAPONS AND EQUIPMENT – WEIGHTS AND PRICES

Item	*Base Weight*	*Ammo Weight*	*Rds/ Clip*	*Length Overall*	*Base Price*	*Ammo Price*	*TL*
Assault Rifle	3000	330	30	850	300	20	7
ACR	3500	500	20	750	1000	15	10
Gauss Rifle	3500	400	40	750	1500	30	12
Snub Pistol	250	30	6	100	150	10	8
Accelerator Rifle	2500	500	15	800	900	25	9
PGMP-12	6000	3000	40	800	10000	2500/50	12
PGMP-13	900	7000	–	900	65000	50000/20	13
PGMP-14	9000/50	1600/90	–	800	300000	250000/50	14
FGMP-14	1000	9000	–	900	100000	65000/50	14
FGMP-15	1000/50	2000/110	–	800	400000	300000/70	15
LAG	4000	500	5	900	600	20	8
Lt Machinegun	5500	2500	100	1100	1200	120	6
Auto-Cannon	300k	100k	200	1500	10000	1000	8
VRF Gauss Gun	2000k	10k	1000	1500	200000	200	10
GL	3000	200	1	750	200	5	7
Auto-GL	6000	200	16	900	1400	85	7
RAM GL	4000	1400	3	900	400	50	8
RAM Auto-GL	6500	9000	20	900	2200	350	8

Note: Consult the weapon descriptions for further data.

Note: Weights in grams (k indicates 1000 grams), lengths in millimeters, prices in credits.

Note: Fusion and Plasma Gun weights and ammo weights after the slash indicate reduction due to gravitic field generator. Ammo price indicates cost of the power pack; the figure after the slash indicates recharging cost.

BODY ARMOR

Type	*Price*	*TL*
Flak Jacket	100	7
Combat Environment Suit	1000	10
Combat Armor	20000	11

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