DP9-016

HEAVY GEAR

ARTILLERY & GROUND WARFARE

TACTICAL FIELD SUPPORT

A TACTICAL RULES SUPPLEMENT FOR THE HEAVY GEAR UNIVERSE

DREAM POD 9

HEAVY GEAR

The sound of the artillery batteries was a distant thunder on the far horizon. Temporarily safe at the bottom of a hastily digged foxhole, Ranger Callahan considered his options. With his Gear blown out from under him by a well-concealed mine, these were dreadfully limited.

Callahan immediately ruled out any thought of a pick-up. This far out on the border, no operation was completely official, and if you missed the first bus home there was no second service.

"If I'm to make it out of here, I'll have to do it all by myself," he thought grimly. He carefully evaluated his meager possessions: a survival knife and kit, a small bedroll, a light anti-armor rocket launcher. He repacked them carefully in his backpack and peered out of the foxhole. Nothing in sight.

"No sense in staying here," he muttered while climbing out. Half-crouched, he began to run toward friendly lines — or at least, where they still were when he last heard from Command. Far ahead of him, he could see shafts of light rising into the night sky, probably the odd artillery rockets fired to make troops keep their head down.

"It's gonna be one hell of a walk back to the firebase," Callahan thought, "but if I make it I'll be getting drinks off the story for cycles..."

The Tactical Field Support manual contains additional rules and equipment for Dream Pod 9's exciting Heavy Gear mechanized science-fiction game. Within these covers you will find:

- The all-new Skirmish Scale, which brings more detail and a lot more action to small units combat;
- A detailed advanced combat initiative system for small unit actions;
- Advanced artillery rules, including barrage fire and locked-on artillery missiles;
- Advanced minefield rules, including proximity, remote and jumping mines;
- Optional rules for field engineering and detailed close combat;
- Eight new support weapon systems, from the Light Artillery Unit to the monstrous Very Heavy Artillery Missile;
- Four new Perks, more options to add to your vehicles;
- And fully illustrated descriptions and game stats for 25 battlefield support vehicles.

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HEAVY GEAR

ARTILLERY & GROUND WARFARE
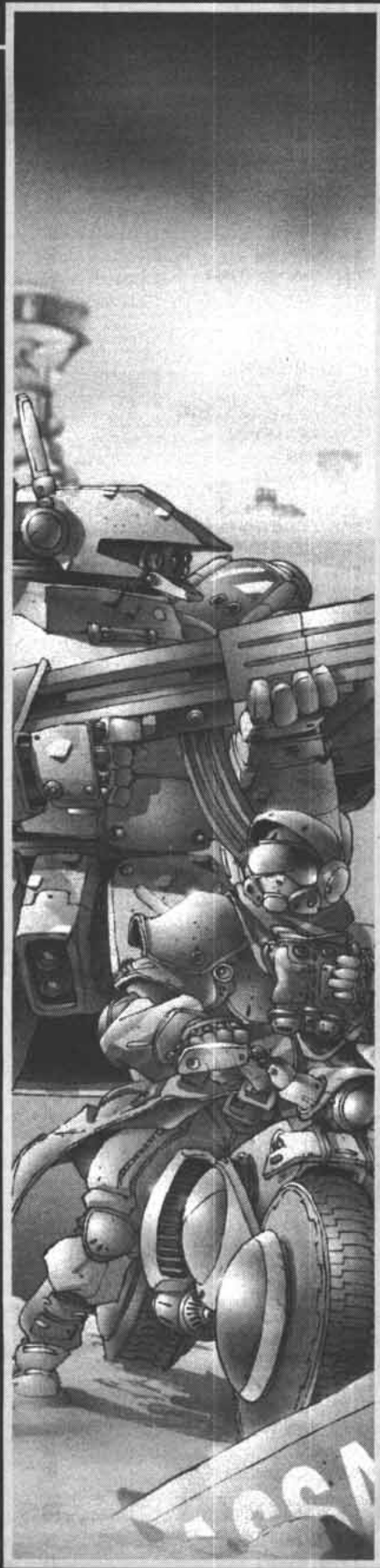
TACTICAL FIELD SUPPORT — BEHIND THE SCENES

Heavy Gear, both as a game and as a fictional universe, has been greatly inspired by the classic works of the military science fiction genre. Heinlein, Drake, Laumer, Dickson, all told vibrant stories of future conflicts and the men who are caught in them. It has always been one of our goals to portray these conflicts as vividly and as realistically as possible.

From the beginning, we wanted to attract the attention of real life soldiers with a game that provided a practical approach to modern warfare. Even after the rulebook was published, we sought their comments and advice. We realized that although the existing rules were more than enough for the civilian gamer, there were many situations which they did not cover. We went back to the drawing board and busily set to work.

After consulting with many experienced military personnel, it became clear that we needed to put some emphasis on the use of artillery on the battlefield. Much to our collective surprise, we discovered that the main effect of long range artillery is not so much the damage as the loss of morale it causes. Indeed, when one finds himself cowering under a thundering barrage of very heavy high explosive artillery fire, it is often the fear of dying rather than the actual risk of dying that has the greater effect. One thing leading to another, we joined our efforts and created some much-needed morale rules.

Paradoxically, although the game is called Heavy Gear, the Gear themselves do not rule the battlefield. One of the most noted highlights of Heavy Gear is that our infantry is a viable part of any force. With this book, we took infantry one step further and made it an indispensable addition to any fighting unit.

Now grab your supplies and move out. And remember: if you hear "Incoming!" it's already too late. . . .

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Produced and Published by

UNDERFIRE

"I'm telling you, we have the most damned, rotten luck ever slapped on a Republican infantry escouade!" Tiny said. He punctuated his remark by spitting on the ground at his feet. Sergent DeMoren looked at him disapprovingly, but let it pass. Truth be told, he wasn't feeling that much more confident right now. If that idiot Lieutenant hadn't been so careless with his "private business," the entire company would not have been assigned to the Basal campaign.

At the moment, Bravo Escouade was huddled in a small ditch somewhere in Basalian territory. "Somewhere" was exactly the right word for their situation: ever since the forces of the rebel emir had tried yet another counterpush against the MILICIA troops, this region had effectively become a black zone in most military holodisplays. You never knew whether you were in friendly or hostile territory until you got shot at, and even then you would be as likely to be taken out by so-called "friendly fire" as you would by enemy artillery.

DeMoren peered out of the ditch but ducked back quickly. No sense in offering a nice, juicy target to a bored sniper, he thought. He rummaged in his backpack until he found an old, beaten-up field periscope and used it to take another look at the field. The damage done by the combined effect of their anti-armor guided missile fire and the mines they had carefully laid earlier had paid off. Numerous Heavy Gear wrecks wearing Basalian colors were visible nearby, their legs blown off by the hidden charges or their bodies crushed by missile impacts.

He was still surveying the field when the first explosion threw geysers of dust into the air with a dull booming sound. DeMoren's well-trained mind went into automatic — enemy barrage.

"Incoming!!" he yelled as he dropped flat.

The entire cadre was hugging the dirt by the time they heard the supersonic screams of the shells falling and bursting nearby. The ground began to shake and the explosions became louder, sharper.

DeMoren felt something hit right beside him and looked up. A few paces to his left, Tiny did the same. Just between them, a shell was half buried in the soft ground, a tiny crater around it. Both men looked at it with wild eyes, but the shell just sat there. The expected detonation never came.

"A dud. It's a dud." Tiny said in a voice matching his nickname. DeMoren realized he was still holding his breath and slowly let it go. The barrage stopped as suddenly as it had begun, but DeMoren knew the artillery guns were just changing position to avoid return fire. "Time to move, people. Seems we're not welcome here anymore."

Bravo Escouade emerged from the ditch, the troopers bent low and running to get to the next one. The barrage had created some nice new foxholes that were soon put to good use. "Tiny, get me Command on the tube again. Those damn idiots better find a way to get us out of here this time — fast."

Just behind them, the shell suddenly remembered its mission and the ditch was filled with white-hot fragments. Many soldiers flinched and paled visibly at the sight. "Merrrde..." was all Tiny could manage to blurt out.

"You were saying, about our dumb rotten luck?" DeMoren said with a smirk.

1.1 THE BATTLEFIELD OF THE 62ND CENTURY

Battlefield support is a broad term that has come to encompass many different things, such as artillery, defensive works and supply lines. Although none of the above are necessarily seen on the battlefield *per se*, especially in this era of small unit actions, they remain vitally important to the continued survival of all armed forces in any extended campaign. This manual aims to cover all of these subjects, both in descriptive and in rule terms, in as much detail as possible.

Warfare has always been ugly and brutal, and the modern battlefield is no exception. Both artillery and mines fit the above description, each capable of delivering high firepower seemingly out of nowhere and devastating even large armored columns. Artillery weapons use both chemical and electromagnetic technology to propel shells and warheads awesome distances with great accuracy, and some can even hunt down designated targets. Mines can be programmed to discriminate between friendly and hostile units, or even attack low-flying aircraft. Technological improvements have made these weapons extremely accurate and deadly, but at the same time small enough to be man-carried, allowing even the lowly infantryman to play a significant role in classic fire support.

Although fire controls and weapon ranges have been greatly improved since the advent of mechanized warfare, defending against them does not always require a high level of technology. Indeed, some quite primitive means of protection are still very effective: trenches, foxholes and other earthworks are inexpensive and afford considerable protection to units using them as cover. Best of all, they can often be built by engineering units using whatever materials are available on the front lines.

Fortifications can also be erected to protect important installations, such as a factory or a military base. Some are armed with point defense weaponry, such as anti-aircraft lasers or rapid-fire AMS cannons, to shoot down incoming aircraft or missiles. Others feature armor plating to reduce or absorb damage before it can affect the structure itself. Although fortifications are only useful in a defensive situation, they can turn the tide of almost any battle if used properly.

Last, but far from least, supplies must be delivered regularly to any unit in the field. Although the troops may be able to scrounge their own food and fuel, it takes valuable time and effort and may antagonize the local population, leading to further problems. Even worse, spare parts and ammunition cannot usually be manufactured in the field and must be provided quickly or the performance of the combat group will deteriorate.

The duties performed by the military supply personnel and engineering corps are seldom seen as very glamorous by the general public. Nevertheless, the soldiers that fuel the hungry war machine of Terra Nova take a certain pride in their work. They may even be unexpectedly trust into the role of heroes by the changing fortunes of war. The tales and quiet exploits of these valiant crews never go much further than the mess hall but they are rarely forgotten by those whose life depends on the work of the much maligned support units.

1.1.1 BOOK OVERVIEW

The **Tactical Field Support** manual is a **Heavy Gear** tactical battle supplement that contains advanced rules, new equipment, weaponry and vehicles. This supplement is divided into several chapters, each covering a specific aspect of the new rules. Most of these have been written with tactical game scenarios in mind and may vary somewhat from established military procedures and axioms. Whenever possible, sidebars have been included to give additional insights on the effect of the new rules when viewed from a roleplaying or tactical point of view.

The following chapter introduces the Skirmish Scale system, a more detailed set of rules for combat between small numbers of units. While based on the tactical system, the Skirmish rules use more condensed battlefield and time scales, allowing for more detail and more opportunities for action.

The third chapter covers the improved artillery rules: the entire procedure for calling down artillery support has been expanded and revised. The fourth chapter features new mine types, such as jumping and electromagnetic pulse mines, and the rules to field them; it also reviews the minelaying and mine-clearing procedures for both infantry and engineering vehicles.

The fifth chapter lists the optional rules. These rules cover situations that are normally outside the scope of the tactical combat game, but might be required for some specific scenarios. Rules that bring additional realism at the cost of complexity are also included, should the players want to use them. For example, while most of the battles fought with the standard **Heavy Gear** rule set are raiding operations and skirmishes, with little choice over the terrain configuration, the engineering rules now allow players to modify the battlefield to improve their chances of winning.

The next chapter unveils new support weapons and new Perks to add artillery and engineering vehicles to **Heavy Gear**. Some new types of infantry equipment are also included. The book closes with eight campaign seeds, ten typical battlefield support character archetypes and eighteen vehicles that are representative of the support units currently in service with the forces of Terra Nova.
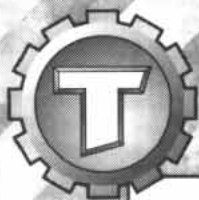
SKIRMISH SCALE
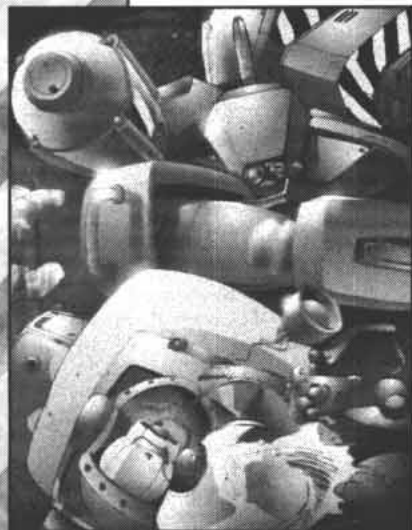
The Skirmish scale rules are an optional rule set intended to simulate fast and furious, action-by-action, short-range combat between small numbers of units. These rules can also be used to simulate combat in heavily restricted environments, such as FIBUA (Fight In Built Up Area), jungles or canyons, with greater accuracy than the normal 50-meter hex scale allows. Also, since the Skirmish time scale is the same as the one used in the roleplaying system, it is now easier than ever to mesh tactical combat and roleplaying action together.

The following Skirmish scale rules are for Silhouette's tactical combat. They are changes and additions to the combat rules detailed in the *Tactical Combat* chapter, starting on page 82 of the main rulebook. They are also particularly well suited to miniature tabletop play, since they require less table surface and allow more detail to be added to the battlefield.

The following is the complete version of the Skirmish scale. A shortened version for arena combat that features only the modifications to the standard tactical game can be found in the Duelist's Handbook. Other than this, both rule sets are exactly the same.

2.1 CHANGE OF SCALE

The Skirmish scale system takes a much closer look at mechanical combat than the normal tactical rules. Skirmish scale hexes are only 10 meters across, one-fifth the size of a standard tactical-scale hex. Likewise, elevation levels now represent only 10 meters. Skirmish scale combat rounds represent 6 seconds of real time, equal to the standard Silhouette roleplaying rounds. Since all dimensions are divided by a factor of five, the MP scores of the various units do not change: one MP still represents approximately 6 kph of speed.

Weapon ranges remain as they were, so all range bands are multiplied by a factor of five to take into account the smaller hexes. For example, a weapon with a base range of 1 will now have a base range of 5. An attacker is at Point Blank range when he is within two hexes of the target (about half a normal tactical hex away — see diagram). Obviously, most Skirmish scale combat will take place at Point Blank or Close ranges, making it extremely deadly. Melee weapons, however, can still only be used in the same hex as the target.
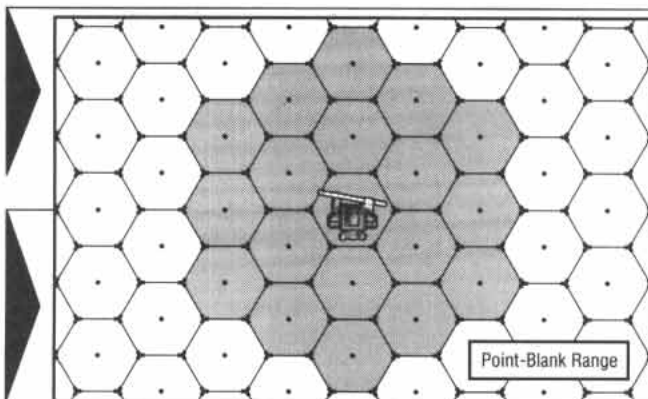
Point-Blank Range

Point Blank Diagram

The diagram at right represents the Point Blank range band in the Skirmish scale game. Any unit within two hexes of an attacker (the gray-shaded zone) is attacked with a +1 modifier to hit. Unlike the tactical-scale game, where being at Point Blank range is enough to attack a unit in close combat, melee combat is possible only in the hex containing the target unit.

Integrating Dogfighting With Skirmish

The aircraft-related Dogfighting scale and the Skirmish scale share the same time frame of 6 seconds per round, making it possible to have an integrated game featuring both. In general, it is best to limit the integration to VTOLs, lest an enormous map (or two maps at different scales) be used. The aircraft's speed and turn radiuses are multiplied by five to play in Skirmish scale, but use the ground weapon ranges when firing on ground targets.
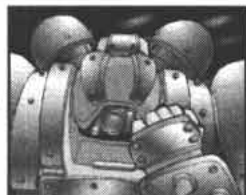
Skirmish Scale

Time:	Each round lasts 6 seconds
Ground Scale:	Each hex represents 10 meters
Movement Points:	Remain identical
Weapons' Rate of Fire:	Remain identical
Actions:	One extra action allowed

2.2 THE ADVANCED SKIRMISH COMBAT ROUND

The following is a new approach to the Combat Round procedure found in the **Heavy Gear** rulebook (page 86). It makes play proceed more smoothly and reduces the importance of winning the Initiative roll, placing the emphasis on the second-by-second decisions made by each commander. It is important to note that either initiative system can be used in Skirmish game play. If the players feel more comfortable with the system outlined in the rulebook, then it should be the one used.

Although this advanced initiative system is slightly more complex and requires some additional bookkeeping to keep track of which unit has moved, which has not and who has extra actions, the reduced number of units in play means there is no significant increase in playing time. Using numbered counters or just small dice to keep track of actions removes much of the paperwork and is made practical by the small number of units. In general, the more dynamic and chaotic battlefield play this system permits is well worth the trouble.

2.2.1 SET-UP PHASE

A battle always begins with the Set-up phase. Set-up takes place before the first round of combat and occurs only once. An overall commander must be chosen for each side, with a second in command. Their identities can remain secret, but must be noted for future reference. If the commander becomes a casualty, he is replaced by the second in command. If both are put out of action, all future Leadership skills are rolled at the skill level of the next highest ranked soldier present (by default, at level 1). The only exception to this rule occurs during integrated roleplaying/tactical games. The Player Character with the highest Leadership skill may choose to replace the commander if the latter becomes a casualty. Otherwise, the rule stands as is.

A Tactics skill test is made by each side based upon the skill level of the commander. Fumbles count as a die result of one. Reroll ties. The winner chooses which player will begin placing his combat groups (see **Heavy Gear** rulebook, p. 82) upon the map. Players should alternate, each placing one combat group at a time on the mapboard. After placing a unit, the player must declare what speed (stationary, Combat, or Top speed) it is moving at. Pre-designed scenarios should have clearly defined set-up locations for each faction. Otherwise, the players should agree on which mapboards to use and set up on the first two rows of hexes on opposite sides.

If, during the first round, a unit is attacked before it has been moved, it is treated as if it were moving at the maximum number of hexes possible for its speed for the purpose of defense rolls only.

The die result of the Tactics roll should be recorded by each player. Each point represents one Tactical Command point that can be played at any time during the game. Command points represent an action reserve for unexpected situations; they are fully explained further on.

2.2.2 THE COMBAT ROUND

The Skirmish game is subdivided into combat rounds that simulate approximately 6 seconds of real time, the same duration as a roleplaying round. During each combat round, the following steps occur, in order:

● STEP ONE: DECLARATION PHASE ▼

Both sides declare any extra actions and individual evasive maneuvers for the round. Use a counter or token to mark the unit(s) with extra actions, avoiding confusion during game play. This token can be placed either near the playing piece or on the record sheet, whichever the player finds more suitable.

● STEP TWO: INITIATIVE PHASE ▼

Initiative determines which side has the advantage during the present round of combat. Each side rolls an action test based on their commander's Leadership skill. If only two machines are facing each other, the Piloting skill is used instead of the Leadership skill. The highest result wins. Draws are rerolled.

Record the MoS of the Initiative roll. The Winner receives a number of Initiative Command points equal to that MoS. The Loser receives no Initiative Command points this combat round, but may use Tactical Command points.

The side with the least number of combat groups decides which side will play first. If both sides have the same number of combat groups, the winner of the Leadership roll makes the decision.
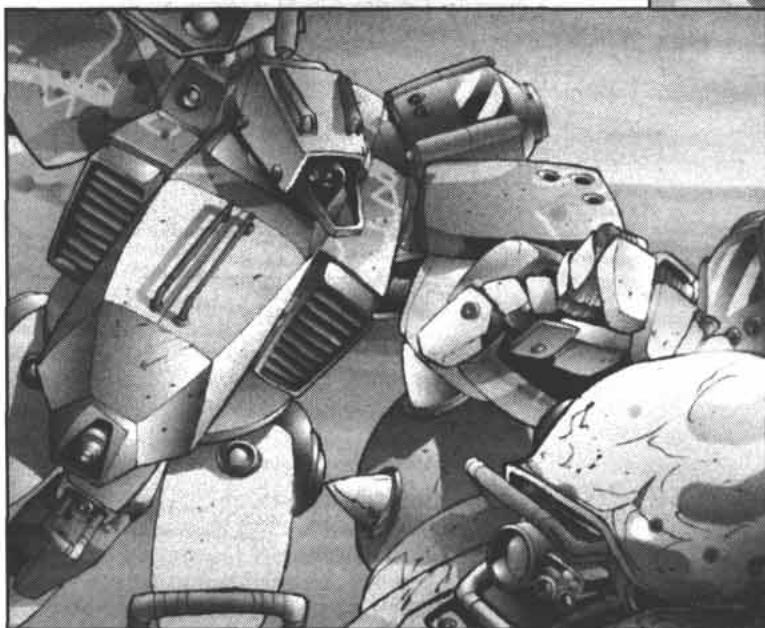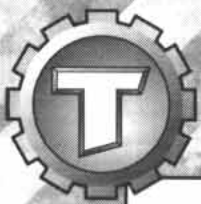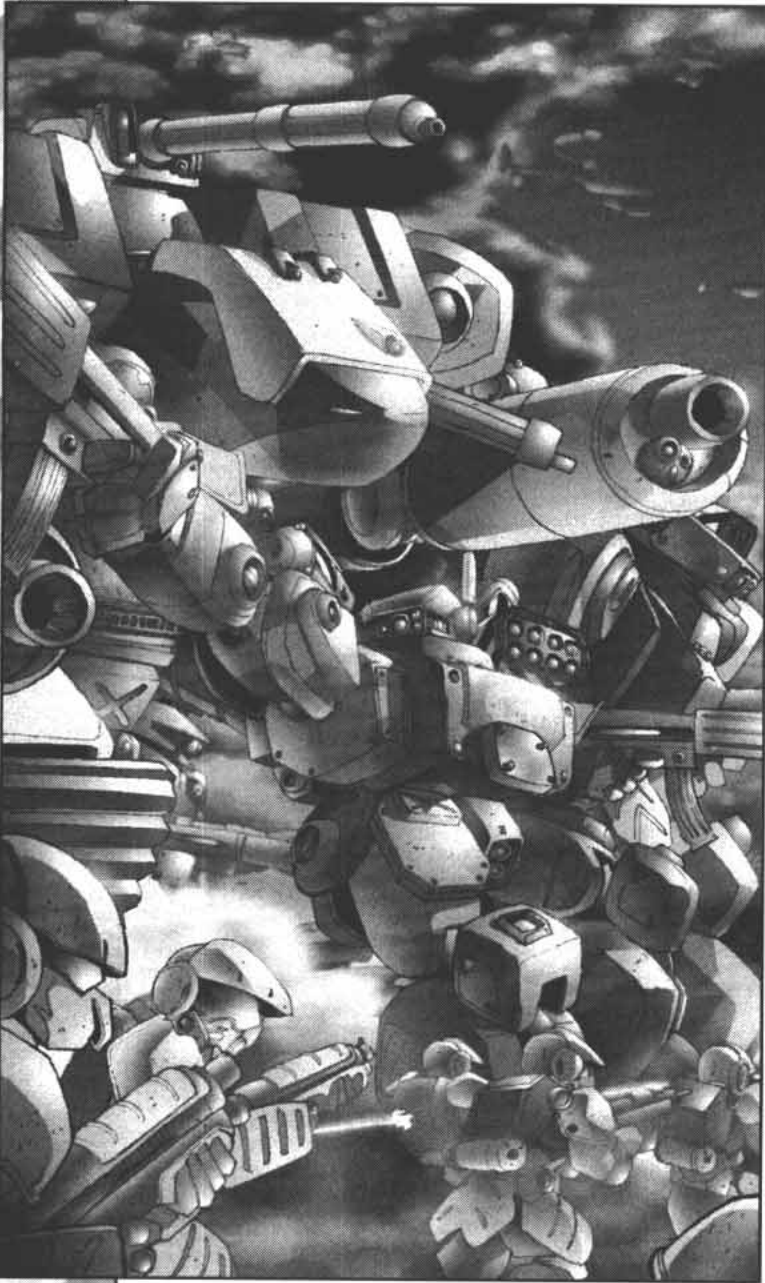
STEP THREE: ACTIVATION PHASE

The side whose turn it is to play may move any or all units in one of their combat groups. Units that shift speeds (Combat to Top and vice-versa) must declare so immediately after movement. Actions, such as firing or activating a system, may be resolved at any time before, during or after the movement. Attack penalties are based on the unit's total movement; for example, if Half-Combat Speed is announced, the unit cannot spend more than half its Combat MPs.

Each unit moves and takes its actions before another unit is activated. If a unit does not take the opportunity move or act when its combat group is activated, it cannot do either at a later point in the combat round.

At any time during the activated unit's movement, any enemy unit may use one (or more) of its actions to fire or perform a task against the moving unit (and only against the moving unit). Attacks may be directed at any point along the moving unit's path, but the unit's full movement counts towards the Defense roll. The total MP allocation of the target is used to determine the defense speed modifier, even though the actual displacement may be shorter, because this is a hurried reaction for the attacker. The defender must spend at least one MP or end its movement before each of the attacker's actions if more than one action is used. Forward observers must always act before the firing unit(s) to which they relay target information.

Once every unit in the combat group has moved and acted (or forfeited its chance to do either), the other side activates one of its own combat groups, which may move and take action as outlined above. This exchange goes back and forth until all groups have moved and acted.

A combat group may only move once per combat round. If one player no longer has any combat groups left to use, the opponent activates his remaining combat groups one by one until they all have been moved.

STEP FOUR: MISCELLANEOUS EVENTS PHASE

During this phase, any unusual events — such as long-range artillery and off-board bombing attacks — are resolved. Initiative Command points go back to zero. Any action not spent at this point is lost.

Repeat steps 1 to 4 until the battle is resolved or pre-planned objectives are met. A combat group may only move once per combat round.

2.2.3 COMMAND POINTS

Command points represent the commander reacting to or anticipating the enemy's actions. There are two types of Command points: Tactical and Initiative. Tactical Command points are available throughout the game, but their number is determined in the set-up phase and no more can be obtained once they are spent. Initiative Command points are valid for one round only, but are refreshed with each new Initiative roll. Other than this, there is no difference between the two. Two colored dice of different colors can be used to keep track of Command point totals.

Command points are available to any unit with a functional communication system and can be used to take an additional regular action, incurring no die penalty; turn a unit around by up to 180 degrees, even if it has been activated before (and thus has no MP left); buy a +2 modifier to a single Defense roll (representing a warning shout); or activate a unit out of sequence — to get out of harm's way, for example. In the latter case, the unit must not have been activated (i.e., moved) previously, and it cannot be moved again when its combat group is activated (though it may act if it has any actions left).

2.2.4 ACTIONS

In Skirmish scale combat, players still get the same number of actions per round as in tactical combat, i.e., one plus an additional number of actions based on the number of crewmen. Each unit is allowed **one** extra action with a -1 modifier on all its rolls. Because of the short time span involved, it is impossible to get more except by using Command points.

For the same reason, the scope of what an action includes has been reduced. For example, in the tactical system, maneuvering a vehicle costs zero actions and firing a weapon costs one action. In the Skirmish scale, maneuvering a vehicle requires one action and both aiming and firing a weapon require an action each (see further).

As a general rule, most complete acts in the Skirmish scale require two actions. The first action spent represents the preparations made (e.g. acquiring a target, programming active sensors). The second action represents the actual completion of the act (e.g. firing the weapon at a target, performing the sensor scan). Usually, the second action can be performed many times in a row without requiring the first act to be repeated. For example, once a vehicle has acquired a target, it can fire upon it repeatedly until it either loses sight of its target or switches to another (see *Target Acquisition* below).

The following are common actions in Skirmish scale combat.

Crew And Actions

Min. Crew Size	Add. Actions	Total Actions	Max. Actions
1	0	1	2
2	1	2	3
4	2	3	4
8	3	4	5
16	4	5	6
32	5	6	7
etc...			

• MANEUVERING

Guiding a vehicle through complex maneuvers or hard turns requires the pilot's full attention, often preventing him from doing other tasks such as firing a weapon or operating an on-board system. In addition to costing 1 MP, any turn of two hex-facings or more (120°+) requires one action. Moving in a mostly straight line (e.g. no turn of more than one hex-facing, or 60°) does not require an action.

• SHIFTING INTO TOP SPEED/COMBAT SPEED

Just like maneuvering, going to Top Speed requires the pilot's full attention. Instead of simply declaring a change from Combat Speed to Top Speed or vice versa after movement, in Skirmish scale combat this change requires the expenditure of an action (the change still takes place after movement).

• TARGET ACQUISITION

Before attacking an opponent, a unit can use one action to acquire it as a target (also see *Panic Attack* below). A target can also be automatically acquired if the attacker moves within ten hexes of the defender and a clear line-of-sight exists between the two. This target remains acquired until the unit's line-of-sight with the target is broken.

It is also possible to acquire a target by "tailing" it. To tail an opponent, one must end the turn in the target's rear defense arc. An opposed Piloting check is made between the two pilots on the next turn if the attacker is still tailing the defender. If the tailing unit succeeds, the target becomes acquired. For each subsequent turn where the target is tailed but not acquired, add +1 to the attacker's roll for acquiring the target.

• STANDARD ATTACK

After performing target acquisition, a unit may attack the target with one weapon or set of linked weapons. Firing a weapon or link costs one action per firing as per the standard tactical rules. Ammunition consumption remains the same as in the Tactical game, except for Saturation fire (see page 15). Damage is applied immediately as each weapon hits.

• PANIC ATTACK

A Panic Attack consists of an attack performed without first acquiring the target (in effect, taking a wild shot). Panic Attacks suffer a -2 penalty on their attack rolls. If a unit performs three Panic Attacks (successful or not) against a target without ever losing their line of sight, the target is automatically acquired.

CHANGING WEAPON SYSTEMS

Each crewman can handle a single weapon system, or set of linked weapons, at a time. Using more than one is simply too confusing in the heat of close quarter battles. Switching between weapon systems costs one action. A set of linked weapons is considered to be one weapon for the purpose of this rule. It is possible to add or remove a linked weapon from the firing link at the cost of one action. Such a weapon must have paid the cost for being linked (i.e., non-linked weapons may not be added to a weapon link).

ACTIVATING AUXILIARY SYSTEM

Before using any auxiliary system, such as ECM, active sensors or smoke launchers, a vehicle crew must expend one action preparing the system for use. This action succeeds automatically. Communication systems and passive sensors are assumed to always be "on" and do not need to be activated prior to being used. However, if either is shut down (to avoid leaving telltale emissions, for example), it takes one action to activate them.

USING AUXILIARY SYSTEM

Once an auxiliary system has been prepared, a vehicle's crew may expend one action to use it. If the system requires a roll of some sort, it is performed when the action is expended. An auxiliary system may be used multiple combat rounds in a row without additional preparation. If two rounds go by without the system being used, the crew must expend one action to prepare it again.

PREPARING TO EMBARK/DISEMBARK

One action is required for a vehicle crew outside their vehicle to prepare to embark or for a crew inside their vehicle to prepare to disembark. This action covers the various ingress preparations, such as lining up for orderly entry, opening hatches and access doors, etc. Crew preparing to leave the vehicle must likewise release their security harnesses and move into position by the doors.

EMBARKING/DISEMBARKING

Once a vehicle's crew has prepared to embark or disembark, up to ten crew members or passengers may enter or exit the vehicle per action expended, provided the situation allows it. This action covers various activities such as entering the crew compartment or cockpit, settling down, reaching for straps and belts, etc.

WARM-UP/SHUTDOWN

Since Skirmish scale rounds are so short, the actual act of starting up a vehicle's engine or shutting it down requires a full action. In most combat situations, all vehicles will already have their engines started, but in some scenarios a vehicle's crew could begin the game outside their vehicle.

In such cases, the crew is treated as an infantry squad with a skill level one lower than their crew level (e.g. a Veteran vehicle crew becomes a Qualified infantry squad). The crew is divided into makeshift units of around five people. They are armed with pistols (Acc. 0, ROF 0, Dam. x1, Base Range 1 Skirmish hex). One in five crewmen may be equipped with a heavier weapon: for simplicity, it is treated as a standard 7 mm infantry rifle.
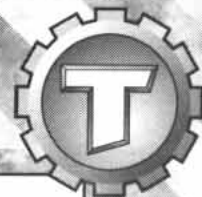
2.3 MOVEMENT AND TERRAIN

Vehicles move in the same manner as in a normal tactical game, with but one exception: sharp turns now cost one action to perform, in addition to one MP (see *Maneuvering*, p. 9). Otherwise, the mechanics of movement work exactly the same as in the normal tactical game (see the **Heavy Gear** rulebook, p. 88).

There is a difference, however, in the cost (in MPs) of the various hexes of terrain. When dealing with 50-meter hexes, some averaging must be made to account for natural variation. For example, ground-effect vehicles cannot normally cross a forested hex because they lack the required leverage to knock down trees that are in their way. Movement is still allowed through Forest hexes in the tactical system, however, because trails, clearings or small dirt roads might exist that would allow them to pass.

In the Skirmish scale, hexes are only 10 meters wide. This leaves a lot less room for suppositions, so the movement costs of the various terrain types have been changed to take this into account. Some hex terrains are now prohibited to certain types of units; these are marked "n/a" in the table below. Note that the Skirmish scale rules outlined in the **Duelist's Handbook** do not list these Skirmish MP costs because the rules were included to help define arena combat, where the terrain is relatively uniform. If the players agree, the following Skirmish MP costs may be used to further define an arena's terrain.

Advanced Skirmish Terrain Costs

Terrain Type	Walker MP	Ground MP	Hover MP	Naval/Sub MP	Obscurement?
Clear	1	1	1	n/a	N
Rough	1	2	2	n/a	N
Sand	2	2	1	n/a	N
Woodland	2	4	n/a	n/a	Y
Jungle	3	n/a	n/a	n/a	Y
Swamp	3	4	1	n/a	Y
Water	3*	4*	1	1	**
+1 elevation	add 2	add 2	add 4	n/a	N
-1 elevation	add 1	-	-	n/a	N

Only amphibious walkers and ground vehicles may enter Water hexes. Other walkers and ground vehicles will flood and automatically be put out of action. Amphibious vehicles cannot enter or exit water while moving at Top Speed.

** Water only produces obscurement if the defender is in a Water hex and is submerged. In this case, water produces 1 point of obscurement per 3 hexes.*

2.3.1 SKIRMISH SCALE STACKING

No more than 15 Size points worth of units may occupy a single Skirmish-scale hex at any one time. Five infantrymen or less now count as a single Size 6 unit. Vehicles larger than Size 15 will occupy multiple hexes (see page 90 of the main rulebook).

If a unit attempts to enter a hex that is already occupied by 15 Size points (or if its entry would bring the total above 15), it is automatically assumed to be ramming the unit(s) present in the hex (ramming player's choice of target in the case of multiple targets). Ramming rules are found in section 2.5.2 *Physical Attacks*, p. 14.

If the rammed unit is a vehicle and sustains enough damage points in the collision to cause a Light Damage result or more, it is moved one hex directly away from the direction the ram came from. If the rammed unit does not sustain at least Light Damage, the ramming vehicle ends its movement one hex before the disputed hex (but the collision still occurs). If the rammed unit was an infantry squad, it moves one hex (in any direction) away from the disputed hex no matter the damage received (if any).

Skirmish Scale Stacking Example

A *Hunter* (Size 6) is standing in a Skirmish-scale hex. A *Grizzly* (Size 7) then enters the hex. There are now (6 + 7 =) 13 Size points in the hex. Another *Grizzly* attempts to enter the hex. There is not enough room for all three of them (13 + 7 = 20, which is higher than 15), so it collides with one of the two vehicles already present in the hex.

An *Aller* MBT (Size 14) automatically collides with any vehicle larger than Size 1, as the total Size points per hex will surpass 15. Colliding with the above mentioned *Hunter*, it would in all likelihood send the Gear flying into the next hex. Were this to send the *Hunter* back into the hex with the two *Grizzlies*, another collision would occur.
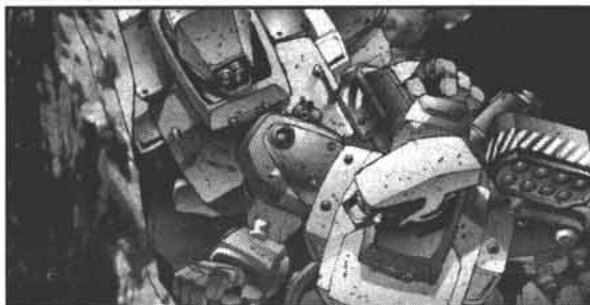
2.4 LINE-OF-SIGHT AND OBSCUREMENT

The rules for detecting and engaging an enemy unit do not change from the tactical to the Skirmish system, but they are reproduced here for clarity and ease of reference.

A unit must "see" its target to fire. The ability to target an opposing unit is called having a Line of Sight (LoS). Vehicles are considered to have a LOS unless one of the following occurs:

1)	Any terrain between the two units is one or more elevation levels higher than both the units.
2)	Either unit is within the dead zone of an intervening elevation level. A unit is within a dead zone if it is adjacent to an interceding elevation increase.
3)	The concealment value between the attacker and the target is greater than the attacker's detection rating (see below). The concealment value is equal to the Obscurement score of all terrain directly between the two units, plus the Obscurement score of the terrain the defender is in. If one of the two vehicles is on a higher elevation level than the other, only the terrain at the higher elevation level and the terrain of the defender's hex are counted for concealment purposes.
	Obscurement scores are covered in their own section further on. In addition to making a target difficult to detect, Obscurement penalties are applied to the attacker's roll in combat.

2.4.1 DETECTION RATING

The vehicle's sensor rating is added to its crew's Electronic Warfare skill to produce the vehicle's passive sensor value. In addition, all units, including infantry, have a base detection value of 4 in daylight or 2 at night from unassisted vision. The highest value of the two (passive sensor or unassisted) is the vehicle's final detection rating.

2.4.2 ACTIVE SENSOR LOS

Active sensors can be used to obtain a LOS on an enemy even when visual or passive sensor LOS is impossible. To activate sensors, an Electronic Warfare skill test is made, modified by the vehicle's Sensor rating. The threshold number is equal to the target's concealment value minus one for every hex the unit moved this round and minus one for every weapon the defender fired. The rating of any stealth systems possessed by the defender is added to the target number.

A success reveals the defender's position to the detecting unit and thus allows it to attack as normal (Obscurement still applies to the attack roll). A draw, failure or fumble does not reveal the target's position. Vehicles with no sensors cannot perform active sensor detection. Active sensor sweeps, unlike passive or visual detection, require a full action to complete and are detectable by anyone within sensor range (i.e., no hiding while using active sensors). The following table is a brief summary of the bonuses and penalties that modify the threshold.
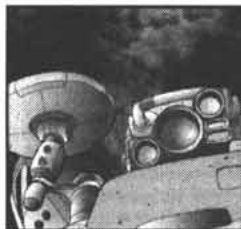
Detection Threshold Modifiers

• Applied to attacker's roll	
Sensor Bonus	variable, by default 0
• Applied to (concealment) threshold	
Stealth Bonus	variable, by default 0
Movement Penalty	-1 per hex moved by target
Combat Penalty	-1 per weapon fired by target

2.4.3 OBSCUREMENT

Some of the rules about terrain and cover are slightly modified to fit within the reduced scale. They mostly concern the Obscurement values and the damage points required to ignite/destroy certain types of hexes.

Each Skirmish scale hex produces only one-fifth the obscurement of a standard 50-meter tactical hex. To simplify things, Obscurement values were recalculated to take this into account. In the Skirmish scale, all Obscurement-producing terrain types cause one point of Obscurement per terrain type, not hexes, crossed by the line-of-sight between attacker and target. For example, if there are Jungle hexes in the line-of-sight, the Obscurement modifier is +1. If the LoS also crossed Swamp hexes, the Obscurement modifier would be +2, and so on. Some terrain types do not cause Obscurement (Clear hexes, for example) and are not counted in the total.

Additional Obscurement may be caused by a great number of obscuring terrain hexes. The table below lists the minimum number of hexes required to produce one more point of Obscurement for each terrain type.

Certain weather conditions may contribute to Obscurement: see 2.6.7 for more detail. Smoke, whether natural or artificial, will also cause obscurement. A standard smoke launcher will cover five Skirmish hexes per shot (any disposition, as long as the hexes touch another).

Additional Terrain Obscurement

Terrain Type	Minimum Number of Hexes for +1 Obscurement
Clear	-
Rough	-
Sand	-
Woodland	5
Jungle	3
Smoke	5*
Swamp	5
Water	3**
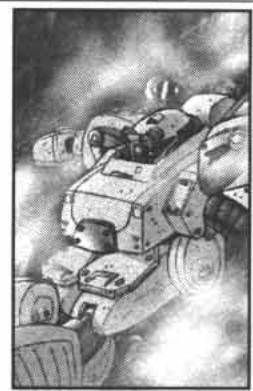
Smoke produces 2 points of Obscurement per five hexes.

**Water only produces Obscurement if the defender is in a Water hex and is submerged.*

Skirmish Obscurement Example

During a jungle fight, Heavy Gear Alpha tries to acquire Heavy Gear Beta and fire on him. Beta, not wanting to risk getting shot, is hiding behind three hexes of Woodland and four hexes of Jungle. For the sake of simplicity, it is assumed that neither unit is presently moving.

The basic Obscurement penalty is equal to 1 for each type of Obscurement-causing terrain, for a total of 2 (1 for the Woodland terrain plus 1 for the Jungle terrain). This is increased by 1 because there are four hexes of Jungle, which is greater than the three hexes required to count as additional Obscurement. The new total is thus 3, which is less than the daytime Detection rating of Alpha and thus does not require an Active Sensor roll. If Heavy Gear Alpha tries to attack, his attack roll will be penalized by -3 plus any other modifiers.
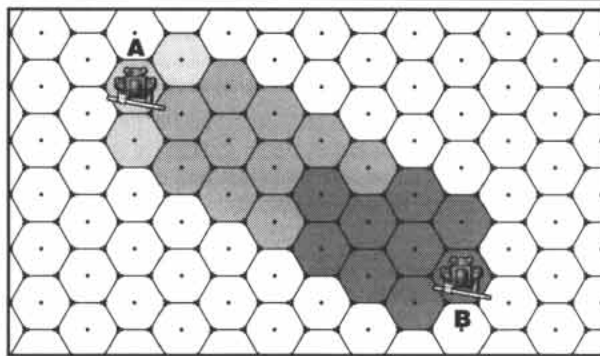
2.4.4 ECM AND ECCM EFFECTS

ECM and ECCM results are rolled immediately after an action is spent to activate these systems, but their effect is not felt until the beginning of the next round. If ECM is active and functional during the initiative phase, all sensor and communication rolls for the round are affected and must beat the ECM threshold to function. The unit using either of these systems is the one testing, not the receiver. Transferring Command points requires a Communication test from the commander's unit (if an infantry squad, use Infantry skill with Communication rating of 0).

If ECCM is active during the initiative phase, all active ECM systems must compare their own threshold to the ECCM's threshold (or thresholds, if there is more than one ECCM system active). If the ECCM score is equal to or higher than the ECM score, the ECM does not work. The ECM unit may spend an action during the turn to try and increase its own threshold in order to beat the ECCM in the next round. Likewise, the ECCM unit may spend an action to try to raise its own threshold for the next round.

ECM and ECCM Ranges in Hexes

Scale	Maximum range in hexes
Skirmish	(Sensor Range x 1000) + 10
Tactical	(Sensor Range x 1000) + 50
Air War	(Sensor Range x 1000) + 250

The three formulas above give distance-to-hex conversions for all three game scales. For the sake of simplicity, signal strength and the system's sensitivity are assumed to be constant over this distance. A vehicle's sensor range can be increased by boosting the sensors' power. Rules for this can be found in the **Technical Manual**, page 75.

2.4.5 STEALTH EFFECTS

Stealth systems are design features that absorb radio waves and minimize laser return signals, both of which are primary active sensor carrier waves. During daytime, the rating of a Stealth system is added to the Concealment total only when there is Obscurement between the attacker and the defender (Stealth does not confer invisibility, after all). Stealth systems are always added to the defender's concealment at night since it is assumed that stealth vehicles are painted in dark shades and feature silent running drive trains, making them hard to locate with human senses and sensors alike.
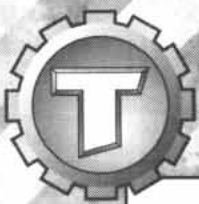
SKIRMISH SCALE

2.5 WEAPON ATTACKS

The attack procedure remains exactly the same in the Skirmish scale, although some numbers have to be modified to take into account the decreased scale. In addition, due to the increased level of detail the Skirmish scale brings about, some additional clarifications are required for weapon fire.

If a unit has a LOS to a target within its weapon's firing arc and range (remember that range is modified because of the scale: see *2.1 Change of Scale*, p. 6), it can attack that target. An opposed skill test is required to determine the success of an attack. The attacker uses his unit's Gunnery skill and the defender uses his unit's Piloting skill to make the roll. If the attacker wins the skill test, the attack succeeds as normal. If the defender wins or if a draw occurs, the attack misses. The modifiers to both rolls are exactly the same as in the tactical game (refer to page 93 of the rulebook if necessary).

2.5.1 CONSECUTIVE DEFENSE PENALTIES

In large, pitched battles, one doesn't always have time to react to incoming fire from multiple locations. Extremely agile units can defend more easily against multiple attacks, but avoiding multiple incoming assaults during a single round becomes more and more difficult. A penalty of -1 is applied to the defense roll of a unit when defending against a second attacker. Another -1 is added for each new attacker, with a maximum penalty of -3 (including all other modifiers).

For example, a vehicle has a total defense modifier (movement, maneuver, Obscurement, etc.) of -1, plus its skill roll. That turn, it defends normally against the first attacker, at -2 versus the second, and -3 versus the third and any subsequent attacker (since the maximum penalty is -3). Conversely, a vehicle with a total defense modifier of +2 would defend at +1 against the second attacker, 0 against the third, and so on until the penalty reaches -3.

2.5.2 PHYSICAL ATTACKS

Few vehicles can make effective physical attacks. Ground vehicles are capable of ramming, but few commanders exercise the option. With the humanoid Heavy Gears, old-fashioned, close-in attacks have become common. Ramming, punching, kicking, stomping and all manner of melee weapons are used on the battlefield when ammo runs out.

All physical attacks use the attacker's Piloting skill instead of his Gunnery skill. Except for melee weapons, the Fire Control rating is not used. Body attacks (punches, kicks, ramming) add the Maneuver of the vehicle to the Piloting skill roll as normal. Facing is determined by the hexside of entry, although a defender may spend an action or a Command point to turn around and face its attacker.
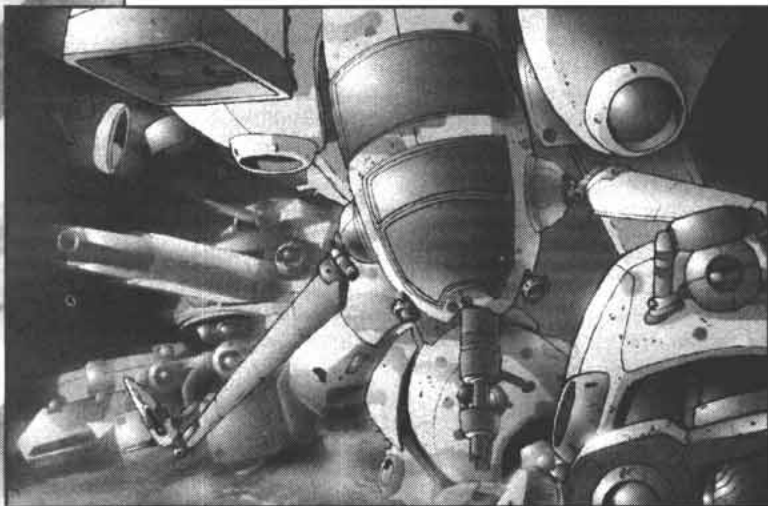
• RAMMING

Impact at high speeds can be devastating to both attacker and defender. Suicidal units have been known to engage in head-on collisions. Impacts from either side are less lethal and impacts from the rear are much less dangerous. Unlike other attacks, ramming inflicts damage on **both** attacker and defender.

When checking for ramming damage, the ramming speed is first determined based upon the direction of the attack: for head-on collisions, add the speeds of the attacker and defender; for side impacts take only the attacker's speed; and for rear collisions take the difference between the two.

Once the impact speed has been established, a damage modifier is determined using the impact speed table (on the next page). This damage modifier is added to the Size of each vehicle to determine the total damage multiplier of the vehicle. Each vehicle will take an amount of damage equal to the Margin of Success of the attack multiplied by its opponent's impact damage multiplier.

Ramming Speed

Ramming Direction	Impact Speed
Head On	Attacker Speed + Defender Speed
Side	Attacker Speed
Rear	Attacker Speed - Defender Speed

Impact Speed Modifiers

Impact Speed	Damage Modifier
1-2	-2
3-4	-1
5-6	+0
7-9	+1
10-19	+2
20-99	+3
100-999	+4

• PUNCHING

An arm specifically designed for punching is required to perform this action (i.e., it must be included in the Offensive Score of the vehicle). The Heavy Gear is the most common punching vehicle, but construction vehicles with hydraulic arms can achieve a similar effect. The damage multiplier of a vehicle's punch is listed under its Perks and is generally equal to the rating of the punching arm (though it can be lower if desired). At the pilot's discretion, punches can also be pulled, reducing the damage multiplier, without any other penalty.

• KICKING AND STOMPING

Kicking vehicles and stomping infantry are both valid walker attacks, provided both the attacker and the target are in the same hex. Kicking or stomping requires a Piloting roll vs. the defender's Piloting (or infantry) skill. The damage multiplier is equal to the Size of the vehicle.

• MELEE WEAPONS

Much like punching, attacks with various hand-held weapons is a Heavy Gear battle signature. To use a melee weapon, the pilot must attack using his Piloting skill; the Fire Control rating applies in full. Each weapon has its own damage multiplier.

2.5.3 BURST FIRE

Because the standard ROF fire rules represent the unit firing multiple times during the tactical 30-second round, it costs a lot of ammo. In the Skirmish scale, shorter bursts are fired, reducing ammunition consumption. For each point of ROF used, only five shots of ammo are consumed. Missile ROF ammunition costs are not affected and remain the same.

• SATURATION FIRE

Saturation fire affects three Skirmish-scale hexes for every tactical-scale hex that would normally be affected. The hexes must be touching one another (see diagram for examples of valid fire patterns). Otherwise, the normal saturation rules apply.

Saturation Fire Diagrams

The diagrams at right show three valid fire patterns when laying down saturation fire. As long as the three hexes are touching each other and the entire pattern is located with the weapon's Medium range or less, they may have any orientation in regard to the firing unit.

All three hexes must, obviously, be directly visible to the firing unit. One cannot shoot around obscurement by "bending" the fire pattern. The modifiers and damage effects are worked out for each hex separately. If a target in one hex is under more Obscurement than the attacker's Detection rating, it is considered acquired and can be attacked by the Saturation fire.

Sturation Fire Patterns
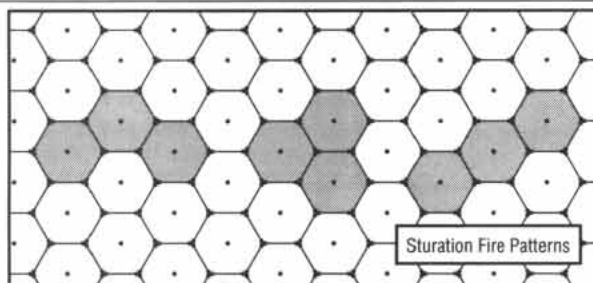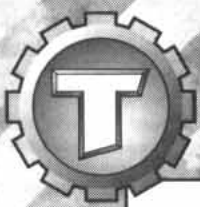
2.5.4 AREA EFFECT WEAPONS

All area effect diameters are multiplied by five, thus a weapon with a tactical AE of 3 would have a Skirmish scale AE of 15 (a weapon with an AE of 0 would have a Skirmish blast radius of two hexes — the same as the Point Blank zone, see p. 6).

Only the area within a zone equal to the weapon's tactical AE times two (the "primary" blast zone) is fully affected by the explosion. Targets within the Skirmish AE but outside the primary zone receive only half the damage. This represents the fact that the effect of an explosion decreases proportionally with the distance from the impact point — it doesn't just stop suddenly. On the diagram below, the primary blast zone is in black while the secondary one is in gray.

Purists may want to decrease the damage along a more sloping curve, but this would slow down the game considerably. We feel that the above approximation is best for most games.
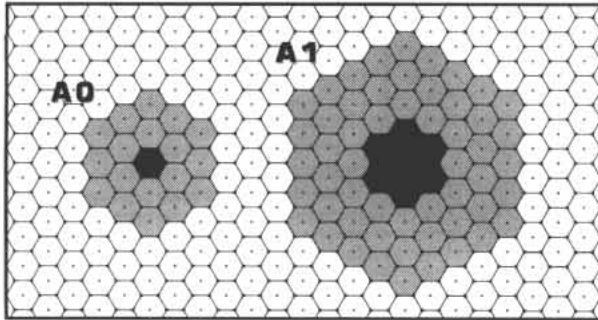
Area Effect Diagram

The diagram on the far left shows the Skirmish area effect template of a burst weapon with a tactical Area Effect of zero. The black hex in the center is the primary blast zone, where the target takes full damage, while the gray-shaded hexes around it represent the secondary blast zone, where the target(s) receives only half damage.

The diagram on the left represents the area effect template for a weapon with an Area Effect of 1. The primary blast zone is the two-hex radius area in black while the secondary blast zone is the five-hex radius area in gray. An AE2 weapon would have a primary blast zone with a radius of four hexes, including the hex where the shot lands. The secondary blast zone would be ten hexes large.

• BLAST RESULT OF AREA EFFECT WEAPONS

The concussion from an area effect weapon can knock walkers and infantry off their feet. Walker vehicles are automatically pushed back one hex from the center of the blast and knocked to the ground (roll Piloting as per normal falling to avoid damage, see **Heavy Gear** rulebook, p. 107) if they are in the blast's primary zone, no matter the damage suffered (if any). Walkers in the secondary zone must make a Piloting skill roll versus a threshold equal to the damage total divided by five, rounded down. If failed or fumbled, the vehicle falls down, again as per the optional falling rule in the rulebook. Infantry are always thrown to the ground regardless of the blast zone they are in. Like walker vehicles, it costs them one MP to get up.

Vehicles may be physically pushed by the blast. In some cases, the explosion might even overturn traditional light ground vehicles. If a vehicle is located in the primary blast zone of an explosion and the damage total is equal to or greater than three times the vehicle's Size, the vehicle is pushed back one hex from the center of the blast (two hexes for Hover vehicles). Roll on the table below to check if the vehicle is overturned. Hover vehicles are more likely to simply be pushed away and apply a -1 modifier to the die roll.
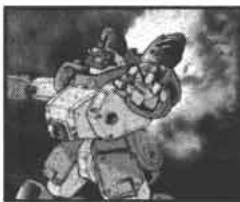
Blast Effect

1d6	Result
1-2	The vehicle remains upright
3-4	The vehicle ends up on its side (roll randomly which one)
5-6	The vehicle is overturned

Note: Hover vehicles have a -1 modifier to the die roll (min. 1).

• POWERFUL WEAPONS AND AREA EFFECT

Powerful weapons often affect not only the target but also the area immediately around it: shell and missile explosions scatter high velocity shrapnel, high energy weapons cause burns and a thermal bloom shock waves, etc. Although this additional damage effect is too small to be modeled in the tactical scale, it must be represented in the 10-meter hexes of the Skirmish scale.

Ranged weapons with damage multipliers of x20 or greater are considered to have an area effect in Skirmish-scale combat. Weapons with damage multipliers between x20 and x49 have a Skirmish scale AE of 0 (they affect the whole 10-meter hex where the target is standing). Weapons with damage multipliers greater than x50 have a Skirmish scale AE of 1.

2.6 SKIRMISH SCALE OPTIONAL RULES

This section covers the adaptation of several advanced rules for the Skirmish-scale system. Although they bring additional complexity to the game, these rules will often be helpful when dealing with the special situations that always seem to crop up in a game. The use of any rule in this section is completely optional and must be agreed to by all players *before* the start of the game.

Because of limited space, only the most important special rules have been included here. Other advanced or optional rules, such as those outlined in Chapter 5 (page 32) of this manual, can be adapted practically as is or have conversion notes already built-in.

2.6.1 ARTILLERY AND SUPPORT

Some players may wish to place long range fire support units off the playing surface. Off-board artillery may use the same abstract rules as in the **Heavy Gear** rulebook (page 106), or they may use the advanced artillery rules outlined in Chapter 3 (page 20) of this manual. Either set is valid. If using the advanced rules, care must be taken to use the proper modifiers on areas of effect and the response time of the artillery batteries.

2.6.2 AQUATIC ENVIRONMENT

Naval vessels, submarines, hovercraft and amphibious ground vehicles and walkers are able to travel through Water hexes. Naval vessels, submarines and hovercraft must expend 1 MP per water hex. Amphibious vehicles pay the water hex MP cost for their movement type (in the Skirmish scale: 3 for walkers, 4 for ground vehicles). If their movement system is destroyed, amphibious vehicles may still enter water but may not move on their own.

Aquatic movement normally occurs on the surface of the water. Certain unusual walkers or ground vehicles are sealed against underwater environments (i.e. the Hostile Environment Protection: Underwater Perk), but lack the ability to float (i.e. the Amphibious perk). These "bottom-crawlers" pay the normal water hex movement costs for their type plus any costs for underwater elevation changes.

Only "bottom-crawlers" and submarine vehicles gain the full obscurement effects of water hexes. Note that Deep Water hexes are not used in Skirmish scale.

- ### SINKING

One die is rolled for any aquatic vehicle that suffers (or has suffered) a Heavy damage result. On a roll of 2 or less, the vehicle begins to sink. It immediately suffers a -1 Maneuver result and will be flooded and sink (i.e. be destroyed) in a number of rounds equal to the roll of one die. Even "bottom-crawlers" must test for sinking. Obviously, they would not actually sink, but would instead flood.

A vehicle that suffers an Overkill result will automatically flood. If the crew ejects, their chances for survival are the same as they would be with a normal ejection, though the crewmembers will have to swim to the surface after getting out of the vehicle.

- ### UNDERWATER COMBAT

Only torpedoes (rockets/missiles with Underwater ammo), depth charges (grenades with Underwater ammo) and melee weapons are effective underwater weapons. Projectile weapons jam due to water resistance as their projectiles attempt to leave the barrel; standard missiles, rockets and bazookas cannot ignite their propellants or are wildly inaccurate in the liquid medium. The concentrated blasts of energy weapons diffuse quickly in water, turning it into rapidly-expanding steam that usually hurts the attacker far more than the intended target.

Vehicles must have at least Hostile Environment Protection: Underwater in order to engage in underwater combat. Any vehicle without the Submarine movement type automatically suffers a -2 to its Maneuver score while submerged.

2.6.3 URBAN TERRAIN

Urban terrain in the Skirmish scale is considered to be a single building about the size of a house (16 damage points). Dense Urban terrain is considered to be a larger, more strongly built building (20 damage points). A large building may be spread over several hexes, but each hex is treated separately for damage purposes.

Infantry may spend one MP to enter either form of building hex. Vehicles may not normally enter a building hex. If the building has lost one half of its damage points or more, vehicles may then enter it at the same movement cost as Rough terrain (it has destroyed sections and gaping holes in it).

The building can lose these damage points as the result of being rammed. House-sized buildings (Urban terrain) count as an immobile Size 6 vehicle for damage calculation purposes. Larger buildings (Dense Urban terrain) are considered to be immobile Size 12 vehicles. Because they do not move, the buildings' defense rolls are always equal to zero against ramming attacks.

● WALLS

Walls are a special type of Urban terrain which crosses an entire Skirmish scale hex. In the tactical scale, walls are considered to be part of the Urban terrain located in the hex and are disregarded for simplicity. In the more-detailed Skirmish scale, walls can be both useful (as cover) and downright annoying (as obstacle).

In order to keep the game simple and fast moving, walls have been standardized. A typical wall stands at about three meters tall and is made of a resilient material such as stone or ferroconcrete. Walls made of lighter material, such as wood fences, have little defensive value for vehicles and are disregarded for simplicity. Walls are impassable unless they are damaged, destroyed, climbed or jumped over. Obviously, the vehicle must have the capacity to climb or jump for the latter options to work.

A typical wall segment of one hex has a Damage Point Capacity of 12 for a standard Wall and 16 for a Dense Wall. If involved in a collision, treat Walls as stationary Size 4 objects, while Dense Wall are Size 10. If the Wall hex loses one half of its damage points or more, vehicles may cross it at the same movement cost as Rough terrain (by going through the gaps).

Most large vehicles are able to fire over walls, gaining the wall's full Obscurement benefit but not being impeded in their own attacks. For simplicity, any unit of Size 4 or more can fire over walls. Units with the Low Profile Perk may not fire over walls when under Size 15, because they are too low to be able to clear the wall.

Infantry units disregard walls for movement and fire. It is assumed that they can climb over them using any convenient stairs or walkways, or their own climbing equipment. They may also simply go through doors, if any are present. Infantry units gain full Obscurement from the wall when placed in the Wall hex, even if attacked by a unit in the same hex.

● OBSCUREMENT FROM URBAN TERRAIN

Unlike other terrain types, Urban and Dense Urban terrain hexes do not have reduced Obscurement values in the Skirmish scale. Instead, the Obscurement of the two types of hexes is doubled. Skirmish scale Urban hexes have an Obscurement value of 2, while Dense Urban hexes have an Obscurement value of 4.

The increased Obscurment effect comes from the fact that Skirmish scale Urban terrain represents actual structures, rather than an abstracted landscape of alleys, road and gaps where a line of sight can be drawn. Structures block line of sight completely (disregarding glass-plated buildings for simplicity) and are hard to shoot through even when sensors provide the target's location.
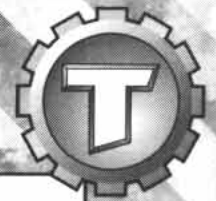
2.6.4 BRIDGES

Even small bridges can be fully represented at this scale. Movement across bridges still has the same MP cost as clear terrain, unless a road has been built on it. Each bridge hex is rated by the three usual attributes: Damage Point Capacity, Elevation Level, and Size Capacity. Obviously, each hex will have a lower Damage Point Capacity and Elevation Level to reflect the change in scale: divide the tactical scale's values by a factor of five, rounding up.

Apply the normal tactical scale rules for Size Capacity. If converting a tactical scale bridge to Skirmish scale, keep the same overall Size Capacity for each Skirmish scale bridge hex. Refers to the **Heavy Gear** rulebook, p. 110, for more information about bridges' structural and damage caracteristics.

2.6.5 INCENDIARY EFFECTS

The damage points required to ignite or destroy terrain are halved. To ignite a Skirmish Scale hex, a total of 50 Intensity points must be fired into it. No attack roll is necessary. Slow burn incendiaries have double the Intensity of other incendiary weapons. Once the 10-meter hex is ignited, it is considered to be a fire of Intensity 8. At the end of every combat round thereafter, its Intensity is increased by one until it reaches 20. Once it reaches 20, every adjoining hex ignites as an Intensity 8 fire.

2.6.6 CLIMBING AND FALLING

Any hex with an elevation change of two or more levels is considered to be a cliff. Vehicles may not normally ascend or descend cliffs. The one exception are walkers with arms. Infantry may climb or descend cliffs at normal costs for elevation changes.

If a walker has arms that can lift a vehicle of its own size, it can climb up or down a cliff face. The walker must pass a Piloting test with a threshold of 4 for every elevation level climbed. The walker ascends or descends the cliff face at a rate of 1 elevation level per combat round, regardless of available MPs. If the walker fails or fumbles a Piloting roll, it falls the remaining elevation levels. Climbing consumes a vehicle's entire MP allotment and is considered to be equal to expending the vehicle's entire Combat Speed MP. Climbing walkers and infantry are in poor defensive positions and suffer -2 on all defense rolls.

If a vehicle falls an elevation level or more, it takes reduced damage because Skirmish scale elevations are only 10 meters tall. The falling damage is calculated normally (see **Heavy Gear** rulebook, p. 106), but the result is halved (rounding up).

> • **SKIRMISH SCALE FALLING DAMAGE = (TWO DICE X VEHICLE SIZE X ELEVATION FALLEN) ÷ 2** •

Skirmish Scale Falling Example

A Size 6 Heavy Gear with a base Armor rating of 15 falls off a 2-level tall cliff. A level 2 cliff is equal to 20 meters in the Skirmish scale. Although the falling distance is shorter than a tactical-scale cliff (which is 50 meters), the fall is still going to cause a great amount of damage (point-wise) since the Gear does not have the benefit of the doubt normally accorded to tactical gaming. In the tactical game, it is assumed that the vehicle slides down a sloping cliff or hits a providential ledges to slow itself down since any direct fall would likely take just about any vehicle out of the game immediately.

The Heavy Gear lives up to its name and impacts squarely at the foot of the cliff. Two dice are rolled for damage, resulting in a 3 and a 5. The Heavy Gear takes 5 (highest die roll) x 6 (vehicle's Size) x 2 (elevations fallen) = 60 points of damage, which are then halved, for a total of 30 points of damage. This is equal to Heavy Damage.
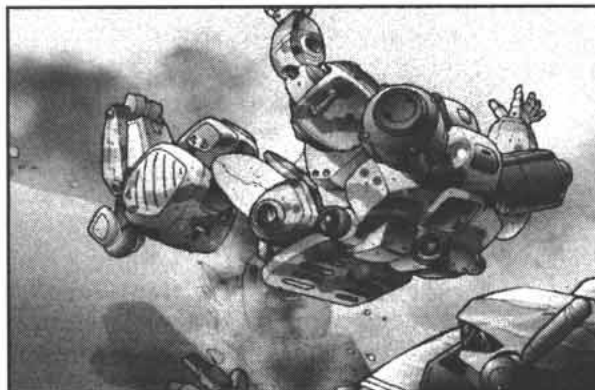
2.6.7 WEATHER

Weather is an important element to consider when planning a battle. History has many examples of fine military commanders suffering humiliating defeats because of unexpected weather conditions such as heavy rain or dense fog. Modern meteorological predictions alleviate the problem somewhat, but one does not always get to chose the time and place of an engagement.

The various rules for extreme weather conditions found in the **Heavy Gear** rulebook (page 108) and the **Tactical Air Support** rule supplement (page 20) can still be used. Any Obscurement effect caused by weather now applies only to every five hexes of distance, rounded up. For example, units caught in a sandstorm would apply a -1 modifier to their attack for every five hexes (or part thereof) of distance between themselves and their target.

ARTILLERY SUPPORT

Some players may wish to place long-range, fire-support units off the playing surface. Any weapon with the Indirect Fire or Guided perk may be used that way, provided it has the range to do so, obviously.

Artillery support is most often composed of several units placed in a combat group called a "battery." Batteries consist of one to five artillery vehicles that fight together as a whole. Batteries are most often located far from the battlefield, using the long range of their weapons to provide covering fire without exposing themselves to the enemy. An artillery attack is called a "fire mission." Fire missions are requested by a unit's Forward Observer or the commander himself (see *3.1 Requesting Fire Missions*, below). They can consist of one or two units firing on a specific spot or all units blanketing the area, at the caller's request.

Off-board artillery can be as close as a few hundred meters or as far as a few kilometers off the field. The player possessing the artillery must write down at the beginning of a game the direction and distance (in hexes) of the artillery piece from one hex on the edge of the mapboard nearest the artillery piece. The artillery piece's range is equal to its distance from that hex plus the distance from the hex to the target. The opponent will know the general direction of the incoming fire but not its distance or precise location (although this can be learned with a Counter-Battery Sensor Unit — see *3.3.1 Counter-Battery Fire*, page 24).

NOTE: If used, the following rules replace and completely supersede the rules found on page 106 of the Heavy Gear rulebook.

3.1 REQUESTING FIRE MISSIONS

Fire missions are called in by a dedicated artillery spotter unit called the Forward Observer. The Forward Observer must be identified as such before the game starts (preferably in writing), but his identity need not be revealed to the opposing player. Forward Observers can be vehicle-mounted or on foot; there is no difference as far as rules go.

The Forward Observer first opens a communication channel and gives the name (or codename) of the target, along with its description and coordinates. Target points are identified and objectives are planned before the battle whenever possible for maximum efficiency. Once the target is identified, the mission (illumination, harassment, etc.) is requested along with the type of ammunition and the number of rounds required.

Fire missions can be called at any time by spending one action. Only specific hexes, terrain features or buildings can be targeted by artillery fire, never combat units (except for locked-on Artillery Missiles, see 3.3.2 on page 24). The Forward Observer calling in the support fire must have a clear line-of-sight to the target hex. Because of this, Forward Observers will often find a nice position overlooking the battlefield and attempt to remain there.

A Leadership skill roll against a threshold of 6 is required to get through to the artillery battery. Any bonus from the calling vehicle's Communication system is added to the roll, if applicable. If the Forward Observer has not moved last turn, the threshold is only 5. If the Forward Observer has been in the same position, without moving, for the last two turns or more, the Leadership Threshold to call in fire missions is equal to 4.

If the Leadership roll is successful, artillery fire will normally arrive during the Miscellaneous Phase of the next turn. It is very possible that there will be a delay of one or more turns if the artillery battery is very far away or crewed with inexperienced gunners: the *Artillery Response Time* table on page 22 lists the flight and response times for all situations.

If the Leadership roll is failed, the request is not heard, but the next attempt is at +1, provided the new request is made the turn immediately after. A fumble means the communication did get through, but the wrong coordinates were transmitted. The target hex is missed by a distance in hexes equal to the roll of one die times two (see *Deviation* on page 22 for how to determine direction). The shells may deviate from the new target hex as well, depending on the Margin of Success (or Failure) of the artillery battery's crew.

3.1.1 CALLER HIERARCHY

Only the unit's Forward Observer may call in fire missions or cancel them. If the unit's designated Forward Observer becomes a casualty or loses his communication system to battle damage, his job is taken over by the unit's commander. The fire mission request threshold goes up to 8, since the commander must now divide his attention between the flow of battle and the artillery battery. If the commander should also be incapacitated, the second in command takes over, using the same threshold of 8. No other personnel may request artillery support.

Artillery Command Structure

Artillery is a powerful military asset, and every commander wishes he could call on fire support at any time. Unfortunately, fire support resources are always in short supply and an artillery battery can only cover part of the battle zone. Fire missions must be prioritized in order of increasing threat, and such decisions cannot be left to a poor scared kid in a trench (who's likely to call in support to deal with even small forces). Most artillery strikes are planned in advance, before the battle. Solid fire support plans, well-integrated into the overall strategy, are the mark of a good commanding officer. The time and location of each strike is carefully mapped out to ensure no friendly will be caught in the fire zone. Fire missions are not necessarily designed to hurt the enemy, but rather to force him to move into a pre-determined location.

It is said that no plan survives contact with the enemy, and fire support plans are no different. Although each battery will attempt to follow their primary assignments as best they can, they are also asked to answer "on the spot" requests from approved control units. Usually, this request comes from a Forward Observer, a scout who is specially trained to recognize what support is required. Should the Forward Observer become a casualty or somehow be prevented from fulfilling his duties, the senior officer in the field may take over and call in strikes by himself.

3.1.2 CANCELING FIRE MISSIONS

For a whole host of reasons, it is sometime necessary to cancel a fire mission. Fire missions can only be canceled the turn after they were called (i.e., before the artillery battery fires). Canceling a fire mission requires one action. The unit canceling the support fire must have a clear line-of-sight to the target hex. A Leadership skill roll against a threshold of 4 is required to get through to the artillery battery. Any bonus from the calling vehicle's Communication system are added to the roll, if applicable.

If the Leadership roll is failed, the request is not heard, but a new attempt may be made the turn immediately after. If this attempt is failed or fumbled as well, the crew ignores the request and the fire mission proceeds as normal. A fumble means the communication did not go through at all and the artillery fire proceeds as normal.

Friendly Fire Accidents

Most soldiers know that things will rarely, if ever, go according to plan. This includes long range fire support, whether planned or called in during battle. Artillery batteries are placed within a certain effective band to optimize the accuracy of their fire while reducing their vulnerability and exposure to the enemy. This means they must rely on the radio contacts they have with the battlefield (generally through communication with the senior commnading officier or Forward Observer) to get an accurate portrait of the battlefield situation and avoid firing on their own troops.

Strikes are carefully pre-planned and called to make sure no friendly forces will be caught in the barrage. Unpredictable movements may change this, however, and there is not always time to cancel the mission. A broken chain of command, either due to communication jamming or casualties, may cause a so-called "friendly fire" incidents.

There are a few exceptional situations where a friendly fire incident actually helped save a unit. During the War of the Alliance, a squad of UMF troop were pinned on a ridge when they called in an artillery strike. Due to an error in transmission, the squad supplied its own coordinates to the battery, which promptly sent a barrage of shells on their way. Unaware of this, the soldiers fought valiantly but were forced out. The GREL force captured the ridge just in time to receive the incoming artillery barrage.
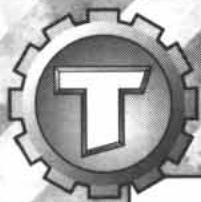
3.2 FIRE MISSION ATTACK PROCEDURE

Once the coordinates have been locked in, the artillery battery can fire. Firing costs one action, as with any other weapon. Artillery guns with large crews can thus fire several salvoes per turn. The flight time of shells is irrelevant to the game most of the time, except if the artillery battery is very far away or the game is played in Skirmish Scale (see page 6). The *Artillery Response Time* table below lists the response time for both game scales.

The assignment of the artillery battery also affects how fast the crew is able to respond to the fire mission request, see the *Artillery Delay Time* table, below. A battery which is reserved for the Forward Observer's exclusive use is going to respond much faster than a battery assigned to another combat force. For a regular game, assume that the artillery battery is merely attached to the forces on the board (unassigned and reserved batteries are included only for specific scenarios). Any delay is added to the flight time of the shells.

A flight time of zero rounds means that the shells arrive during the same round that they were fired; a flight time of one round means that they arrive the round after the round in which they were fired, and so on.

Artillery cannons (weapon codes LAG, MAG, HAG and VHAG) have an area effect to reflect the large number of projectiles they fire in one salvo (usually four to six shells in under ten seconds). Unlike normal Indirect Fire or Guided weapons, they can augment the size of the area affected by spreading the shells around. This adds one to the area effect (e.g. an AE of 0 becomes an AE of 1, an AE of 1 becomes an AE of 2, and so on) but divides the damage multiplier in half (rounded down). Such an augmented area effect is called an open sheaf. A converged sheaf is a pattern of concentrated fire — the weapon's normal AE.

Artillery weapons can use all of the new specialized ammunition types (as listed in the **Heavy Gear Technical Manual**, p. 65), except Non-Lethal ammo. A summary of the various types of shells and warheads is included in section *6.3.3 Artillery Ammunition*, p. 52. For convenience's sake, it is assumed that all shells in the salvo are of the same type.

The attacker must write down the destination, sheaf (open or converged) and nature (the type of ammunition used) of each separate fire mission. Note that he does not have to reveal anything about the type or nature of the incoming fire until it actually hits the target. Thus the defending player will know that a fire mission is incoming (from bribes of intercepted transmissions between forward observer and battery, ranging shots, etc.), but he will not know where it is aimed or whether the rounds are simply smoke or a more lethal payload.

When the fire mission arrives on the battlefield, the attacker rolls the artillery crew's Gunnery skill, modified as normal for range and movement, versus a threshold of 8. If the modified die roll is equal to or higher than the threshold, the fire mission lands right in the targeted hex. If the dice roll is failed or fumbled, the shot will deviate as per the rule below.

Artillery Response Time

Distance of battery in meters	Flight Time (Tactical)	Flight Time (Skirmish)
3200 and less	0 round	0 round
3201 to 6400	0 round	1 round
6401 to 9600	0 round	2 rounds
9601 to 12,800	0 round	3 rounds
12,801 to 16,000	0 round	4 rounds
16,001 to 19,200	1 round	5 rounds
Etc.		

Artillery Delay Time

Availability	Delay (tactical)	Delay (Skirmish)
Unassigned	12 rounds	60 rounds
Attached	6 round	30 rounds
Reserved	2 round	10 rounds

3.2.1 DEVIATION

Many factors influence the projectiles as they fly toward the battlefield: incomplete or uneven burn of the propellant charge, damaged or defective projectile, strong cross winds, etc. Because of this, even the most skilled gunnery crew will sometimes misplace their shots by a few dozen meters.

If the attack roll fails, the shot will deviate from its intended destination by a number of hexes equal to the Margin of Failure. To know the direction of the deviation, the attacker rolls one die and consults the Artillery Scatter Diagram on the next page.

If the attack roll was fumbled, the shot deviates as normal, but **toward the nearest friendly unit**. Sometimes, a fumble will land a shell right on top of an enemy unit anyway. Resolve the attack as normal: the crew goofed, but they still got lucky.

Artillery Scatter Diagram

The Scatter Diagram can be used in any situation where a random direction is required, such as determining thrown grenade scatter (see page 38) or moving Sensor Dependent units with no Sensor. For a pure roleplaying game, more detail might be required (or wanted). In that case, a twelve-sided die can be used to decide direction on a clock face (numbered from one to twelve), but the six directions of the Scatter Diagram are usually more than enough for game purposes.
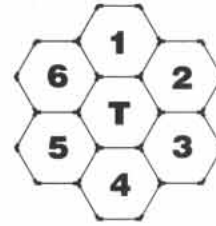
T: _____ Original Target Hex
#: _____ Die Result

3.2.2 RANGING SHOT

Because they fire from so far away, artillery units may require a few attempts before they hit their target. In order to save ammunition, the crew may use what is called ranging shots, where only a few shells are fired rather than a whole salvo. Ranging shots are called and treated as normal fire missions. They do no damage and do not consume ammunition since there are so few shells (the possibility of the odd damaging hit is disregarded to keep the game simple).

Each ranging shot gives a +1 modifier to subsequent attempts to fire at a given target, provided the firing unit does not move and does not switch targets. Thus, given the worst possible luck, an artillery unit will always hit its target on the eighth salvo. Ranging shots are incompatible with direct fire methods such as tracking and core sighting (see 3.4.1, page 26).

3.2.3 DAMAGE

Damage is applied as per normal weapon fire. For defensive purposes, the attack is considered to be coming from the hex on the mapboard nearest to the artillery battery. Damage is applied immediately; the target cannot fire back unless it survives the barrage.

If the attack failed, the weapon still caused damage equal to its basic Damage Multiplier to everything in its area effect.

All off-board artillery attacks are resolved during the Miscellaneous Events phase (Step Eight of the Combat Round). Counter-battery fire is resolved during the firing unit's next Action phase.

Fire Mission Example

Alpha Squad is under heavy fire. Its Forward Observer, piloting a *Jaguar*, decides to call in a fire mission to reduce the pressure on the troops. He spends one action and makes the Leadership roll: he rolls a three, plus one for his vehicle's communication system. The total is four, just enough to cut through the heavy interference so the artillery battery receives the coordinates. The *Jaguar* player notes the various characteristics of the incoming fire mission.

On the next turn, the defender, prudent, attempts to remove his unit from the vicinity of what he thinks is the target. In the Miscellaneous Phase, the fire mission arrives. The artillery battery is manned by a Qualified crew and is located at Medium range. The basic threshold is 8. The crew rolls two dice, yielding a 6. Modified by the distance (Medium range, -1), movement (Stationary, +2) and accuracy (-1), the attack roll gives a total of 6. The Margin of Failure is thus 2, which means the shot deviates by 100 meters, landing 2 hexes from the target. Rolling a die gives the direction.
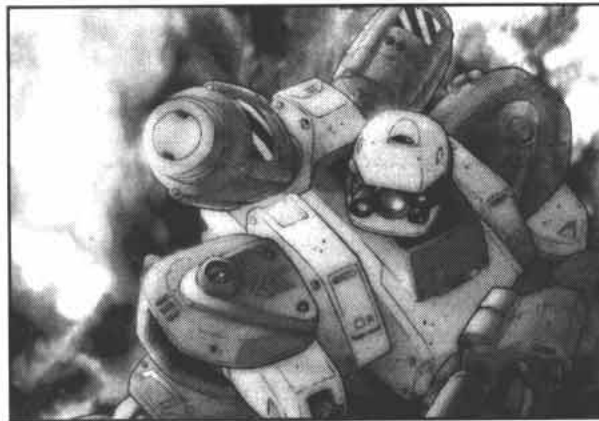
3.2.4 PSYCHOLOGICAL DAMAGE

Although artillery weapons are capable of inflicting terrible damage, their main effect is to destroy the morale of enemy forces. A constant bombardment will sap the morale of the troops in the field even though they might suffer very few casualties. The Morale rules (page 44) are highly recommended to simulate this. If the players prefer to play without them, the following behavior rule should be observed.

Because of the huge amount of shrapnel it throws around, artillery is especially devastating to infantry units. If any part of an artillery salvo falls within two hexes of an infantry squad, the squad must make a Leadership roll versus a threshold of 5 to keep moving. If the roll fails, they are pinned into place but may still fire their weapons. If fumbled, the squad may do nothing for the round. If a squad is caught in the area of effect of a salvo, it is automatically pinned down for the round and must pass the Leadership test to get moving again (even if the artillery barrage is over).

Armored vehicles have less to fear from artillery — only a direct or near-direct hit will harm them. Vehicles caught under a salvo must attempt to exit the area of effect as soon as possible, but suffer no additional adverse morale effect.

3.3 ARTILLERY MISCELLANEOUS RULES

Although most people think of artillery as the "rain of death" launched from large cannons or rack upon rack of long range missiles, in truth artillery has many more faces and uses. Even the standard vehicle-mounted rocket pod can be used to provide devastating area fire, while mortars and grenade rifles lend indirect firepower to even the lowly infantryman.

In addition to its task of providing support firepower, artillery can be used to attack enemy batteries, clear minefields and open trails through dense fortifications. The following text explains how to use artillery for such specialized missions.

3.3.1 COUNTER-BATTERY FIRE

All 62nd-century artillery batteries are mobile, rarely firing more than one or two salvoes before moving on. This is required since radar units can easily determine the position of the firing battery by analyzing the trajectory of the shells. If a vehicle is equipped with a Counter-Battery Sensor (CBS, see *New Perks*, page 55), it can use it to pinpoint the location of the enemy artillery unit that just fired on its location and relay coordinates to friendly units.

When an enemy fire mission is launched, an attempt can be made by any CBS-equipped unit within 20 tactical hexes (1000 meters) of the target hex to locate the fire mission's origin, allowing effective counter-battery fire. Activating the CBS costs one action. The operator "attacks" the enemy artillery using Electronic Warfare as the skill and the CBS as the weapon. The opponent must reveal in which range band his artillery battery is located. The CBS's base range is equal to its rating; it has +0 accuracy and does no damage.

A successful roll locates the last known firing position of the enemy battery. Obviously, if the enemy battery moved after firing, the information is much less valuable. A failure does not yield any information. On a fumble, the operator gets a phantom echo — any shot at the opposing battery automatically deviates by a number of hexes equal to the result of three dice, added together.

3.3.2 LOCKED-ON ARTILLERY MISSILES

Artillery Missiles (see page 49 for game stats) are capable of adjusting their flight path as they sail toward the battlefield. As a result, they are able to target moving enemy units if a target designator provides them with course correction data.

Artillery Missiles need not be aimed at a particular battlefield hex. Instead, they can be launched in "seeking" mode, where they will use the information provided by an allied target designator to decide on a target. The target designator must illuminate the target unit during the whole round in which the missile arrives. If this occurs, the designated target's current hex becomes the missile's arrival point. If the missile deviates, it will deviate from that hex. If no target designator is locked on, the missile will deactivate its warhead and impact harmlessly on the ground (roll as normal for scatter — building and terrain features in the landing hex will suffer 5 points of damage).

3.3.3 CLEARING MINEFIELDS

Artillery fire can be used to clear minefields with a brute application of firepower. If a minefield is present in the hex(es) targeted by the fire mission, it will automatically be affected by the impact of the shells and the concussion of the explosions.

The minefield's vehicular and infantry thresholds will drop by one point for every full ten points of damage caused to the hex, regardless of the type of sheaf used (open or closed). If either threshold falls below zero, the minefield, while not quite eliminated, has huge gaps in it and is no longer much of a threat to units passing through the hex. Units take the minefield's basic Damage Multiplier in damage points if they fumble their Piloting roll. Except for Water and Swamp hexes, the target hex's terrain is automatically transformed into Rough ground if the minefield is destroyed by artillery.

3.3.4 USING ROCKET PODS AS ARTILLERY WEAPONS

The military generally considers unguided rocket pods (VLRP, LRP, MRP and HRP) as short range weapons. This is not because they lack the necessary fuel to cover large distances (aircraft-fired rockets generally can reach longer engagement ranges), but primarily because they are inaccurate and thus unlikely to cause significant damage at long distances. They can be used with great efficiency against immobile targets, however, such as buildings or terrain features.

Any rocket pod can be used as an off-board artillery weapon. When used in this manner, the weapon can fire from its usual Extreme range to double that at a penalty of -4. Rocket pods must obey all the usual artillery fire rules and cannot be targeted at individual units, only buildings and terrain features.

Because the rockets cannot be aimed as precisely as in the direct fire mode, they deviate like other artillery fire if the attack misses. Use the Artillery Scatter diagram on page 23 to determine the direction of the deviation. Rockets do not have an area effect unless they are used to saturate a hex.

3.3.5 INFANTRY SUPPORT

The mortars carried by infantry units are capable of precise indirect or off-board fire, though the minimal sensor apparatus carried by the crew sometimes limits their efficiency when firing at unseen targets.

When used off-board, the weapons can fire from their usual Extreme range to double that at a penalty of -4. Mortars must obey all the usual artillery fire rules and cannot be targeted at individual vehicles. Infantry weapons do not have an area effect unless multiple mortars are fired together to saturate a hex (using the normal infantry ROF procedure).

• SNIPERS

Snipers are one-man units that operate independently, trying to pick off important enemy assets through sheer accuracy. Snipers are also known to cause severe morale problems — at least until they are spotted and have an artillery barrage called on their position!

A sniper is, in game terms, a one man infantry unit. He is armed with a long-range weapon: either the 15 mm Sniper Rifle, the Sniper Laser Rifle or the Anti-Gear Rifle (see page 100 of the rulebook). Stationary snipers may aim at a specific system on a vehicular target at no penalty, or they may choose to attack one specific infantryman when attacking a squad. Because they take great care to conceal themselves, snipers have the equivalent of the Stealth Perk at level 2. The sniper is counted as being two levels higher than his true skill when calculating his Threat Value (thus, no sniper may have a skill level of six or more). If the Morale rules (see page 42) are used, a standard Morale check must be made after each sniper attack (successful or not).

Sniper Equipment

• CAMOUFLAGE SUIT

Snipers commonly wear a high tech camouflage suit to reduce their sensor signature. The basic suit is made of a heat-dissipating material that has a limited ability to absorb radio waves in the radar frequencies. The suit features helmet attachment points for sensor equipment and can be hooked up to a thermal shroud to increase its heat-dissipation rate. When hooked up together, the suit and shroud disperse the sniper's body heat over a larger surface in a randomized pattern. Each suit is custom-fitted to the soldier and very expensive, which makes them somewhat rare.

• SENSORS

Snipers and support squad troopers carry electronic binoculars that have been modified to detect and process visual information in the infrared and low-light bands. A small processor can be hooked up to the soldier's communicator to transform the binoculars into a Heads-Up Display, relaying and displaying targeting information from the rest of the squad. Many carry the sensor apparatus on a helmet mount to leave their hands free.

• SNIPER ARMAMENT

Snipers are armed with an accurate long range gun. The weapon is painted in camouflage and equipped with a thermal shroud. The sniper laser is extremely accurate, but can easily be traced back to the shooter. The sniper must maintain the beam only for a fraction of a second or "shoot and scoot" to avoid detection. A sniper rifle avoids this problem and can fire specialized ammunition, but requires more expertise.

• SUPPORT WEAPON

One of the most common support weapons is the lightweight mortar unit. It is made of aluminum alloy reinforced with composite and is easy to deploy and carry by one man. Many current mortar designs use self-boosted ammo to reduce recoil and further decrease the weight of the launcher.

Sniper Laser Rifle

Low Light/IR Goggles

Camouflage Suit

Thermal Shroud

Polarized Goggles

Composite Armor

Portable 62 mm Mortar
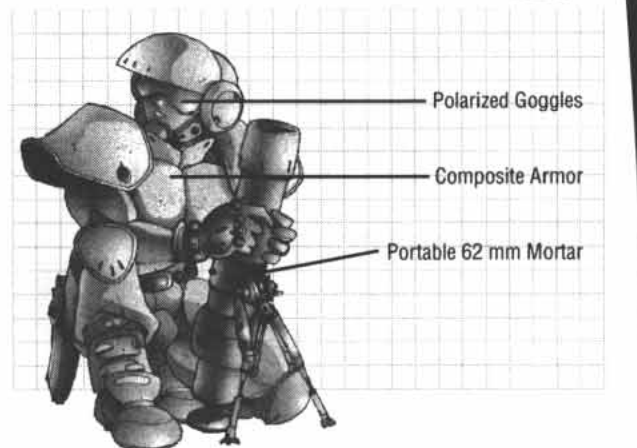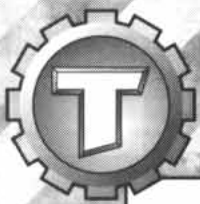
3.4 DIRECT FIRE

Artillery units are sometimes caught in the middle of a raging battle by the fast and unpredictable movements of the conflict. Artillery units that start the game on the board or find themselves trapped in the middle of a battlefield may elect to use direct fire. Like other direct-fire weapons, artillery units and artillery missiles may engage any moving or stationary targets, although they are not very efficient in the direct fire mode. Direct fire can only be used if the artillery unit can trace a direct line of sight to its target, otherwise the shot is resolved as a standard indirect artillery attack.

The artillery unit must have a direct line of sight to fire on an immobile target placed on the same board section. Immobile targets include bunkers, buildings, terrain features and disabled vehicles (stationary vehicles are still counted as mobile targets because they may move at any moment). The basic threshold to hit an immobile target is 5. This number can be raised or lowered by the usual attack modifiers.

If the target is mobile, hitting it is much more difficult because the bulk of the artillery weapon makes it slow to turn around to track the target. The basic threshold to hit a mobile target is 8 or the target's Defense roll, whichever is higher. As above, this number can be raised or lowered by the usual attack modifiers.

3.4.1 TRACKING AND CORE SIGHTING

There are two methods an artillery unit may use to increase its chance of hitting a target with direct fire attacks: tracking or core sighting. Units wishing to use either method must announce that they are doing so during the Declaration Phase of the turn. Both will work, but take some precious time.

If, at any moment during tracking or core sighting, the artillery unit is fired upon or otherwise attacked, it immediately loses all its accumulated bonuses and must start the process all over again in the next round (this is assuming it survives the attack).

• TRACKING

Tracking is a firing procedure in which the gunner holds his fire and continuously tracks the target to improve his chances of hitting it. In game terms, this translate into a reduced threshold number. Tracking only applies against moving targets.

To use tracking, the artillery unit's gunner must have a continual line of sight to his target at the beginning of each turn. Each complete turn of tracking lowers the attack threshold by one. Should the line of sight be lost at any point, all the accumulated tracking bonuses are lost as well. The artillery weapon must remain stationary while tracking.

Because the action on the battlefield is so fluid, spending too much time on tracking is considered extremely dangerous by most gunnery crew. Artillery units may only track targets for four consecutive rounds, after which they must either fire or lose their accumulated bonuses.

• CORE SIGHTING

Core sighting is another method of direct fire targeting, this time used against immobile targets. The procedure consists of nothing more than taking the time to adjust the target point and making sure the projectile(s) will hit the target.

To use core sighting, the gunner must have a continual line of sight to his target at the beginning of each turn. Each complete turn of core sighting lowers the attack threshold by one. If the line of sight is lost at any point (because of smoke, for example), core sighting bonuses may not be improved that turn. Firing bonuses accumulated through core sighting are not lost unless the artillery weapon is moved.

Because the action on the battlefield is so fluid, artillery gunners do not like spending too much time on core sighting. Artillery units may only track targets for two consecutive rounds, after which they must either fire or lose their accumulated bonuses.

3.5 GUN CARRIAGES

Gun carriages are simple towed platforms that allow small vehicles to carry and use heavy weaponry. Gun carriages are often used to transport artillery batteries and other battlefield support weaponry.

A gun carriage is built exactly like a normal vehicle, with the following exceptions: Ground or Naval are the only movement types available (other movement types require an engine to function); speed and Deployment Range are equal to 0 (gun carriages don't have engines). The Maneuver rating is applied as a modifier to the towing unit's Maneuver rating, and so is often equal to 0 or -1. The Sensors and Communication systems can be omitted if desired, but some carriages do have their own dedicated systems which may be used by the towing unit's crew if desired. Gun carriages can have a dedicated crew or can be operated by the towing unit's crew.

Because they lack an engine and many other mechanical parts, gun carriages can carry a much greater amount of weaponry and equipment than combat vehicles. The carriage is considered to be five Sizes larger than its final Size for weapon minimum sizes and ammunition purposes. This adjusted Size should be written down in parenthesis beside the unit's real Size.

Gun carriages take ten rounds to set-up, during which they can neither move nor fire. In Skirmish scale combat (see page 6), ten 6-second rounds are required to detach the carriage from the towing vehicle and forty more are required to set it up. At least one man or a vehicle with manipulator arms is required to detach the carriage. Set-up requires either a number of soldiers equal to the Size of the unit or an arm-equipped vehicle capable of towing the unit into position.

Move It Or Lose It

Gun carriages, also known as field artillery carriages or just gun platforms, are an inexpensive and easy way to allow heavy support weapons to be brought into battle. They are somewhat fragile, however, and take time to properly set up and prepare. Once set, they are very hard to move in a hurry. For this reason, gun carriages are generally used only to bolster defensive position or provide support to siege units and are rarely seen on the modern battlefields.

Large pitched battles, once common in the past, now rarely occur. They are just too costly (both in men and resources) and inflexible to fulfill most current military objectives. The modern battle is often a short and brutal affair, consisting of deadly fire exchanges between a small number of mobile units whose missions often consist of raids and fast strikes. The operational words are "get in, do your stuff, get out."

The relative immobility of a battery of ready-to-fire gun carriages make them very vulnerable to counter-battery fire and enemy overruns. Gun carriages are often placed within reinforced positions, such as a revetment, to ensure they will survive at least one counter-battery strike. They are almost invariably assigned "bodyguards," either Gears or infantry squads that act both as defenders and as replacement crew should the need arise.
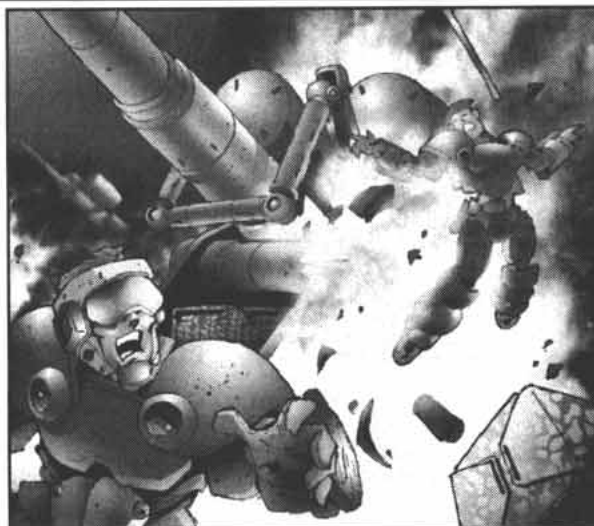
A Gunner's Pride

"There ain't nothing more beautiful in the world than a gunner's weapon. Ask any gunner 'round here, he'll tell you so. Check this out: this here is 'Patricia,' our self-propelled gun. She's a real babe, eh? That tube on top is a 200 mil electrothermal cannon — a good, solid thumper if I ever saw one. Notice how good she looks, even though she's been out in the field for twelve-odd cycles? We wash her, oil her, feed her, and pamper her. We take good care of her, and she slams the bad guys so they can't hurt us. You could say we gunboys are in love. It's the same for every battery.

What? Yeah, we feed her. We got cans of ammo over there — we call 'em cans, but they're actually revolver-type magazines. It's awesome to see her spit them all out — thumpthumpthump, like the sound of a big giant drum. She's a big eater, ya know, <wink> that's why we have lots of cans. Wouldn't want her to go hungry, it don't look so good.

They say we're supposed to "disable the unit and retreat" in case of an enemy overrun. That means we have to remove or rip out the breach block and the firecon module, or just drop a thermite grenade in the tube before leaving. Either way, you're not likely to use that gun ever again. But I couldn't do that to her — none of us gunboys could. Myself, I'd rather die than leave her in the greasy hands of the enemy."

Private Burke "Beanboy" Furhey, 365th Artillery Group

MINEFIELD

Mines have dramatically reduced in size over the centuries — the smaller a mine is, the harder it will be to find, and the more you can cram into one delivery system. Modern mines are made of light-weight, non-reactive plastic to avoid detection. Their small size, combined with their advanced design, make hidden minefields extremely hazardous to all types of 62nd-century combat units.

This section explains how to define and handle mined areas during the game. Six different types or "grades" of mines are available, depending on the target requirement. All can be modified using seven characteristics to customize them to the exact needs of the situation. In addition, special mine-scattering ammunition is also available for large guns and missiles, though it cannot be modified by the above-mentioned characteristics (the method of delivery makes most of them inapplicable).

The text also covers how to lay down mines both before and during a battle, along with the cost and time required to do so. Further, the reverse procedure is fully detailed, allowing infantry squads and vehicles to look for and disarm any hostile mines they might encounter.

NOTE: The following rules are significantly more detailed than those found on page 109 of the Heavy Gear rulebook. Either set of rules can be used at the players' discretion.

4.1 MINEFIELDS IN THE GAME

Any hex may be designated as a minefield (mines can be designed for practically any environment, be it ground, water or even air). The type of mine used to produce the minefield determines the minefield's threshold and damage multiplier. Treat minefields as areas that continuously have an area saturation attack in effect (see *Saturation Fire*, page 97 of the main rulebook). The mines themselves are so smal,l and there are so many of them, that the field effectively remains active throughout the game (unless cleared, see section *4.3.1 Minesweeping*, p. 31). Depending on their type, mines have different detonation thresholds versus different unit types.

Damage is considered to come from underneath the unit for game purposes, though some mine designs are first launched out of the ground before exploding and attack normally according to facings (see *4.1.5 Jumping Mines*, on the next page). Any additional armor is ignored, unless it is mounted directly on the underside of the vehicle. Mine attacks are automatically aimed at the Movement system, but do not suffer the usual -1 aiming penalty. No unit can be attacked more than once per hex during any given turn.

The costs given in the table (page 30) assume that the enemy is not aware of either the existence of the minefield or its location. Such a minefield costs the listed price. It is possible, however, to buy minefields whose existence is known by both sides. Such a minefield costs only one-third the listed price.

4.1.1 PROXIMITY MINES

Proximity mines can use a large variety of sensors and exploding devices, but the underlying principle remains the same: the mine lies dormant until its sensors are triggered by a passing unit corresponding to known enemy signatures. Proximity mines can use radar, sonar, vibrations, etc. to detect their prey — they are all equivalent in game terms. The most efficient sensor is assumed to be used.

Once a target is detected, the mine attacks by simply exploding, launching a tiny missile or emitting a searing energy beam. No matter the type, proximity mines are activated as soon as an enemy unit enters the mined hex. Friendly units passing through the hex will be unaffected as long as they broadcast the correct IFF (Identification Friend or Foe) code — thus, a friendly unit without a functional communication system will be attacked just like an enemy unit.

A cheaper type of proximity minefields is the "dumb" minefield, which lacks the sophisticated IFF sensor routine of the usual prox minefield. Its mines are triggered by a simple vibration or pressure sensors; anti-personnel mines can also be triggered by trip-wires. Such a minefield costs only half the listed price, but reacts to any unit (man or vehicle) entering its hex.

4.1.2 REMOTE-DETONATED MINES

Remote-detonated minefields are extremely sneaky and deadly. They can remain hidden until an enemy is well within the minefield's boundaries — then can be activated with deadly effect. Remote-detonated mines cost twice the listed price, but do not attack until activated by a friendly unit within communication range.

Activating a minefield requires either a LOS to the minefield hex, a satellite uplink or a forward observer. Any number of minefield hexes can be detonated at once, provided they satisfy the above condition. A Leadership roll must be made against a threshold of 2 plus the hex's terrain's MP cost (highest cost in case of multiple terrain types), modified by the vehicle's Communication rating. This roll costs one action. A successful roll means immediate detonation of the selected hex(es). A failed result means only some of the mines went off — halve the damage multiplier of the minefield. A fumbled result has no effect. Remote-detonated minefield hexes can be used only once per game (all mines in the hex are detonated simultaneously).

4.1.3 TIME-DETONATED MINES

Time-detonated minefields are not very flexible in game terms, though in reality they are extremely sneaky. They are equipped with a timer that activates the mines at a previously set time, regardless of who or what is in the hex.

This type of minefield costs only one-fifth the listed TV cost. The turn in which they will detonate must be recorded on paper before the start of the game. Time-detonated minefields can be used only once per game (all mines are detonated simultaneously). It is possible to buy multiple timed minefields per hex, though, creating a sequential explosion effect. For example, Minefield 1 might be set to blow on Turn 2; Minefield 2 on Turn 5, Minefield 3 on Turn 10, and so on.

A ruthless tactic is to lay a proximity minefield and a timed one in the same area. Once the proximity mines have been detonated, the enemy too often assumes the area is safe to pass through, leaving their soldiers vulnerable to the later timed detonations. At worst, it will force them to commit valuable resources to mine clearing.

4.1.4 HAYWIRE MINES

A rare type of minefield uses electromagnetic pulse (EMP) warheads instead of explosives. The bulk of the mine is taken up by a rapid-discharge energy capacitor, a simple flywheel/generator arrangement. The EM pulse generated by the self-destructing mine disrupts electronic systems in the target, coursing through circuitry and destroying non-grounded components.

Haywire mines cause only half the listed damage (rounded down), but roll twice on the System Damage table if they cause Light or Heavy damage. In roleplaying terms, treat the weapon as an electrical attack with an Intensity equal to its damage multiplier plus its Margin of Success, covering an area 10 meters across (one Skirmish scale hex).

4.1.5 JUMPING MINES

Jumping mines use a small rocket motor or compressed gas charge to "jump" into the path of their intended target before detonating. This allows them to attack almost any kind of unit, including aircraft flying at nap-of-earth (NOE) altitude over the mined hex. Because they have to be carefully placed and concealed, jumping mines may only be placed by infantry units.

Jumping mine attacks are unpredictable: the mine can be set to explode in front of the target (1-3 on one die) or wait until the target has passed and attack from behind (4-6). Other than this, they are treated as a normal attack on the facing rolled.

Flying Low

"One time, I was on a deep recon mission — no, I can't tell you when or where. Hey, tough. Anyway, I was flying over the hills, trying to stay low. Last thing I wanted was a missile in my tail pipe or a laser strobed all over my windshield. There were trees all around, just like a carpet, until I crossed a recently cleared zone. I'm the suspicious type, you see. It's saved my buns more than a couple of time. So I slow down a bit.

"Then suddenly, I got warning lights flaring up right and left. It's a weird sight: you just see these 'pops' of dust on the ground, and there's something in the air like a big black bug. Then it blows, and you have a face full of ceramite splinters — or worse. I pulled on the stick like crazy, and for a while I thought that either it or the turbines were gonna tear right off. I got lucky though, and I cleared the danger zone without damage. I became a pilot to avoid that nasty stuff, and now it's following me! Hate this, man..."

Debbie Jungston, hopper pilot

4.2 MINEFIELD COSTS AND CHARACTERISTICS

The following table lists the six main types of minefields available. More than one type of mine may be placed in any given hex, but the full price must be paid for each. The price below gives the cost to completely cover one tactical hex — additional Threat points spent on that minefield have no effect and do not give any kind of bonus. If the Skirmish scale is used, the listed cost will buy ten Skirmish-scale hexes' worth of mines (rather than 25 — it is supposed that a mined tactical scale hex is not fully covered by mines, allowing some units to pass through unharmed on a good die roll).

Minefield Type gives the minefield's primary function. Damage Multiplier is used in the same way as other weapons' damage multipliers. For simplicity, treat all mines as HEAT weapons. The Vs. Vehicles and Vs. Infantry columns list the threshold used to determine whether a hit has occurred and how much damage is inflicted. Finally, TV per Hex is the cost, in Threat Value points, of one tactical hex of this type of minefield. This cost will be further modified depending on the chosen characteristics of the minefield (dumb, remote-detonated, etc.). All costs are rounded up to the nearest whole point.

Mines delivered by artillery or other weapon fire are paid as ammunition for the weapon firing them and thus cannot use any of the special options listed in section 4.1. They are considered to be standard proximity minefields and have the same threshold (the saturation attack roll) versus vehicles as they do versus infantry.

Minefields

Minefield Type	Dmg Multiplier	vs. Vehicles	vs. Infantry	TV per Hex
Anti-Personnel	x5	4	7	2
Improved Anti-Personnel	x7	4	8	3
General Purpose	x10	6	6	5
Heavy General Purpose	x15	6	6	7
Anti-Armor	x15	7	4	8
Heavy Anti-Armor	x25	8	3	10

Minefield TV Cost Multipliers

Proximity	x1
"Dumb" Proximity	x0.5
Remote-detonated	x2
Time-detonated	x0.2
Haywire	x1.5
Jumping	x1.5
Minefield is known by both sides	x0.33

4.2.1 DEPLOYING MINEFIELDS

There are several different ways to deploy minefields. One of the most common methods is to place them by hand. A well-trained engineering or infantry unit (skill level 2+) can mine an entire hex in a matter of minutes. The exact time required is equal to the base TV cost of the chosen minefield (before any multipliers are applied), in minutes, provided the ten troopers in the squad work at it. Multiply the previous result by two to get the time required in Tactical scale rounds or by ten to get the time required in Skirmish scale rounds.

If only part of the squad works at it, the time required is proportionally longer. For example, if only half the squad place mines, it takes twice the time. If only one trooper places mines, it takes him ten times as long as if the entire squad were working at it. The time required is also doubled if the unit is inexperienced (skill level 0 or 1) or is not an engineer squad (the modifiers are cumulative). It is not possible to place mines while under attack.

Vehicles may be equipped with the Minelaying Equipment Perk, a set of special machinery designed to dig a small trench or a series of holes along the path of the vehicle (see page 55). The machinery then plants the mines and buries them. The smaller anti-personnel mines can also be "sprayed" behind the path of the vehicle, making them even faster to deploy. The whole system is very efficient and can lay up to five points worth of mines every two minutes (four tactical rounds or twenty Skirmish rounds). The minefield becomes active one minute after the minelaying vehicle has left the hex, though this can be increased if desired.

It is also possible to deploy minefields by using artillery weapons. Both tube and missile artillery can use Minelayer ammunition, which consists of a warhead filled with hundreds of tiny multi-purpose mines. Although these mines are easier to detect than infantry or vehicle-placed mines, which are carefully concealed rather than just thrown on the ground, their sheer number and small size ensure that those unsuspecting enemy units will walk right into them. The game stats for Minelayer ammunition can be found in the **Heavy Gear Technical Manual**, page 68.

4.3 CLEARING MINEFIELDS

Hidden minefields are very hard to detect, but it is possible to find them using sophisticated equipment, cautious probing by hand or just plain luck. Infantry units have a one in three chance of discovering a minefield when they enter a mined hex, even if they do not trigger it (i.e., receive damage). The player controlling the unit decides if he wants to bother with the roll (1 or 2 on one die reveals the presence of mines in the hex). The crew of vehicles passing through a mined hex, but not triggering it, will not be aware of what is around them.

Infantry units can be equipped with advanced scanning equipment to look for mines (see page 48). At least two men are required to carry the sensors and cannot carry weapons. By spending one action, the squad rolls using its infantry skill. The result is then compared to the lowest thresholds of any mined hexes within a two-hex radius. If the roll is higher than the threshold, any minefield hexes in the area scanned are identified as such. If it is equal or lower, there is no result.

Vehicles can also be equipped with special mine-detecting sensors. These are very similar to the sensors supplied by the Geological Sensor Perk, but are specially calibrated to detect the mass and faint emissions of buried land mines. This allows the vehicle to detect mines in the same way as an infantry unit, save that the sensor rating is added to its Electronic Warfare roll.

4.3.1 MINESWEEPING

There are several ways to clear mined hexes, but none of them are particularly safe (save for artillery bombardment, if only because the crew never actually enter the minefield). The job is always extremely dangerous and requires extensive training in the field of demolition and explosive devices.

The simplest and cheapest method is to send in an engineering or infantry unit which will attempt to clear a path through the mines. Too often, they have to make do with sticks, intuition and common sense to find mines. Luckier units will have access to special sensors, consisting of a bulky backpack and an antenna array, designed to find hidden mines. Needless to say, the job is dangerous and thankless.

Vehicles can also be equipped with specialized sensors designed to look for the telltale signs of hidden land mines. A mine plow or detcord launcher will then dispose of the newly-located mines and drop chemiluminescent sticks to mark the cleared path. The armored hull of the vehicle makes the job of mine clearing less dangerous for the crew, but once in a while a mine slips through and explodes, damaging or even destroying the vehicle. Often, engineering units rely on remote-controlled drones to avoid endangering soldiers.

Artillery can also be used to clear suspected dangerous areas. This tactic tends to be costly in ammunition and is not very subtle, often devastating the target area.

• INFANTRY

Infantry squads sent to clear minefields must remain in the mined hex for at least two complete rounds. By spending one action, they can roll versus the minefield's infantry threshold using their generic skill. Engineering squads add +1 to their die roll to reflect their additional training. If successful, both of the minefield's thresholds (i.e. vehicle and infantry) are reduced by one. If either of the two thresholds drops to zero or lower, the minefield is effectively neutralized (most mines remain, but a safe path is identified through the hex).

If the roll fails, the infantry unit is immediately attacked by the minefield, as per the normal rules. If the roll is fumbled, the infantry is also attacked but does not get a defense roll (i.e., the roll is equal to zero for damage purposes).

• MINE-CLEARING VEHICLES

Vehicles can be equipped with mine-clearing devices (see *New Perks*, page 55). The vehicle must remain in the mined hex for at least one complete round. By spending one action, the vehicle can roll versus the minefield's vehicular threshold using the crew's Piloting skill, adding the rating of the mine-clearing equipment. If successful, both of the minefield's thresholds are reduced by one. If either of the two thresholds drops to zero or lower, the minefield is neutralized.

If the roll fails, the vehicle is immediately attacked by the minefield, as per the normal rules. If the roll is fumbled, the vehicle is also attacked but does not get a defense roll (i.e. the roll is equal to zero for damage purposes).

• ARTILLERY FIRE

Minefields can also be cleared by concentrated artillery fire. Fuses will be set to explode after the shells have burrowed into the ground, increasing the chances of detonating as many mines as possible.

A minefield present in the hex(es) hit by the artillery barrage will automatically be affected. Both its vehicular and infantry thresholds will drop by one point for every full ten points of damage. If Anti-Structure ammunition is used, the damage caused by the attack is doubled as if the minefield were a building.

Except for Water hexes, the target hex's terrain is automatically transformed into Rough ground. Because artillery fire will not destroy all the mines, a minimum threshold of 1 will always remain, but can be removed using the other mine-clearing techniques.

OPTIONAL RULES

This chapter covers advanced optional rules for tactical combat. Not all of them will apply to a particular game, but they can be mixed and matched without ill effect. The effect of one rule upon another is clearly indicated in the text. Among the most useful or interesting of these optional rules are those that allow vehicles to go "hull down," effectively hiding behind terrain features. Also interesting are the rules that cover close combat, including new ways to use grenades; and those that cover the affect of troop Morale in how soldiers will behave.

Because the advanced optional rules listed in this chapter bring additional complexity to the game, it is highly recommended that players have a good understanding of the basic rules before attempting to use any of them. The use of any rule in this section is completely optional and must be agreed to by all players *before* the start of the game.

Perhaps the best way to introduce these advanced rules into a Heavy Gear tactical game is to create a series of scenarios, each featuring one new set of rules. New terrain types can be introduced by playing a series of battles set across Terra Nova; melee combat can be introduced in a urban close-combat scenario; field engineering might appear during a longer scenario featuring many troops on each side.

5.1 NEW TERRAIN TYPES

The various terrain types listed in the basic rulebook are those most commonly encountered on the surface of Terra Nova. There are, however, other types of terrain that are less common, but present unique difficulties to travelers and combatants trying to find their way across. The table below lists seven new terrain types, including three featuring the deadly white sand (WS for short) deposits that have made the desert of the same name so famous. Movement point costs for elevation changes have also been included for completeness.

New Terrain Types

Terrain Type	Walker MP	Ground MP	Hover MP	Obscurement
White Sand (WS)	2	2	1	-
WS Rough	1	2	1	-
WS Deposits	2	2	1	-
Snow	2	2	1	-
Deep Snow	3	4	1	1
Ice	2	3	1	-
Tar Sand	3	4	1	-
+1 elevation	add 2	add 2	add 4	-
-1 elevation	add 1	-	-	-

5.1.1 WHITE SAND TERRAIN

The Great White Desert and a few other areas in the Badlands are home to heavy deposits of white sand, a volcanic ash that is extremely corrosive. Forces doing battle in these areas will have to deal with several unique (and possibly damaging) conditions, all related to the presence of white sand in the soil.

White sand has a tendency to either pool in recesses or be deposited on the rim of dunes and rocks by the desert winds, depending on its origin and granularity. As a result, though Gears and other vehicles are very susceptible to the sand's corrosive effects, they can avoid damage if their crews remain alert. Some areas are so saturated with white sand, however, that damage is unavoidable. Although white sand may be present almost anywhere, for tactical purposes there are three general types of white sand terrain.

WHITE SAND ▼

White sand is an extremely corrosive volcanic ash found in the Great White Desert. Blown across the Badlands by winds, they settle in large pools near the top of dunes and rocky outcroppings. Most pilots and drivers know to avoid the pools because the dust can damage any mechanism it comes in contact with.

Ground and walker vehicles crossing a White Sand hex must make a Piloting roll against a threshold of 4 or suffer a Light damage result to their movement system. Hover vehicles roll against a threshold of 3 and roll location normally, ignoring Crew hits. Infantry units automatically avoid the white sand pools in the hex.

WHITE SAND ROUGH ▼

White sand has a tendency to settle and accumulate near rocks and other prominent features. In rough areas, pools of white sand are more common and often hidden under small rocks and ordinary sand. White sand can also clump with regular sand to form "Badlands eggs," innocuous-looking, but highly corrosive rocks.

Walker and ground vehicles crossing a White Sand Rough hex must make a Piloting roll against a threshold of 5 or suffer a Light damage result to their Movement system. Hover vehicles roll against a threshold of 4 and roll location normally, ignoring Crew hits. Infantry units automatically avoid the white sand.

WHITE SAND DEPOSIT ▼

Certain locations, such as rocky outcroppings, tend to favor the accumulation of white sand. In some places, the white sand base can be up to two or three centimeters thick while covering several hundred square meters. Any vehicle or person wandering there will likely suffer from some corrosion or burn damage.

Walker and ground vehicles crossing a White Sand Deposit hex suffer an automatic Light Damage result to their movement system. Hover vehicles roll location randomly, ignoring Crew hits. Infantry units suffer one point of damage to each trooper.
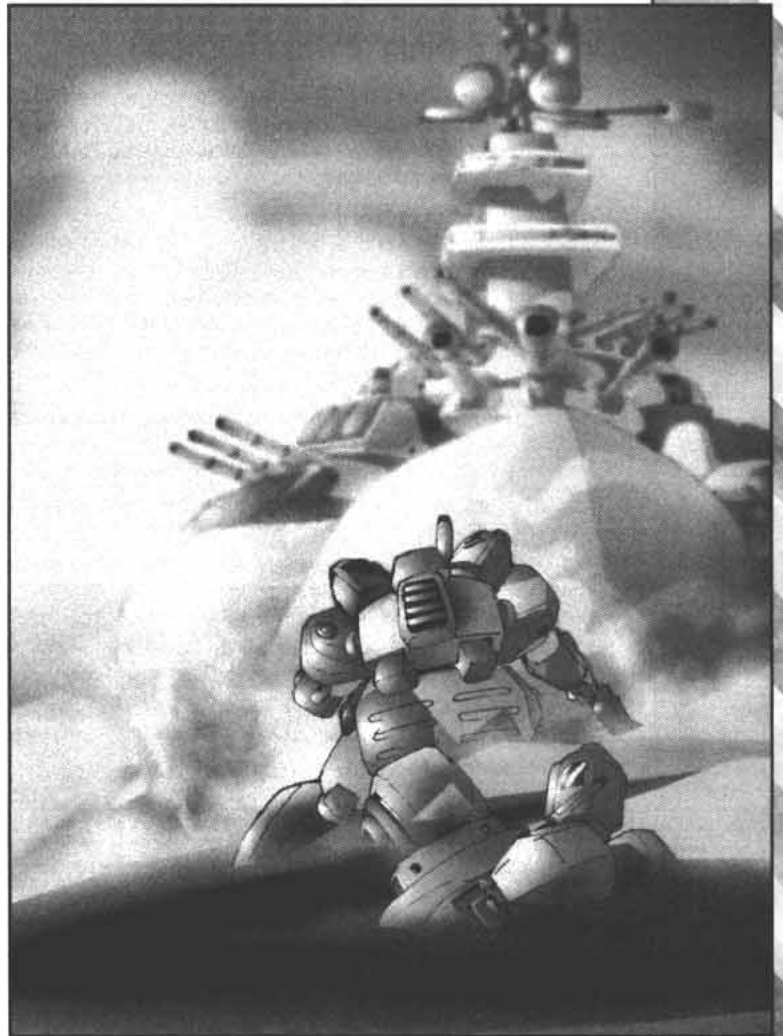
5.1.2 SNOW ▼

Snow is rather rare on Terra Nova, but it can be found on the peaks of most northern mountains and the surface of polar glaciers. There are two types of snow hexes: Snow and Deep Snow. Snow represents packed ice crystals which, while not particularly strong, can still support the weight of units traveling on it. Deep Snow is fluffier material which makes travel difficult. Most units, except hover vehicles, will sink or get mired in it due to their weight.

5.1.3 ICE ▼

Large patches of ice may sometimes be found where snow has been repeatedly compressed (by a glacier, for example), or on one of the few small polar lakes. Modern military sensors can usually be used to determine if the ice will support the weight of the vehicle, so drivers don't have to be as careful. The low friction of the surface, however, means that high speeds and complex combat maneuvers do not mix very well, requiring drivers to greatly reduce the speed at which their vehicles move.

5.1.4 TAR SANDS ▼

Tar sands are saturated with petroleum, making them hard to cross for walkers and ground vehicles. Walkers have problems with the ground pressure caused by their limited foot area, but their legs can generally pull them out of most problems. Ground vehicles are not so lucky and must carefully pick their way through lest they become mired in the unstable surface. Skimmers usually have no problem traveling across tar sand, since they float above the surface.

5.2 HULL-DOWN POSITIONS

Hull-down refers to a classic battlefield position where only the turret of an armored vehicle is exposed to enemy fire, the hull itself being protected by a natural or man-made obstacle such as a ridge or a low wall. This drastically reduces the chances of being hit while not impeding the attacker's own fire. Obviously, other vehicle types can also use hull-down positions, including walkers. These simply squat or lie down behind cover.

Because of the large ground scale chosen for the tactical game (50 meters per hex), it is not always possible to place a unit precisely behind a ridge or other land feature since these are not readily apparent on the map. Instead, a somewhat abstract system is used: by spending MPs, a vehicle can entrench itself behind hard cover almost anywhere. It is assumed that there are suitable terrain features in the hex for such a move. The MP cost (which is listed in the Hull-Down Table below) represents the fact that the unit must move out of its way, find suitable cover, slow down and otherwise park itself into the hull-down position. Some terrain types offer less protection than others, and this is reflected in the MP cost — it is always easier and faster to find a suitable defensive position in broken terrain or in a city than on open ground.

The Hull-Down Table lists the various costs and protection factors assigned to each terrain type. The values listed apply equally to the tactical- and Skirmish-scale rules. The "Covers" column indicates the system(s) that are hidden behind the obstacle when the vehicle is in the hull-down position with weapons at the ready (the numbers listed in the table refer to the die roll numbers on the System Damage table). If a commander so chooses, his vehicle can be completely hidden, covering all locations, but rendering all weapons useless save for those capable of indirect fire.

Rather than applying a modifier to hit the now smaller silhouette of the vehicle, the attack is rolled normally; if a hidden system is rolled on the System Damage Table, the obstacle absorbs part of the damage first. The "Protection" column gives the amount of damage points subtracted from the attack if it hits the cover instead of the vehicle. If the damage is reduced to zero, there is no further effect on the target vehicle. To prevent unnecessary bookkeeping, the protection afforded by the cover remains constant and does not ablate under fire. Aimed attacks are not possible against hull-down vehicles.

Infantry is always assumed to be in the "hull-down" position, hence the natural -2 modifier on all attacks against them. They may still use the protection afforded by revetments and foxholes (see page 40), but may not then claim any damage reduction from other "hull-down" positions. Aircraft may not use the Hull-Down rules, except for VTOLs (aircraft with a Stall Speed of zero).

Hull-Down Table

Terrain Type	MP Cost	Covers	Protection
Clear	n/a	n/a	none
Rough	+2	2 to 4	15
Sand	+3	3 to 4	10
Woodland	+2	2 to 4	15
Jungle	+1	2 to 6	20
Swamp	+1	2 to 6	10
Water*	+3	2 to 6	5
Urban	+2	2 to 6	15
Dense Urban	+1	2 to 6	20
Elevation change**	+1	2 to 6	15

*Water only produces hull-down effects if the vehicle is completely immersed (the vehicle must have the Submarine movement type to do so).

**It is assumed that the vehicle is located at the edge of the elevation level.
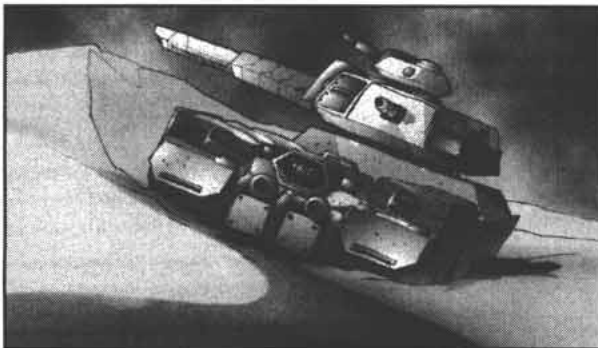
Going Hull Down

"Don't believe everything they say, kid. Going hull-down has its disadvantages. Sure, it always great to have something between you and incoming fire, but with today's guns they're likely to go right through whatever cover you can find! Also, you have to look for a good position — they're not lying just about anywhere. Look for a nice ridge, or maybe a low wall, then slam the brakes and get down behind it!

"Once down, you're protected but you're also stationary. And you and I both know the old "move it or lose it" routine, eh? So wait until you've found some tough cover, and check that you have a good shot lined up. Once you fire, go. Don't wait. Find another place to hide."

Lieutenant Armand Denner, for **Battlelogs** (TN 1915)

5.3 MELEE COMBAT

Although ramming, punching and kicking are the most common close combat attacks, skilled pilots can often finesse their machines through more elaborate attacks. The following rules cover additional close combat maneuvers that are taught to most combat crews. Some maneuvers can only be used by walker vehicles with arms, such as Heavy Gears, and are clearly noted as such.

5.3.1 ADVANCED CLOSE COMBAT

Many of the following close combat maneuvers are made possible by the Gears' humanoid configuration. Skilled pilots often program very complex movement sequences into their vehicle's drive computer, achieving astonishing results. Nonetheless, physical attacks are less efficient than weapon fire and are usually only practiced as a last resort.

Pilots with the Dueling skill (see the **Duelist's Handbook**, page 100) may use the following attacks as a normal Macromove.

● SLAM

A Slam attack is used to push opponents aside (or off a cliff). It is treated as a ramming attack that does only half the regular damage, but pushes the defender back by a number of meters equal to the difference in Size times the MoS of the attack, plus the impact speed modifier (if the total is lower than zero, it becomes zero). If both vehicles are of the same Size, the impact speed modifier plus the MoS is used as the number of meters (with a minimum of zero). Obviously, this technique is most useful in a roleplaying context (both the Tactical and the Skirmish scale are usually too large to properly represent the knockback distance).

● TRIP

A Trip attack is only useful against vehicles using the Walker movement mode. This type of attack is hard to execute and has a -2 modifier on the attack roll. If successful, the target vehicle falls down, hopefully taking damage and using precious time and Movement Points to get up (see *6.2.5 Walkers Falling*, page 107 of the rulebook).

● GRAB

The Grab attack is used to gain one object not permanently attached to the defender — a hand-held rifle or some cargo carried in netting, for example. An opposed Piloting test is made: the attacker suffers a -1 penalty, while the difference in arm ratings and vehicle Sizes are added to the defender's roll. For example, a Size 6 vehicles with rating 6 arms tries to grab the gun of a Size 7 vehicle with rating 7 arms. The defender's modifier will be (7-6 = 1, twice) +2. If the situation were reversed, the modifier would be -2.

The Rip Out variant of the Grab attack is much more dangerous: it is used to gain one object which is usually *permanently* attached to the defender. Only specific systems (such as Sensors, Communications, weapons or perks) can be targeted. If the attack is successful, punch damage is applied to the target. If the result is Light Damage, the system suffers from a - 1 modifier. With Heavy Damage, the system is ripped right out of its location and is considered destroyed. If an Overkill result should happen, the vehicle still suffers Heavy Damage plus an automatic additional Light Damage result, rolled randomly.

● PIN

The Pin attack requires at least two arms (of any kind) to be performed. It prevents either the defender's arm(s) or Movement system from being used, depending on which is pinned. To pin a target's arm, an opposed Piloting test is made: the attacker suffers a -2 penalty, while the difference in the Size of the vehicles and the total rating of all arms is added to the defender's roll. If the roll is successful, the arms are pinned. Pinning the Movement system follows the same procedure, except that only the difference between the average rating of the pinning arms and the Size of the target is added to the defender's roll.

The Bearhug is a follow-up of the Pin attack. It follows the same attack procedure, but also causes damage to the defender. The target must already be successfully pinned before the Bearhug is attempted. For each point of MoS, a number of damage points equal to the rating of the strongest arm plus half the rating of any other arms is caused to the target's Structure (or Movement, if it is the system pinned).

● FEINT

The Feint is not a close attack per se: it is used to distract an opponent so the next attack, which is a real one, really hurts. A Feint is performed as a normal attack but does no damage. Obviously, it does not have to be announced as a Feint. If the defender goes for it and fails to "defend," his defense roll against the next attack (same attacker, same round) is considered to be zero.

This maneuver is a simpler version of the Feint maneuver available to pilots with the Dueling skill and can be used by anyone, whether or not they have the Dueling skill.

5.3.2 USING GRENADES

Vehicle-sized grenades are powerful, versatile weapons - provided the pilot knows how to use them. Unfortunately, grenades require Manipulator Arms to be used effectively, so they are only available to Heavy Gear battle groups.

Grenades can be used in many different ways since they are nothing more than a large block of explosive with a timer has been attached. The following rules allow grenades to be thrown, dropped or used as demolition charges. The throwing rules can also be applied to any other object, such as a vibroblade or a rock.

● THROWING

Throwing is the attack used to hurl items such as rocks or grenades. At least one arm is required for throwing. Battle and tool arms may not be used to throw objects, unless they have been specifically designed to do so — in which case, they may not be used for another function, and the Battle Arm cannot pick up the projectile by itself. If the object being throw is not consenting to it (such as an enemy vehicle), an opposed Piloting skill roll must be made to grab it first. In addition to this, all deviations are automatically oriented toward the thrower (i.e., a missed throw will always fall short).

The base throwing range (in meters) of the arm is equal to twice its rating. This is reduced by the Size of the object being thrown, which is subtracted from the throwing arm's rating before doubling. Alone, an arm cannot throw an object larger than half its rating. If the object being thrown is larger than half the Size of the throwing arm, half the rating of another arm can be added to the effort. The base range is reduced to the rating of the strongest arm. For example, a Size 6 Heavy Gear with two rating 6 arms would throw a Size 5 vehicle up to eight meters away, but only with great difficulty. Each additional range band is double the previous one, as with any other ranged weapon.

When playing on a hex board, both the attacker and defender are considered to be in the middle of their respective hexes when determining the range. For example, two Heavy Gears in adjacent hexes would be 50 meters from one another in the Tactical scale, but only 10 meters away in the Skirmish scale.

When an object is thrown, a Piloting skill roll, modified as normal for range and movement, is made. If the modified die roll is equal to or higher than the defense roll of the target, the object thrown lands right on top of it. If throwing at a specific hex, the threshold to beat is equal to 4. If the dice roll fails, the shot will deviate from its intended destination by a number of meters equal to twice the Margin of Failure. For the direction of the deviation, the Artillery Scatter Diagram on page 23 is used. When using hexes, place the deviated projectile in the nearest possible hex, considering the target point as the center of the target hex.

If the attack roll was fumbled, the shot deviates as normal, but toward the throwing unit. Sometimes, a fumble will land a projectile right on top of another unit anyway. Units caught in the area effect always take at least half the explosion's damage multiplier. The attack is resolved as normal if the defense roll of the new target fails. Some area effect weapons may have a large explosion radius which might be large enough to hurt the throwing unit. If the thrower lobs the weapon above a solid obstacle, he gains cover from it even though he would be in the area effect of the explosion. See the Skirmish scale rules on page 16 for detailed effects.

Grenades are the objects most often thrown by Heavy Gears. Grenades are metallic cylinders of Size 1, and can thus be thrown about 80 meters by a Size 6 arm. The range bands would be 10, 20, 40 and 80 meters, respectively. Other weapons count as being one Size smaller than their Minimum Size requirement for throwing and lifting purposes.

● DEMOLITION

Grenades can be used as very effective demolition charges. Priming a Gear grenade for demolition work takes two actions, and can only be used against immobile targets (disabled vehicles or structures). Once the grenade is ready, it can be set to detonate in any chosen turn. Because the grenade is placed next to the target, its usual -1 Accuracy modifier is disregarded (Accuracy becomes zero).

The skill used to determine damage is Demolition. Unless the unit planting the grenade specifically has this skill, the damage is rolled using a skill level of 1. If the die roll is fumbled, the grenade was incorrectly placed and only cause its DM in damage points.

● DROP

Grenades can be dropped like mines from a moving vehicle to discourage pursuit or for a hit-and-run assault. Grenades used in this way suffer a -1 modifier on their attack roll as it is very hard to accurately use them during a high speed maneuver; once dropped, objects have a tendency to bounce out of control, making them totally unpredictable in term of trajectory. Dropped grenades can be used in the rear arc of the vehicle as they are dropped rather than actually thrown.

Grenades can also be dropped from above — from a rocky ledge or a bridge, for example. They can be dropped in one of two ways: either the attacker is assumed to be standing on a rock ledge or the side of a bridge to drop the projectile and can thus be attacked normally from below; or he rolls the grenade out or extends only a manipulator arm to drop it. Attackers choosing the latter method cannot be hit, but grenades dropped this way suffer a -2 modifier. Grenades can be dropped from aircraft, but suffer the -2 penalty mentioned above plus any other movement modifier. They do not benefit from the aircraft's Fire Control. Note that this replaces the note on page 26 of the **Tactical Air Support** manual.

5.4 VEHICLE DAMAGE

The following rules apply to the damage application sequence found in the main **Heavy Gear** rulebook. The first optional rule has been requested by players who prefer a more "realistic" style of play. The Damage Cap simply places a limit on the Margin of Success and prevents weak weapons from causing huge amounts of damage.

The second optional rule is intended more for roleplaying purposes than for tactical play, but can be used in Skirmish-scale battles (see page 6 for the complete Skirmish rules). Overpenetration demonstrates the enormous amount of energy expelled by modern weapons and shows why standing close together is not a good idea on the battlefield.

The last damage rule will prove invaluable to players of combined roleplaying/tactical campaigns. *5.4.3 Tactical/RPG Crew Injuries* explains how to transfer damage received in tactical game scenarios to an equivalent wound level in roleplaying games for both vehicle crew and infantrymen.

5.4.1 DAMAGE CAP

If all players agree to it, a Damage Cap may be placed on all attack rolls. A Damage Cap is a limit placed on the Margin of Success to reflect the actual firepower or strength of the weapon used. *The existing MoS system is fine for heroic games, where even a man armed with a rifle can blow up a small vehicle.* In a more realistic game, an incredible damage total inflicted on a target should be a function of the weapon's large damage multiplier, not an amazing dice roll.

A maximum Margin of Success of six is suggested for realistic games. Any damage over six times the weapon's base damage multiplier is lost. Attacks made at Point Blank have no such MoS limit and use the regular damage rules. This way, the weapon's maximum damage total reflects its true damaging potential and not its accuracy.

5.4.2 OVERPENETRATION

Modern weapons are capable of applying an awesome amount of energy to a very small area. Sometimes, the attack is so powerful it blows right through the target, possibly damaging something else. This rule is intended primarily for roleplaying sessions, but it can be used in Skirmish scale battles if all players agree.

Overpenetration occurs if the damage point total of an attack is five times greater than the target's Armor Value. Incendiary weapons cannot cause Overpenetration. Structures such as buildings, walls and bridges, which do not have Armor Values, use half their original damage capacity instead. For every ten points of Overpenetration (rounded up), the damage is applied to any object in the initial target's rear arc; range is equal to two meters per full ten points. Overpenetration damage also affects characters and vehicles in buildings and structure hit by weapon fire.

For example, a *Hunter* receives an attack in its front arc causing a total of 100 points of damage. The *Hunter* is destroyed, since the damage exceeds its base Armor Value of 15 by more than three times — an Overkill result. The attack also Overpenetrates by a total equal to the damage total minus the Base Armor times five: (100 - 15x5 =) 25 points. Thus, any target in the *Hunter*'s rear arc, and within a range of 6 meters, will receive 25 points of damage.

5.4.3 TACTICAL/RPG CREW INJURIES

When playing combined tactical/roleplaying scenarios, the wounds suffered by the crew may be transferred from the tactical game to the roleplaying game and vice-versa. Due to the additional level of detail (and thus complexity) involved, this method should be used for Player Characters only.

Whenever a vehicle takes a Light Damage "Crew" result, each crewmember must make a consciousness roll versus a threshold equal to 4. If the roll fails, the crewmember lapses into unconsciousness, and he is not counted when determining how many actions can be spent. He may roll at the beginning of each round to regain consciousness.

If the vehicle receives a Heavy Damage "Crew" result, each crewmember must make a Health roll versus the Margin of Success of the attack. If it fails by 1 or 2 points, the crewmember takes one Flesh wound; if it fails by 3 or more, he takes a Deep Wound. All crewmembers must also test for consciousness, just as for Light Damage.

Overkilling a vehicle generally means some messy damage to the crew compartment, even if it is not the part being hit. Each crewmember must roll for ejection, even if not actually ejecting (see *5.10.3 Ejection*, page 99 in rulebook). Because this can be quite costly in Player Characters' lives, the Gamemaster is advised to let them walk away from one Overkill per game, but restrain from giving the PCs any XPs at the end of the session ("the price of their lives").

In the case of large, multiple-man crews, it is often best to average the above tests in groups of four or the nearest whole number, or ignore them completely and apply the results in the damage table as they stand.

5.5 MISCELLANEOUS ACTIONS

The following rules are used during the Miscellaneous phase of the game round. All actions are considered simultaneous, though Initiative can be used when necessary to establish the order of play (for example, if two enemy units try to pick up the same weapon). Acquiring new weapons allows vehicles with Manipulator Arms to pick up hand-held weapons to replace their own. The new rules also allow technicians to reload the ammunition bins of a unit during the game. Emergency repairs and field engineering actions (such as laying barbed wire) are now also possible during the Miscellaneous phase.

5.5.1 ACQUIRING AND RELOADING WEAPONS

The **Heavy Gear Technical Manual** introduced the concept of putting weapons into rifle-like mounts (page 80). Rifles can be picked up or put away at the cost of one action, as long as the manipulator is still functional. It costs no action to drop a rifle. If the manipulator arm is destroyed, or if the rifle is dropped, the rifle can be picked up by another unit with a free manipulator.

Ammo bays can also be reloaded during the game, but require more extensive equipment than just a spare clip. Often, rounds must be fed one by one into the magazine, or an entire ammunition box must be lowered into position with a crane. Most modern vehicles are designed so that reloading them takes little time. The table below gives the number of ammunition TV point that can be loaded per round.

Some personnel (infantry or other) must be present in order to reload a vehicle. Up to half a TV point of ammo may be reloaded per action, double that if a vehicle with manipulator or tool arms is present. The maximum number of persons that can work on one weapon at a time is equal to the weapon's minimum Size. Thus, a ten-man infantry squad can reload up to two points worth of ammo per round. Rules for recharging energy weapons are found in the **Heavy Gear Tech Manual**, page 89.

Reloading Summary

Number of Men	Actions	Ammo Points per Round
1	1	0.5
2	2	1
4	3	1.5
8	4	2
16	5	2.5
etc.		

Situation Modifiers

Situation	Loading Multiplier
Engineering Squad	x2
Vehicle with Arms present	x2
Rookies (skill level 1)	x0.5
Veteran (skill level 3+)	x1.5
Under Fire	x0.5

Field Reloading

Modern combat vehicles are generally designed to ensure swift maintenance and loading of their weapons. Gears carry clipped weapons and are supplied with ammunition very much like the infantrymen: before each mission, clips are issued to the pilot who then proceed to load their vehicle's weapons, sometimes with the help of a technician.

Vehicles are generally supplied by hand, loading shells and missiles one by one (except for ammunition belts, of course). Some vehicles use boxed stores of ammo, but they are not as common. Large loading doors are often built into tanks and other armored vehicles to facilitate and speed up the resupplying process.

Ammunition is delivered in large boxes, generally sturdy wooden crates. Some of the biggest shells are sometimes delivered in custom-designed polymer cases molded to the shape of the shells. Rockets and missiles are especially well-packaged; guided missiles and shells often have individual foam-lined boxes to avoid jarring the guiding mechanisms. The name and type of ammunition stored inside is stamped on the sides of the box.

5.5.2 EMERGENCY FIELD REPAIRS

Although damage to a vehicle's systems usually requires time and facilities to repair, it is sometimes possible to patch-up minor damage while on the battlefield. If a technician can get to the damaged vehicle, he can sometimes jury-rig new connections and patch up small holes. If the technician manages to weld enough parts together, he might just be able to return the vehicle to the field. If this optional rule is used, both players should agree on the quality and quantity of each faction's technicians.

The quality of a technician is represented by his rating (stat + skill level). Better technicians cost more in Threat points (see first table below). Each technician must be present on the battlefield, either as a crewmember or passenger in a vehicle, or as part of an infantry unit. If the technician is part of a combat unit, he may not fight (or operate a vehicle) and work in the same round.

Each tech generates a number of Labor points equal to his rating each round. These Labor points are expended to repair vehicles and represent both expertise and spare parts. Each attempt to repair a damage effect requires a number of labor points equal to the vehicle's Size plus a modifier from the Damage Effect Modifier table. Only the systems listed may be repaired on the field: other types of damage are too severe to jury-rig and cannot be repaired during scenarios.

To successfully repair a damage effect, the player must assign enough technicians to supply the required labor points. The technicians must be in the same hex as the vehicle being repaired and cannot perform any repair in the turn during which they arrive. Once the required labor points are expended, a skill test determines the effectiveness of the repair. If multiple technicians of differing skill levels are used to repair one vehicle, the skill level of the group is the average skill of all the members (rounding up).

The thresholds for the various types of repairs are found in the Field Repair Threshold table. Each skill threshold is modified according to the situation. Failed or Draw results mean the repair was not completed and the labor points are wasted. A fumble yields a Light Damage result on the vehicle in addition to the incomplete repair.

Technician Threat Value Table

Technician Rating	Threat Value
1	50
2	100
3	200
4	400
5	800
6	1600
7	3200
8	6400

Damage Effect Modifier Table

Damage Effect	Labor Point Modifier
MP Loss (up to half total)	+2 per MP
Maneuverability Loss	+4 per point
Weapon Accuracy Loss	+2 per point/weapon
Power Transfer Failure	+10
Auxiliary Systems Perk	+Perk Cost x 2

Field Repair Threshold Table

Damage Effect	Tech Skill Threshold
MP Loss	1+1 per MP loss
Maneuverability Loss	2+2 per point
Weapon Accuracy Loss	2+1 per point/weapon
Power Transfer Failure	5
Auxiliary Systems Perk	3+ 10% of perk cost (round down)

Situation Modifier Table

Situation	Modifier
Under fire (at any time in the process)	+3
No enemy within LoS	-1
Vehicle with arms (of any type) helping	-1

5.5.3 FIELD ENGINEERING

Field engineering is a blanket term that covers any modification done to the battlefield to either improve an attacker's position or hamper an enemy's progress and fighting ability. Such tasks are usually assigned to field engineers or to infantry squads, called Pioneers, with minimal engineering training. Engineering squads carry extra equipment such as tools and demolition charges and have additional training, and consequently cost more than an equivalent infantry unit (see page 47). Most of the time, any other infantry squad can accomplish the same tasks as engineers, but they take twice as long as the listed time to finish the work and often deliver an inferior product.

• BARBED WIRE

The term "barbed wire" covers any type of material that impedes the movement of hostile units: actual barbed wire, monomolecular wire spool, foamed adhesive, etc. Barbed wire will also slow down or even stop vehicles, as it is solidly anchored to the ground and extremely sharp. For the purpose of the rules, no distinction is made between the various types of installations or material; it is assumed that they are part of a well-built, complex field of defensive structure.

Infantry units may move through a hex which contains barbed wire at the Walker MP cost of the hex, plus two. It may take them more than one round to pay the required MP cost. In addition, the infantry unit must roll their Infantry skill versus a threshold equal to 3 plus the hex's Walker MP cost. If the roll fails, the infantry squad is busy picking and cutting their way through the wire and cannot leave the hex this round. With a fumble, one die's worth of damage points is applied to a random trooper in addition to the "failed" effect.

Vehicles that attempt to move through barbed wire hexes must physically ram their way through it, a task made difficult by the sturdy design of the defensive installation. A heavy armored vehicle may manage to rip the barbed wire apart and flatten it into the ground, while a lighter or unarmored one might simply crash into it and be put out of action. A ramming attack is made against the barbed wire: it defends at zero and is considered a Size 3 vehicle. The barbed wire infantry threshold and "Size" drop by one for every fifteen points of damage caused to it.

There are several ways to clear lengths of barbed wire, apart from the vehicular ramming method described above. Infantrymen may try to cut it by hand or by using satchel charges (packs of explosive, see page 48). To prevent this, barbed wire is often booby-trapped with AP mines or trip flares, making this operation somewhat risky. Instead of leaving the hex, the infantry may attack it, causing a number of damage points equal to the skill level of the unit, per trooper. Satchel charges are used as normal. The barbed wire threshold drops by one for every fifteen points of damage.

The last method of removing barbed wire is to use an artillery barrage to clear an entire zone by blasting the defensive structure apart. The barbed wire is treated as a minefield for artillery clearing purposes: its threshold drops by one for every fifteen points of damage. Once the entire minefield has been removed (its threshold is equal to zero), the terrain of the hex is turned into Rough ground.

• REVETMENTS AND FOXHOLES

Revetments and foxholes are defensive positions built into the ground for vehicles and infantry, respectively. They allow a unit to go "hull down" in just about any environment (except water, obviously). A revetment will shelter any unit from Size 3 on up; smaller defensive works are called foxholes.

A vehicle using a revetment is automatically considered to be "hull down" and gains all the usual benefits. Revetments add 20 points to the protection offered by the type of hex they are located in. It costs only one MP to park in a revetment since it is a prepared position. For infantry units using revetments or foxholes, add one to their defense roll to reflect the prepared nature of their cover (infantry units are always assumed to be under cover already, as indicated by the -2 to hit modifier).

Both revetments and foxholes are extremely hard to destroy since they are really just holes in the ground with some reinforced structure(s) on one side. Each can take up to the lowest MP cost of the hex times a hundred in damage points before becoming unusable. Because they are so sturdy, revetments and foxholes only take damage from weapons with a damage multiplier of x15 or greater, or weapons using Anti-Structure ammunition (see **Heavy Gear Tech Manual**, page 65). Both the Light and Heavy Mining Equipment Perks may also be used to "attack" a revetment or a foxhole, which both have a defense of 0 (they do not move).

• DEMOLITION

Engineers have the training required to make maximum use of the demolition charges they are carrying. They may be called in to destroy a structure that impedes their forces' movement, or to deny an important bridge to the enemy. By placing shaped-charges at key points within the structure, they can bring it down rapidly and completely with little effort.

Engineers who spend four tactical rounds in the same hex as a structure (Urban, Bridge) may plant explosive charges to bring it down. The number of rounds required is doubled for Dense Urban hexes since the structures are sturdier and more numerous. Once the explosives have been planted, they can be set to detonate in any subsequent round. The hex is automatically transformed into a Rough hex, except if the target was a bridge above water (see page 110 of the rulebook for effects).

DITCHES

Ditches are long, narrow trenches designed to hamper the movement of enemy units. They are sometimes filled with incendiary material such as burning oil to confuse visual and infra-red sensors and prevent infantry from crossing. To keep things simple, game ditches must cross a hex from corner to corner, but are considered to be either 10 or 50 meters long (depending on the scale being played), two meters wide and two meters deep. Crossing a ditch requires three Movement Points and a Piloting roll against the MP cost of the hex plus two. If the roll is failed, the vehicle is bogged down for one extra round. If it is fumbled, the vehicle takes an automatic Light Damage result on its Movement system.

Ditches can be dug by any vehicle equipped with the Mining Equipment Perk. Each vehicle may dig out the equivalent of one cubic meter of material per Size point per round, or two if the vehicle is equipped with the Heavy Mining Equipment perk. Filling in a ditch takes half as long: Light Mining Equipment fills two cubic meters per Size point per round, while Heavy fills up four per round.

If the ditch is filled with burning material, the hex has an Obscurement of 2 because of the smoke. Infantry squads and vehicles with exposed crew may not cross it, but other vehicles can. If the burning ditch is filled in, the fire goes out automatically.

LANDING ZONES

Sometimes, landing zones must be cleared to allow air transport to land and offload troops and supplies. On clear, sandy or rough ground, such a task consists of moving obstructions to the sides of the zone and making sure the surface is neat and strong enough to support the weight of the aircraft. Preparing a landing zone in a Clear or Sand hex takes one tactical round. It takes six tactical rounds to prepare a Rough hex. If the aircraft is not a VTOL, the time required quadruples since an entire landing strip must be cleared.

The task gets more complex when the landing zone must be cleared in forests and other hazardous areas. A total of 1000 points of damage will transform a Jungle hex into a Woodland hex. An additional 1000 points will transform the Woodland into a Rough hex, which may then be cleared according to the procedure above. Area Effect weapons multiply the damage they cause by their AE factor plus one to represent the additional concussion effects of the explosion. Thus, the most expedient method is to use bombs or demolition charges to blow away the obstructions, though physical attacks will do just as well (they just take longer).

Skirmish-scale landing zones use the same procedure, but require less damage since the zone affected is smaller. Preparing a zone in Clear or Sand still takes one round, but clear a smaller area (10 meters) which must be taken into account when checking how much space is needed. Only 40 points of damage will be required in the case of a Woodland hex, or 80 for a Jungle hex.

DIGGING CANNONS

Digging cannons are used by both infantry fighting vehicles and engineering units to create almost instantaneous foxholes and revetments for other units. A standard digging cannon is a specialized short-range gun loaded with special Anti-Structure ammunition (see **Heavy Gear Tech Manual**, page 65). The digging cannon has a range of only five meters and has an Accuracy of 0. A fixed firing arc must be chosen for each digging cannon and is already accounted for in the cost. The cannon itself costs 4 points, plus 0.5 points per charge. It has an effective Damage Multiplier of x10 (the effect of the ammunition is included in this).

For every ten damage points caused to the hex, a revetment capable of sheltering one Size point is created. The protected facing of the foxhole or revetment faces away from the vehicle that dug it. Digging cannons may only be used in Clear, Rough or Sand hexes. They may not be fired on the move: the vehicle must be stationary when using them. Digging cannons are quite loud and not very discreet: they subtract one from the concealment threshold of any unit using them.

The Pioneers of Baja

The assault on the Badlands city-state of Baja at the end of the Winter of TN 1916 was the most desperate battle of the War of the Alliance. The Colonial Expeditionary Force had just opened another invasion front and Terranovan forces were already in dire straits. If the CEF troops were not dislodged, the allied defenders had little hope of keeping their planet free.

The CEF had mastered the art of rapid deployment and lightning warfare, and their second beach-head was well fortified by the time the assault began. Terranovan Pioneers were given the task of clearing the way. Riding in specially modified IFVs and piloting engineering Gears, the Pioneers waded through the minefields and razor-wire that guarded all the approaches to the city. Using satchel charges to rapidly clear the fields, they moved on to demolish the revetments, bunkers and fortifications that would slow the approaching armored columns — all the while facing GREL supersoldiers in entrenched positions.

Three out of every four Pioneers assigned to front line duty at Baja never returned home. They are remembered as heroes and as a key part of the most critical victory of the war.
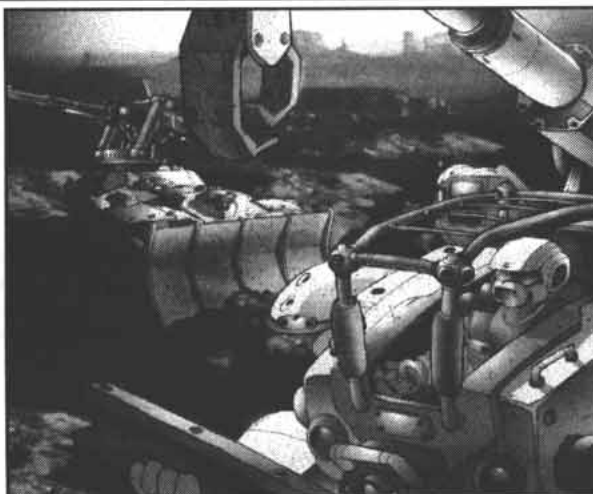
5.6 MORALE

Morale is an important part of warfare. No commander can be truly sure of what his troops will do once under fire. Only totally fanatical or automated forces are immune to the effects of morale, and even the best trained soldier will hesitate to rush a gun position under withering firepower. To the men down in the trenches or sitting in their fragile vehicles, it will always seem better to stay put than to place themselves in harm's way.

The **Heavy Gear** Morale rules deal more with command control rather than with rout. The rules are structured in a way that will allow players to make their own choices when it comes to falling back and regrouping. Instead of affecting the units' will to stay and fight, poor morale affects die rolls, thus forcing the commander to make some difficult choices. Will he push his troops, knowing that their efficiency *is degraded*, or will he allow them to fall back to regroup, possibly losing precious terrain and objectives?

The addition of Morale rules to the game makes play a little more unpredictable and complicated, and thus longer. Unless a truly tactical wargame scenario is desired, morale rules can be ignored. Likewise, if playing a combined roleplaying and tactical game, the Morale rules are better replaced by good roleplaying on the part of the players.

5.6.1 MORALE THRESHOLDS

Morale thresholds are based on the experience level of the individual units or vehicles: Before the set-up phase, each player calculates the Morale threshold of his combat group(s). A squad's Morale level is equal to the total Morale threshold of the soldiers composing it, divided by the number of soldiers in the squad (rounded up to the nearest whole number).

For example, a squad with two Veteran pilots (morale 2) and three Qualified pilots (morale 3) will have a Morale threshold of $(2+2+3+3+3) \div 5 = 2.6$, rounded up. The Morale threshold of this squad is 3.

Morale Thresholds

Type	Threshold
Legendary	0
Elite	1
Veteran	2
Qualified	3
Rookie	4

• FANATICAL UNITS

Some people believe so fervently in the cause they are fighting for that they are ready to die for it. They will lay down their lives without flinching if the situation demands it, and the thought that they may well die in the battle simply does not affect them. Such fanatical units are immune to the effects of Morale. If the Morale rules are used, such a force has a Threat Value multiplier of 1.5.

There are generally few fanatical units around. Apart from the palace guards of the Eastern Sun Emirates, only a few elite units of the Northern Lights Confederacy and the Southern Republic can be considered fanatical. Rovers and Badlanders have been known to fight to the death when defending their community, if no escape is possible.

5.6.2 MORALE CHECKS

When performing a Morale check, the leader of a combat group must roll a number equal to or higher than the current Morale threshold of his unit. Failure will at first only influence combat rolls, not the staying power of the unit in question. Only when morale is really down will units be forced to retreat. The choice of retreating or moving to a safer position is left entirely to the commander, who must take into consideration the reduced efficiency of its troops.

Before the game, each player rolls against his unit's Morale threshold to determine the initial Morale level of his troops, for every individual vehicle in his unit. The number of dice is based on the experience level of the crew in each vehicle, just like a skill. If roleplaying characters are used, this skill roll is replaced by an attribute test against the Willpower attribute. If the crew rolls are equal to or higher than the Morale threshold, the crew passes the test and does not affect the combat group's overall confidence. If the roll fails, the unit morale as a whole is affected, increasing the combat group's Morale threshold by one for each crew failure. Even one or two demoralized crew will be enough to affect the morale of the group as a whole.

Using the combat group in the example above (basic Morale threshold =3), the two Veteran pilots roll 4 and 5 respectively: they both pass. Two of the Qualified pilots, however, fail, thus making the threshold level for the unit as a whole equal to $(3 + 2 =)$ 5. The poor morale of two of the pilots will influence the rest of the group.

• ROLLING MORALE CHECKS

The table below lists the events when a Morale check is required. Morale checks are rolled using the combat group commander's Leadership skill against the combat group's current Morale threshold. If successful, the combat group acts as normal. If the check is failed, the combat group suffers from a -1 penalty to **all** die rolls, including future Morale checks. A spare die is suggested to keep track of the die penalty caused by poor morale. As the group gradually loses its will to fight, its combat performance is affected and starts to rapidly degrade. Penalties caused by poor morale can be removed by the commander, however, by rallying the group and reorganizing it. See //Rallying// below for the rule.

Morale checks are made only in some specific situations, as listed in the Morale Checks table below. A vehicle is counted as destroyed if it loses its capacity to both move and fight, suffers an Overkill result, or the pilot is put out of action. An infantry trooper is considered hit if he has lost at least one damage point. Lastly, a combat group is considered under fire by artillery if at least half its units (round down) are fired upon from beyond the horizon (for game simplicity, assume a standard distance of 7000 m).

If using RPG characters, if the commanding officer becomes a casualty his Influence attribute is added to the Morale check's threshold. Losing a bad commander (negative INF) can actually be a boon to the morale of the combat group!

Morale Checks

Event	Modifier to Threshold
Before the set-up phase	0
Single vehicle is destroyed	0
Per additional vehicle destroyed during the round	+1
Two infantry soldiers are hit within a single squad	0
Per additional trooper hit during the round	+1
Combat group is under fire by artillery	+1

• RALLYING

The penalties caused by failed Morale tests will soon prove crippling, but they can be removed by performing an action called Rally. This is done by the commander, who must spend the action to roll a new Morale check for his combat group, again using his Leadership skill. Only one Rally is attempted per action, although multiple attempts are possible if sufficient actions are available. If successful, the Morale level of the combat group rises by one (i.e., a single -1 modifier is removed). If the combat group is rallied away from the enemy (under Obscurement and with no LoS to an enemy unit), all negative modifiers are taken away automatically. A functioning Communication system is required to participate in the Rallying action.

• MISSION PRIORITIES

Not all missions have the same importance in the eyes of the soldiers. A simple foraging patrol will mean much less to the men than the defense of their home town, and this will most certainly affect their morale and performance level. If the battle is being fought for something precious to the eyes of the soldier, he will place less importance on his own survival.

Noted tactician Jonson Tuffley has determined that most missions can be classified as either High, Medium or Low priority. High Priority missions are those missions that must simply not fail, because the emotional cost attached to failure is too high. The defense of a home city-state is a good example of one such mission. Although this does not necessarily mean that the troops will fight to the death, they will stand their ground much longer. All Morale tests are made with a +2 modifier on the dice roll.

Medium Priority missions are the everyday military actions. They are important, but not overly so. Most engagements will fall in this category: the troops know they must do their best, but if they fail only the battle is lost, not the war. There is no modifier attached to missions of this type. Low Priority missions are those that have little or no consequence to the direct survival of the force. Low Priority missions cause a -2 penalty on all Morale tests because the troopers are unwilling to lay down their lives for unimportant objectives and will actively seek to escape or avoid hostile forces.

• FATIGUE

The fatigue level of the soldiers has a great influence on their combat performance. For record-keeping simplicity, troops can be classified as either Fresh, Tired or Exhausted.

Fresh troops have just arrived on the battlefield. They are in good shape, had a good night's sleep and are ready to face whatever the enemy will throw at them. All Morale checks are rolled with a +2 modifier. Tired troops have been in the field for a few weeks, or have seen combat or other tense situations in the past few days. This is considered the default fatigue level and has no effect on Morale checks. Exhausted troops have been on the march for quite some time or have faced battles several times during the past few days. They are near the limits of their endurance and make very poor fighters. Such a fatigue level will normally be used only for very specific scenarios. Exhausted troops have a -2 modifier on all Morale checks.

5.6.3 SPECIAL CASES

The following situations are special cases that may crop up during the game. As with all other optional rules, they may be used or omitted at the player's discretion, as long as those rules chosen for the game apply to both sides equally. In general, they bring an extra level of detail that will bog down play and are thus recommended only for the most passionate of wargamers.
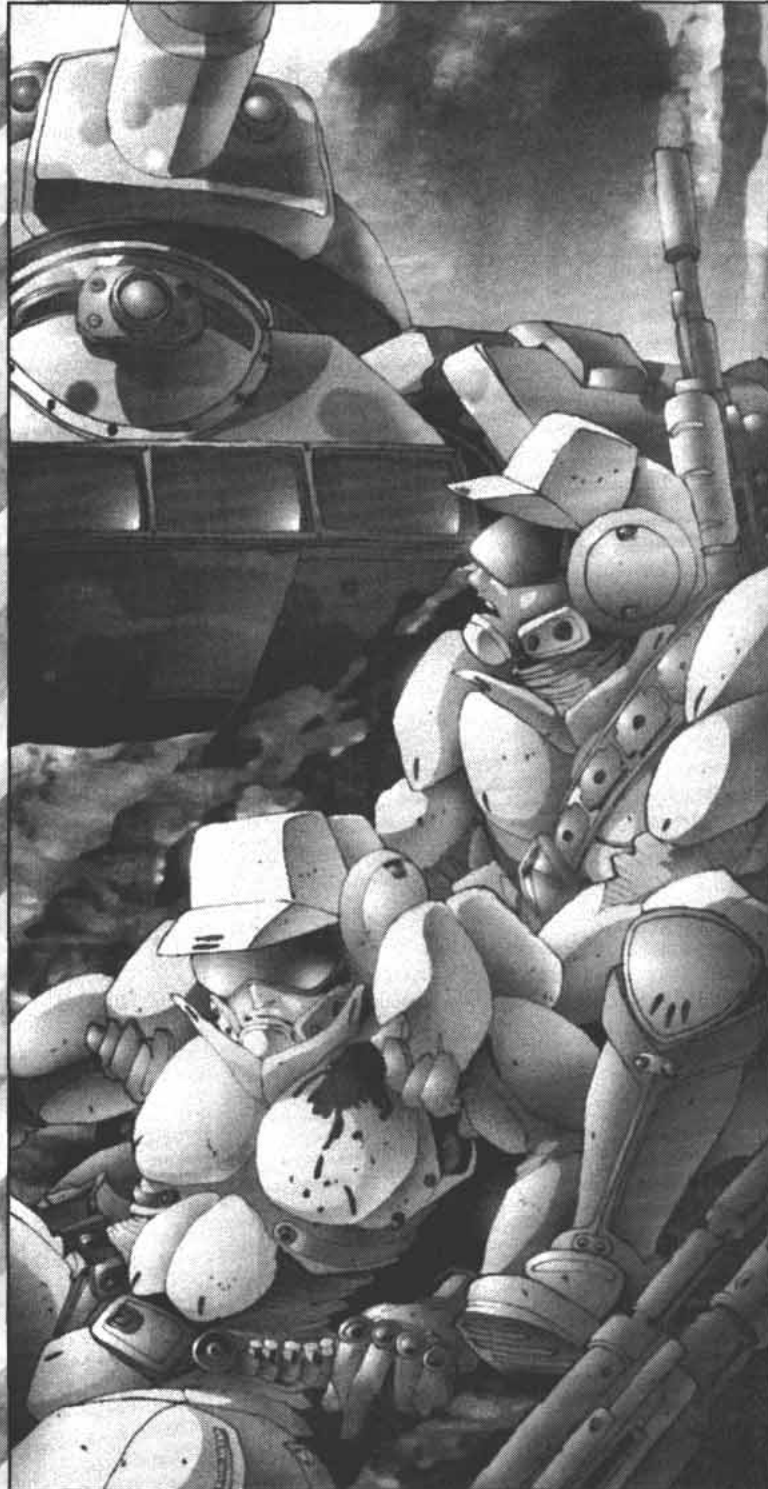
● THE BUDDY RULE ▼

Each soldier is part of an extended family represented by the members of his squad or combat group. If one of them is hit in combat, his squadmates' first reaction will be to rush to his side and try to protect him or get him out of harm's way. Should a commanding officer order his troops to ignore their wounded buddy, he will immediately be faced with a drop in morale.

Whenever a vehicle is disabled in combat, a friendly unit must go and check it out within one round. If the commander will not send someone, or if doing so is impossible because of the circumstances — heavy enemy fire, for example — the combat group must immediately roll against their current Morale threshold. Infantry units are assumed to have sent someone automatically since the troopers of one squad are all in the same hex. If playing at a scale large enough to represent the individual trooper, the rule above applies (i.e., one trooper must be sent to help). Treatment (when possible) is administered by squadmates using field dressings and stimulants (which explains how troopers can take so many hits and keep on fighting).

Vehicles, however, must be checked by a friendly unit. Once a unit has reached the disabled vehicle, they must check if someone is still alive in that mass of half-burned metal and ceramic. If this is the case, the unit can either stay with the victim until a C-Evac unit comes, or they can try and drag the downed crew to safety, either using the towing rules (page 111 of the rulebook) or attacking the crew compartment to break out the crew. A damage result equivalent to the damage received by the crew is required to open it: thus, an undamaged vehicle can be opened immediately, while a vehicle which suffered Heavy Damage to its crew compartment would require another to break open. Because this attack is to liberate the crew, not hurt them, they receive no further damage from this (fumbles are ignored for simplicity).

● FIRE DISCIPLINE ▼

Fire discipline is the ability to control one's urge to fire at anything that moves. Some soldiers can "lose it" and start firing wildly when faced with a superior enemy force or continual suppressive fire. This produces a virtual wall of lead, but consumes ammunition at an impressive rate. Fire discipline can be lost by rookies from battle terror but it may also happen to seasoned troops succumbing to battle lust (much more rarely, though).

If a unit uses its maximum ROF (no matter how) for more than two rounds in a row, it must past a standard Morale check or keep on firing for one more round, using at least one point of ROF. They may stop only when they pass the test or run out of ammunition, whichever comes first. Infantry units will run out of ammo on a roll of six or more on one die, +1 per additional turn in which they kept firing. For example, if an infantry unit fails its Morale checks three rounds in a row, they will run out of ammunition on a roll of 4 or more on the third turn. They will automatically run out of ammunition on the sixth turn and consequently may not fire their weapons anymore.

FLAME WEAPONS

Fire has a profound psychological effect on human beings, even more so when it is used as a weapon. Everyone, no matter how brave, has a distinct fear of being burned.

Whenever a combat unit is attacked by a flame weapon (weapons with the Slow or Fast Burn characteristic), it must either immediately roll against its Morale threshold or retreat at least one hex from the attacker. If they cannot retreat and fail their roll, they will immediately lay down their weapons. Unless they are taken prisoners or killed, they can be rallied as normal in subsequent phases.

Units that are immune to fire, either because of a Perk or because they are too massively armored to be affected (MoS of 5+ required to cause damage), do not have to check for Morale and ignore the psychological effects of flame weapons.

PANIC

Rookies can succumb to panic when faced with combat. When a rookie unit (skill level of 1 or lower) is attacked for the first time, a Morale check should be immediately rolled to see if they will succumb to panic. If the roll succeeds, there is no further effect, and the unit need not test again for panic until the next battle.

If the test is failed, the unit is pinned into place. It can neither advance nor spend actions, but it can move away from the enemy if there is some Obscurement between them and the hostile forces. Units which fumble their Morale test immediately rout and attempt to leave the table by the shortest path. They may be rallied as normal.

SURRENDERING

When faced with overwhelming odds, troops will sometimes surrender to the enemy rather than be pointlessly killed. If the combat group finds itself cut off from the rest of its main force (no line-of-sight to friendly units and out of communication range) and its Morale penalties are equal to -3 or less, the group may lay down its weapons and surrender. Fanatical and elite units (skill level four and more) may ignore this rule and keep on fighting.
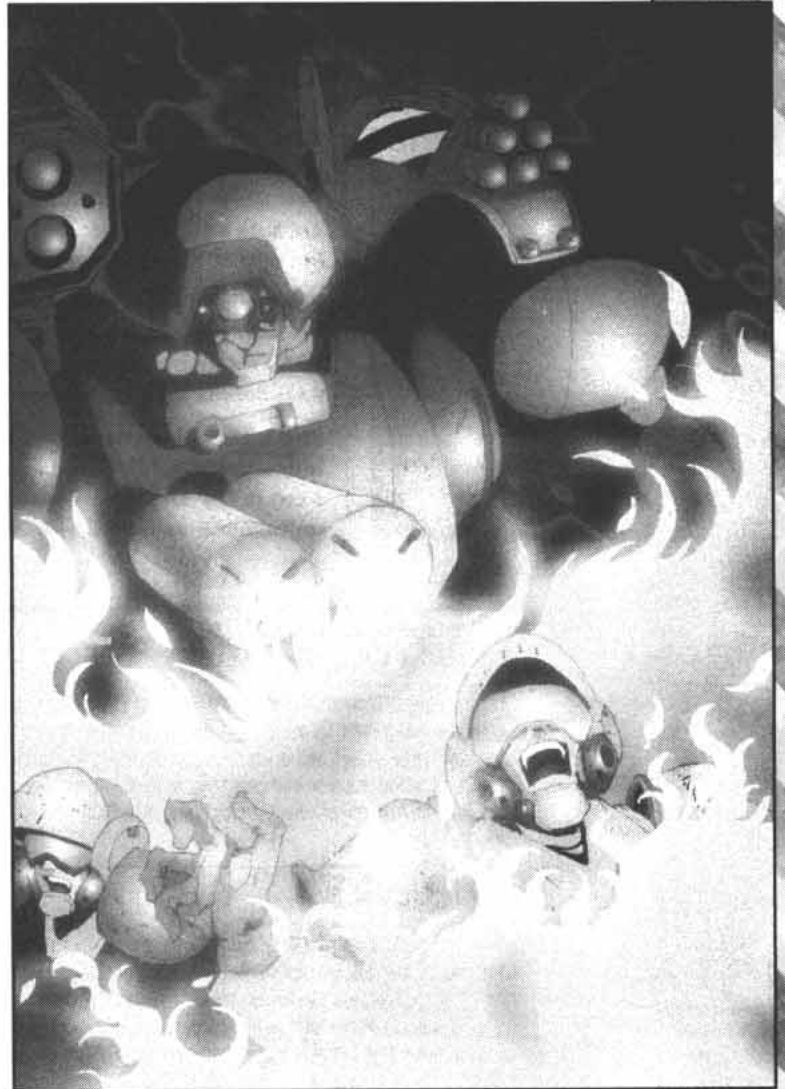
Morale and the Supersoldier

One of the most disconcerting aspects of the Genetically Recombined Experimental Legionnaires (GRELs) who formed the bulk of the Colonial assault force during the War of the Alliance was their seeming immunity to any and all aspects of morale. Products of genetic manipulation and hypnotherapy, GREL supersoldiers were programmed with the belief that all missions were critical and that their individual lives were expendable in the larger picture. In many ways they were all fanatics.

Tacticians point to this psychological advantage as a key factor in the early victories of the CEF in TN 1913. Not only were GRELs physically designed for warfare, they were ready and willing to charge into enemy fire without batting an eye. Apparently indestructible automatons, they terrified many a Terranovan into retreat.

Records of GREL development are heavily guarded secrets in Port Arthur, but some sources report that the supersoldiers' fanaticism has a tendency to wear off. Although GRELs have a difficult time acquiring new skills, some seem to have gained a greater appreciation of their own value than was intended by their designers. Jan-class GRELs (bred for leadership) place the highest value on their continued well being, while Mordred-class shocktroopers place the lowest.
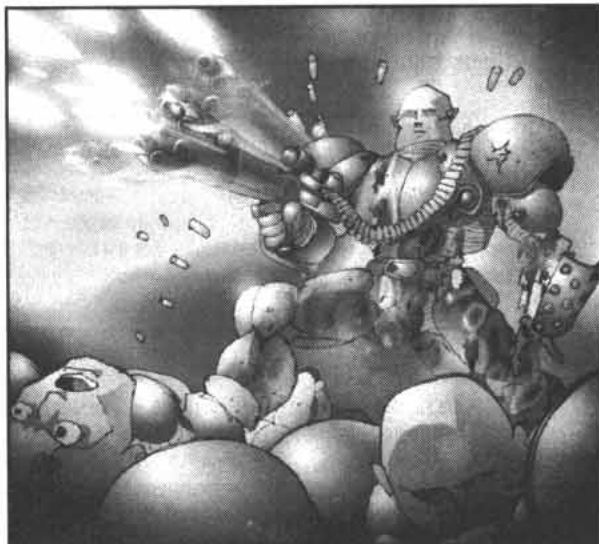
ENGINEERING NOTEBOOK

This chapter contains notes and explanations of various pieces of equipment used by engineers on the field and in the factory. The first section examines the basic equipment used by troops in the field to create fortifications and other defensive or utilitarian earthworks. The descriptions also include the specific rules to deploy them.

The second section introduces some new equipment for infantry units that are deployed in a battlefield support role. This includes both survival tools, such as diving equipment and NBC suits, and new weapons such as the Anti-Armor Guided Missile.

The last section lists the game statistics and descriptions of the new artillery weapons, long range guns and missiles capable of devastating a target from many kilometers away. Also covered are four new Perks for support units, such as Minelaying Equipment.

WELCOME TO
HUNTMORE MOTOR COMPANY
STRIDER PAGE

6.1 SUPPORT MATERIAL

Support material includes the basic items required by the engineers to carry out their work., i.e. the construction materials used to build fortifications and traps, as well as rolls of barbed wire or fascines. Some material can be taken directly from the zone: dirt and sand to fill sandbags, large stones, wood, etc. The rest has to be brought in. Among the latter category are the rolls of barbed wire and fascines, which are usually prepared and assembled well behind the lines. Although factory-fresh units are preferred, field engineers are adept at salvaging old material or even manufacturing makeshift units from whatever scrap metal they can find.

6.1.1 BARBED WIRE

Though it affects mostly infantry, barbed wire covers any type of material that impedes the movement of combat units, including actual barbed wire, monomolecular filament spool, foamed adhesive, etc. All transform the area where they are installed into a nightmare of razor-sharp protrusions and edges placed in a chaotic pattern, requiring each trooper to carefully pick and cut his way through. Tripwires linked to flares or worse, small anti-personnel mines, make this operation extremely hazardous if time and care are not taken. Depending on the actual nature of the material, "barbed wire" will come in spools or in pressurized canisters. Both have been designed for efficient storage and rapid deployment in the field. For convenience's sake, all barbed wire material comes in standard packs, each capable of covering a 10X1 m² zone (thus, about 220 packs are required to cover the surface of a tactical hex). When stored, a barbed wire pack occupies a volume of 0.1 m³ with a mass of 50 kilograms. Deploying one pack of barbed wire requires two men or one vehicle equipped with two Manipulator Arms. It takes four tactical rounds (30 seconds each) to deploy and anchor it (it is assumed that any chemical foam will harden instantly when exposed to the atmosphere).

6.1.2 CONSTRUCTION MATERIAL

Construction material is a broad term to cover the components field engineers use to build their fortifications and other earthworks. They have been known to use just about anything to do the job: loose soil, rocks, even hulks of destroyed vehicles. Fabric bags — the ubiquitous "sandbag" — may be filled with sand or dirt beforehand to allow easy transportation and stacking. Sandbags add five points to the protection factor of any type of revetment or foxhole per row of bags (each row being half a meter thick).

6.1.3 FASCINES

Fascines are sturdy strips of light alloy tied to one another with wire or metal hinges to form an articulated metal "blanket." Fascines have multiple field engineering uses. When rolled or bundled, they can be used to quickly fill up ditches and anti-tank trenches. Laid out flat, they help distribute the weight of heavy units over a larger surface area, creating an instant "road" of sorts. Fascines come in standard rolls of 10 X1 meters (thus, about 220 rolls are required to cover the surface of a tactical hex). When rolled, a fascine occupies about 1 m³ of space with a mass of 100 kilograms. One man (or one vehicle equipped with a Manipulator Arm) can deploy one roll of fascines per two rounds (60 seconds). Deployed fascines are considered to be "roads" for movement purposes.
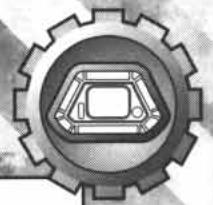
6.2 INFANTRY EQUIPMENT

Infantry teams form the core of most armies. To face the multiple dangers of the modern battlefield, foot soldiers are equipped with a wide array of tools and weapons. All professional troopers wear some kind of light armor plating designed to stop shrapnel. Their eyes are protected from flashes and lasers by polarized filters, while the sound they hear is first processed by the communication apparatus built into their helmets to filter out loud noises. A set of micro-sensors, such as a miniaturized camera and medical monitors, is carried as part of the armor. In addition to this basic equipment, infantrymen can carry a variety of specialized items designed to make them even more effective on the battlefield.

The most common item is the environment suit that is part of the training of every professional modern soldier. Although the use of chemical and bacteriological weapons is highly frowned upon, they remain inexpensive and powerful, making them an attractive alternative for organizations lacking in resources. Other equipment commonly seen on the battlefield includes infantry-carried laser designators — a smaller version of the vehicle-mounted system — and man-portable, anti-armor guided missiles.

6.2.1 DIVING EQUIPMENT

Diving equipment is not normally assigned to a regular infantry unit. The equipment and the training required to operate it are usually reserved for elite units operating in the rivers and lakes of the deep jungle of the southern hemisphere. A few Northern units, however, are also trained in aquatic combat (usually so that they may partake in covert action in the South), and numerous civilian divers are familiar enough with the equipment to use it in a fight.

Diving equipment consists of a skintight suit of rubber-like synthetic material equipped with a transparent faceplate. A small gill unit extracts oxygen from the water and contains an emergency five (5) minute air supply. The suit offers some thermal insulation, but neither it nor the faceplate provides any significant physical protection unless worn with armor (most often Light Flak). A small propulsion unit located in the backpack gives 6 MPs of Submarine movement. The cost includes the modifications required to protect the squad's weapons against the effects of water, allowing them to fire as the troopers emerge. At the player's choice, the squad can exchange their normal weapons for underwater versions (same stats, but cannot fire above water) at no point cost.

> • COST = DOUBLE THE SQUAD'S TV •

6.2.2 ENGINEER TRAINING AND EQUIPMENT

Specially trained engineering squads perform many technical tasks on the battlefield, including disarming and planting explosive devices. They receive additional theoretical training in the fields of structural design, basic vehicular mechanics and explosive handling and preparation. In roleplaying terms, these would be the Physical Science, Architecture, Mechanics and Demolition skills. Engineer squads carry extra equipment such as electronic tools and explosive charges and have training in demolition and field repairs. They usually carry only light weaponry.

Engineering squads cost one and a half times the cost of an equivalent infantry unit. Most of the time, any other infantry squads can accomplish the same tasks as engineers, but they take twice as long as the listed time to finish the work and often deliver an inferior product. The effect of engineering training and equipment is indicated in the rules when relevant.

> • COST = ONE AND A HALF THE SQUAD'S TV •

6.2.3 ENVIRONMENT SUITS

Environment suits are sealed garments designed to protect the wearer against the effects of NBC (Nuclear, Biological and Chemical) warfare. They are self-contained environments that can protect a trooper for up to 12 hours without external supplies. External air is processed through a series of powerful filters before being redirected into the gas mask; if necessary, a small oxygen cartridge can replace the external feed for a few minutes, if the chemicals are too powerful for the filters. The suit has a double liner designed to offer some protection even if the surface of the garment is ripped or otherwise damaged. Each suit comes equipped with a small medical kit which contain the antidotes to the most common chemical and bacteriological weapons.

Unfortunately, the suits are quite cumbersome to wear and very tiring to fight in. It takes one action to put on an environment suit and another to "zip up." Environment suits shield the wearer against the effects of Biological and Chemical ammunition. They have a -1 Encumbrance penalty (cumulative with any armor worn) for infantry. Vehicle crew can also wear them but suffer a -1 penalty on all die rolls. Because of the restrictions imposed on the wearer of such suit, the tactical advantages and disadvantages cancel each other: the suit has no associated TV cost.

> • COST = FREE •
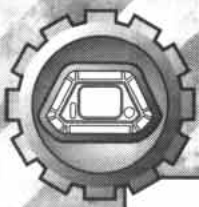
6.2.4 LASER DESIGNATOR

The infantry target designator is a light, man-portable version of the vehicle-mounted target designator. It consists of a large laser gun powered by a backpack capacitor. The laser beam is tuned and pulsed to provide targeting information and cannot be used as a weapon. This system allows infantry units to designate targets for Guided weapons. Because of the bulky equipment and power packs, the trooper carrying the designator cannot carry any additional weapon. If he is killed, the designator is considered wrecked.

To lock on a target, the infantry squad simply "attacks" it using the designator as the weapon. Using the designator costs one action, as per a normal weapon. The designator has a base range of 1, an Accuracy of 0 and does no damage. Any successful attack "paints" the target for incoming guided munitions. Any weapon with the Guided characteristic can use the information provided by the target designator. The target remains designated until the end of the round.

• COST = 20 POINTS PER DESIGNATOR •

6.2.5 MINE SENSORS

Mine sensors are a set of bulky detectors designed to recognize the presence of buried mines. At least two men are required to carry the sensors and cannot carry weapons. If either one is killed, apply a -1 modifier to the die roll. If both troopers are killed, the squad cannot detect mines anymore. Mine detectors cost 10 extra points per set of sensors (one trooper), for a total of 20 for the complete kit.

By spending one action, the squad can look for mines by rolling its general Infantry skill (which is equal to the quality level of the squad). In a roleplaying campaign, the mine sensors are used with the Demolition skill. The die result is then compared to the lowest thresholds of any mined hexes within a two-hex radius, including the hex where the squad is currently located in. If the roll surpasses a threshold, any minefield hexes are identified as such. If it is equal or lower, there is no result. Note that the mines are identified, not deactivated.

• COST = 20 POINTS FOR THE KIT •

6.2.6 PORTABLE AAGM LAUNCHER

Infantry teams can already be equipped with small and powerful anti-armor rockets, but sometimes even they are not powerful enough. The AAGM (Anti-Armor Guided Missile) gives increased range and damage potential but is more cumbersome to carry around. The AAGM is very similar in overall size and performance to the vehicle-mounted Anti-Gear Missile. The weapon is composed of two parts: the missile itself and the launcher, which incorporates the fire control unit. Each is carried by one trooper — if the trooper is killed, the part carried is lost. The launcher is absolutely required to fire the missile, but an infantry squad can carry more than one missile (maximum of one per trooper). Only one launcher may be carried by a squad (five men minimum).

Set-up takes one complete round, during which the infantry unit may not move or fire with any weapon. While the missile is in the ready-to-fire position, the unit may not move until the launcher is broken down, unless they are willing to abandon it. Firing the missile and breaking down the launcher take one action each. The squad may move (but not fire) during the round where they break down the launcher. The AAGM acts as a standard vehicular AGM in all respects and can benefit from any friendly target designator. Since the missile can be remotely operated (the crew hides nearby and is linked to the launcher via a thin fiber optic cable), attackers still suffer from the -2 to hit modifier when engaging the infantry squad, even when they are operating the launcher.

• COST = 90 POINTS PER MISSILE, LAUNCHER IS FREE •

6.2.7 SATCHEL CHARGES

The quintessential demolition expert tool, satchel charges are used to blow up obstacles and stationary enemy vehicles. A satchel charge consists of a cloth or polymer bag filled with blocks of plastic explosive and a programmable detonator, carried on a shoulder strap. The satchel charge must be placed directly against the target for maximum effect. If time allows, the plastic explosives can be taken out of the bag and tamped for increased damage potential (this is the method used to demolish buildings). In a desperate situation, the bag can be thrown a few meters away in the hope that it will land near the target before exploding.

Infantry units may use satchel charges to attack units in the same hex, though generally only engineering squads carry them. The demolition rules are explained on page 36, so there is no need to repeat them here. Foolish or brave troopers have also been known to use satchel charges to attack live targets. Each charge has an effective damage multiplier of x10. A satchel charge attack is automatically aimed at a vehicle's Movement system and the usual -1 aiming penalty does not apply. Units attacking an infantry squad during a satchel assault disregard the usual -2 infantry modifier. Infantry making a direct satchel charge assault take double damage from area effect attacks because they are not using any cover.

• COST = 10 POINTS PER CHARGE •
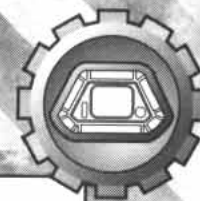
6.3 NEW WEAPON SYSTEMS

The weapon systems introduced in the **Heavy Gear Rulebook** were merely a small sample of the armament available. Many more types exist to fill out a variety of operational and tactical needs. The following section presents eight weapon systems commonly used on Terra Nova for heavy battlefield support.

All of these weapons are inaccurate to reflect the fact they can be fired only when fully stopped and braced (the regular +2 modifier for being Stationary). They have a rather high TV because of their extremely long range and large burst area. Artillery weapons are often fixed forward. Their large Size requirement may also dictate that additional ammunition be carried in a separate supply vehicle. All these limitations reflect artillery's specialized support role.

Because artillery fire is so powerful, its use is not recommended for games under 20,000 TV points unless the artillery attack is part of a pre-planned scenario. It is often best to buy artillery support from a separate Threat Value budget dedicated to support units to avoid game balance problems. Using artillery in Skirmish scale games is not advised — even the smallest artillery gun will cause devastating damage to the Skirmish battlefield. Also, the delay and flight times of artillery support make these weapons largely ineffective in Skirmish-scale scenarios.

New Weapon Systems

Name	Code	Rating	Range	Dam	Acc	RoF	Ammo	Min. Size	Special
Light Artillery Gun	LAG	1107	25/50/100/200	x12	-2	+1	4.4	8	IF, AE0, MR10
Medium Artillery Gun	MAG	3488	30/60/120/240	x18	-2	+1	13.9	12	IF, AE1, MR15
Heavy Artillery Gun	HAG	15702	40/80/160/320	x22	-2	0	53.4	16	IF, AE2, MR20
Very Heavy Artillery Gun	VHAG	35124	60/120/240/480	x30	-2	0	115.4	20	IF, AE2, MR20
Light Artillery Missile	LAM	6729	50/100/200/400	x12	-3	+4	16.8	8	G, AE0, MR40
Medium Artillery Missile	MAM	7630	60/120/240/480	x18	-3	+3	25	12	G, AE0, MR40
Heavy Artillery Missile	HAM	40361	90/180/320/640	x22	-3	+2	108.3	16	G, AE1, MR40
Very Heavy Artillery Missile	VHAM	121912	150/300/600/1200	x30	-3	+1	293.5	20	G, AE1, MR40

6.3.1 TUBE ARTILLERY

Tube Artillery is a blanket term that covers a variety of indirect fire support weapons. Although they might actually be howitzers, mortars, massdrivers or cannons, all of these weapons achieve similar game effects for simplicity and ease of bookkeeping. Tube artillery weapons have been divided into Light, Medium, Heavy and Very Heavy Artillery Guns.

All artillery pieces fire "salvos," a burst of projectiles bound for the same target point. Although a salvo consists of several shots, each firing of the weapon consumes only one salvo. The area effect of the weapon represents the arrival of the salvo's multiple shells/warheads. Firing just one shell is possible (see *Ranging Shot*, page 23), but the damage effect from its impact should only be worked out in a roleplaying campaign (each shell does half the regular damage, without a tactical AE).

● LIGHT ARTILLERY GUN

The Light Artillery Gun is a large cannon or howitzer. The usual caliber is around 100 mm, though some units use a smaller caliber and advanced binary propellants or electrothermal technologies to achieve a similar performance. A few rare designs have been based on massdriver technology, but their power requirement and technological complexity have made them unpopular with the artillery units they have been assigned to.

The AMD-7 is a Southern massdriver artillery gun. Its drive coils can accelerate packets of kinetic penetration ordinance for normal fire or can load special ammunition canisters for special effects such as smoke. Its high maintenance requirement has prevented its wide distribution to front line units, however.

Light Artillery Gun Profile

Purpose:	Artillery/Fire Support
Effective Range:	10 km
Average Penetration:	145 mm
Area Effect:	15 m radius
Accuracy:	average
Mode of Fire:	single
Usual Ammo Magazine:	40 salvos
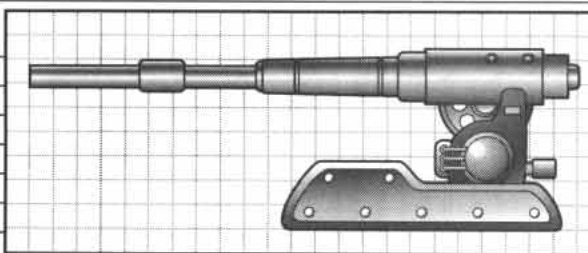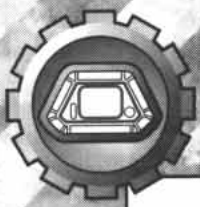
• MEDIUM ARTILLERY UNIT

The Medium Artillery Gun is very similar to its smaller brethren, but uses shells in the 130 to 160 mm range. Some Medium Artillery Guns are actually built around a massdriver, delivering dozens of smaller shells at a time. Medium Artillery Guns are a popular choice for emplacement defenses, but few vehicles have been designed with these weapons so far.

The D7 howitzer is part of the highly successful "D" series manufactured by Dressen, a distinguished Humanist Alliance design and production team. The D-series weapons are renowned for their accuracy and reliability. Dressen is currently under close Republican scrutiny because of rumors that they are holding back their next, more advanced, design.
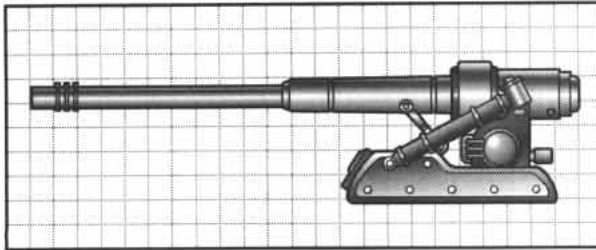
Medium Artillery Gun Profile

Purpose:	Artillery/Fire Support
Effective Range:	12 km
Average Penetration:	325 mm
Area Effect:	25 m radius
Accuracy:	average
Mode of Fire:	single
Usual Ammo Magazine:	30 salvos

• HEAVY ARTILLERY GUN

The Heavy Artillery Gun is even larger than the MAG and uses shells in the 170 to 200 mm range. To get excellent performance without unnecessarily reinforcing the gun, many HAG designs use electrothermal cannon technology, or ETC. ETC is relatively old and well understood, but still costly to built into a weapon. ETC weapons inject an electrically ionized gas behind the shell as it travels the barrel, eliminating the loss of performances caused by the normal gas expansion. ETC is often coupled with an autoloader for a better rate of fire.

The M576 is a close cousin to the 200 mm cannon mounted on the Verder *heavy self-propelled gun. Its carriage has been designed for installation in fortification or landship turrets.*
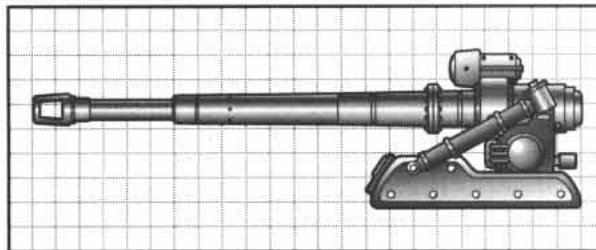
Heavy Artillery Gun Profile

Purpose:	Artillery/Fire Support
Effective Range:	16 km
Average Penetration:	485 mm
Area Effect:	50 m radius
Accuracy:	average
Mode of Fire:	single
Usual Ammo Magazine:	15 salvos

• VERY HEAVY ARTILLERY GUN

The monstrous Very Heavy Artillery Gun looks like it belongs more on a landship (on which VHAGs are commonly mounted) than on a battlefield vehicle. It can accurately place shells up to 24 km away in battlefield conditions, and special tests have sent rocket-assisted shells to nearly 120 km away. Although many have argued that missiles may prove a better (and less expensive) solution to the problem of long range support, the military is quick to point out the relative impunity of the VHAG's hypersonic shells to enemy counter-measures, electronic or physical.

The Defender Mk IV is the largest electrothermal weapon on Terra Nova. It is commonly mounted in fortification turrets to provide long range punch to city-states and other fortifications. Each shell is almost as tall as a man and must be loaded by a small crane.
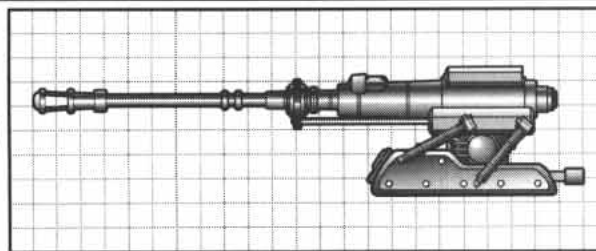
Very Heavy Artillery Gun Profile

Purpose:	Artillery/Fire Support
Effective Range:	24 km
Average Penetration:	900 mm
Area Effect:	125 m radius
Accuracy:	average
Mode of Fire:	single
Usual Ammo Magazine:	10 salvos
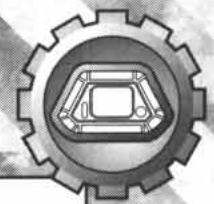
6.3.2 ARTILLERY MISSILES

Light, Medium, Heavy and Very Heavy Artillery Missiles are long-range battlefield bombardment weapons. They can carry large payloads and are often salvo or ripple-fired to produce maximum area saturation. Most of the launcher designs use high velocity missiles that sprint to the battlefield in one minute or less, even though the battle may be taking place 50 or 60 km away, and dodge all but the most accurate anti-missile fire. This explains the high price of these weapons, especially when compared to the slower cruise missiles (which, being small vehicles, are much easier to intercept).

Unlike Artillery Units, one shot represents one projectile with a single high explosive warhead or multiple scattering submunitions. Artillery Missiles use the rocket and missile ROF ammunition expenditure rule and can be attacked by anti-missile systems.

• LIGHT ARTILLERY MISSILE

The Light Artillery Missile lies just above the Heavy Rocket in the military arsenal. It carries a heavier fragmentation warhead, but can also be fitted with a variety of ammunition depending on the mission requirements. LAMs are steerable and can receive course corrections in mid-flight from an allied target designator.

▌ Light Artillery Missile Profile

Purpose:	Artillery/Fire Support
Effective Range:	20 km
Average Penetration:	145 mm
Area Effect:	15 m radius
Accuracy:	poor unless guided
Mode of Fire:	burst
Usual Ammo Magazine:	16 missiles
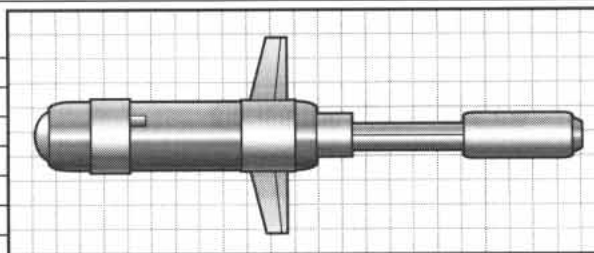
• MEDIUM ARTILLERY MISSILE

The Medium Artillery Missile is rarely seen on the battlefield. The launcher is usually mounted on a tracked or legged platform and placed far from the action, ready to rain sub-munitions on the field. MAMs are capable of limited steering while in flight and are equipped to use the data provided by allied target designators.

▌ Medium Artillery Missile Profile

Purpose:	Artillery/Fire Support
Effective Range:	24 km
Average Penetration:	325 mm
Area Effect:	25 m radius
Accuracy:	poor unless guided
Mode of Fire:	burst
Usual Ammo Magazine:	8 missiles
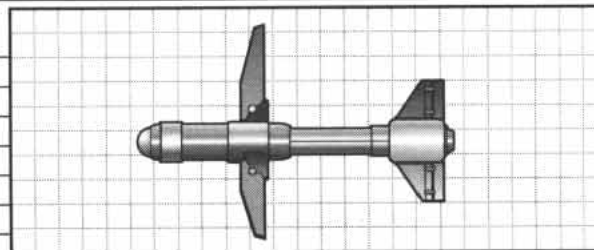
• HEAVY ARTILLERY MISSILE

The Heavy Artillery Missile can hit a mobile target from nearly 36 kilometers away if provided with course correction data. Their long range and their large payload make them an extremely powerful form of battlefield artillery. The missiles are small enough to fit a mobile platform but are also often found in fixed defensive positions. Forward observer units deployed ahead of HAM positions can, with the use of a laser designator, destroy the largest of battlefield units.

▌ Heavy Artillery Missile Profile

Purpose:	Artillery/Fire Support
Effective Range:	36 km
Average Penetration:	485 mm
Area Effect:	50 m radius
Accuracy:	poor unless guided
Mode of Fire:	burst
Usual Ammo Magazine:	4 missiles
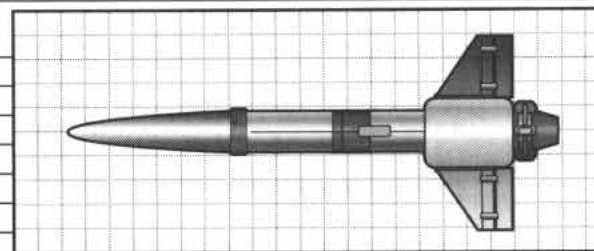
• VERY HEAVY ARTILLERY MISSILE

Unlike its smaller brethren, the Very Heavy Artillery Missile is so large and powerful it is often fired singly rather than as part of a salvo. The multiple warheads contained in its nose cone cover the attack zone very efficiently. Like the other artillery missiles, the VHAM can carry a large variety of specialized ammunition.

The Riley AR-75 Guided Artillery Missile is among the most widely deployed VHACs in the northern hemisphere. Riley has made significant progress in entering the Badlands market by lauding the AR-75 as a deterence weapon system for small desert communities.
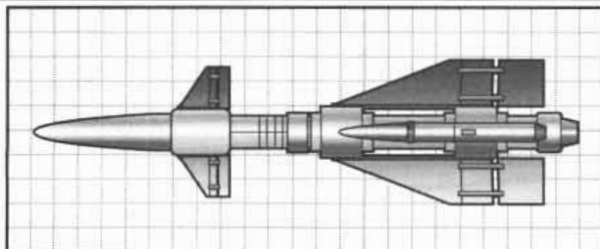
Very Heavy Artillery Missile Profile

Purpose:	Artillery/Fire Support
Effective Range:	60 km
Average Penetration:	900 mm
Area Effect:	125 m radius
Accuracy:	poor unless guided
Mode of Fire:	burst
Usual Ammo Magazine:	2 missiles

6.3.3 ARTILLERY AMMUNITION

Artillery guns can fire a large variety of ammunition to achieve diverse battlefield objectives. Likewise, artillery missiles can carry different warheads to fit specific needs. When a fire mission is called in, the Forward Observer (FO) will always request the type of round which will compose the mission (whether these rounds are available or not is another matter completely). The following text lists the most common types of shells and warheads used by artillery units, and their game equivalents.

• HIGH EXPLOSIVE

This is the standard artillery projectile. It carries a large explosive charge housed within a fragmenting body for increased damage. A pre-programmable fuse located in the nose of the shell can be set to detonate the shell on contact, with a delay or above the target. The gunner will normally select the most appropriate fuse setting for the job at hand; it is then automatically downloaded to the shell prior to firing or manually set by the loader on less high-tech weapons.

High Explosive is the default ammunition type used by all artillery weapons (cannons and missiles alike). Unless another type of ammunition is requested by the Forward Observer, the battery will always use HE.
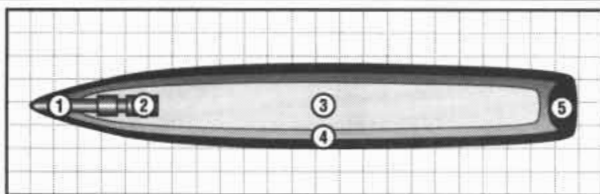
High Explosive Shell

1	Fuse
2	Booster Charge
3	Explosive Charge
4	Fragmentation Liner
5	Base Plug

• CRATERING

This type of shell is equipped with a special concrete-piercing fuse designed to damage or destroy buildings and other man-made structures such as roads, bridges and bunkers. The heavy piercing fuse enables the shell to burrow within the target before exploding, thus blowing out large chunks of material and weakening the overall structure. The concrete-piercing fuse fares less well against armored or soft targets, since it does not have the right penetration profile. Cratering shells are represented by Anti-Structure ammunition (page 65 of the **Heavy Gear Technical Manual**).
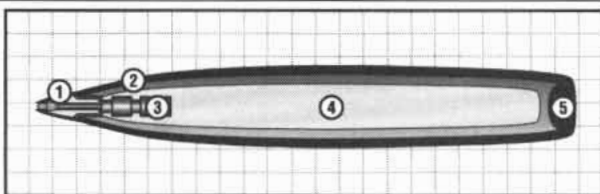
Cratering Shell

1	Reinforced Piercing Fuse
2	Standard Shell Body
3	Booster Charge
4	Explosive Charge
5	Base Plug

• FLECHETTE

Also called a beehive, this warhead has been specially designed to harm infantry units and other soft targets. It explodes just above the target point and showers it with thousands of pre-fragmented ceramic shards. Flechette shells are represented by Fragmentation ammunition (page 66 of the **Heavy Gear Technical Manual**).

Flechette Shell

1	Time Fuse
2	Detonator Charge
3	Explosive Charge
4	Flechette Block
5	Base Plug
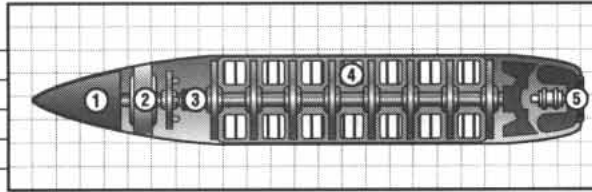
• GUIDED

For all intents and purposes, guided shells are cannon-launched missiles. The laser sensor array in the nose of the shell allows it to seek a target and correct its trajectory in flight. Guided shells gain a +2 modifier on their attack roll versus targets that have been "tagged" by an allied target designator within communication range. Attacks versus targets marked by a target designators do not need forward observers. The Cost Multiplier for this type of ammunition is 30. Note: it is only available for artillery guns.

Guided Shell

1	Sensor
2	Laser Guidance System
3	Forward Warhead
4	Fuse
5	Main Explosive Charge
6	Flight Gyroscopes
7	Battery
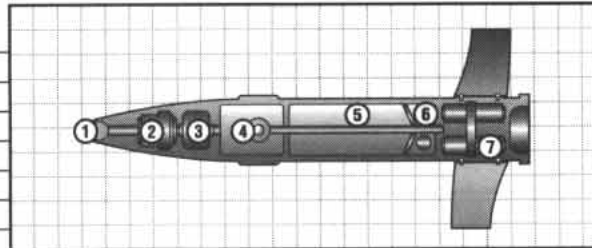
• ILLUMINATION

This type of shell carries a series of small parachute-equipped flares. When the shell bursts high above the battlefield, it releases and ignites the flares. These provide several thousand foot-candles each, making the area underneath as clear as day. Flare-carrying shells are represented by Illumination ammunition (page 66 of the **Heavy Gear Technical Manual**).

Illumination Shell

1	Delay Fuse
2	Ejection Charge
3	Flare Canisters
4	Folded Parachutes
5	Ejectable Base Plug
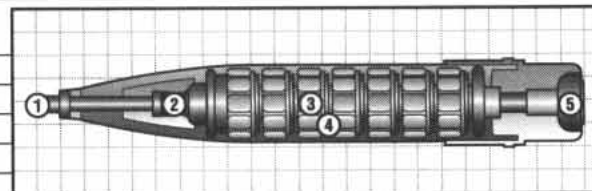
• INCENDIARY

These shells are filled with an incendiary compound such as napalm or white phosphorus. The fuse is generally set to detonate the shell before impact so the burning agent will be spread out as widely as possible. Incendiary shells are represented by the ammunition of the same name (page 68 of the **Heavy Gear Technical Manual**).

Incendiary Shell

1	Fuse
2	Expulsion Charge
3	Incendiary Material
4	Combustible Liner
5	Base Plug
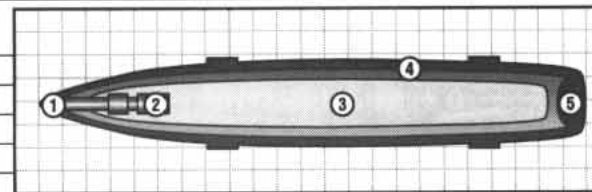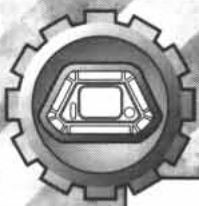
• MINELAYER

Also known as FASCAM (Field Artillery SCAtterable Mines) or ICM (Improved Conventional Munition) shells, Minelayer shells saturate an area with land mines. Although some shells carry anti-personnel mines and others only anti-vehicular mines, great success has been obtained with mixed loads fitted with variable timers. The mines are set to self-destruct over a certain period, usually between 24 to 48 hours after impact. These shells are represented by the Minelayer ammunition type (page 68 of the **Heavy Gear Technical Manual**).
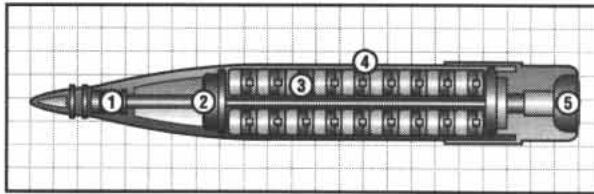
Minelayer Shell

1	Delay Fuse
2	Separation Charge
3	Mines
4	Fragmentation Liner
5	Ejectable Base Plug

• ROCKET-ASSISTED PROJECTILE (RAP)

RAP shells are enhanced ammunition fitted with a small, fast-burning rocket motor. Some designs have low thrust/continuous acceleration motors or multi-stage propulsion units for more predictable flight characteristics. All RAP shells and rockets have greatly extended ranges. RAP shells are represented by Boosted Range ammunition (page 67 of the **Heavy Gear Technical Manual**).
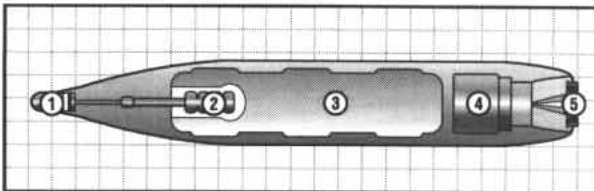
Rocket-Assisted Projectile (RAP) Shell

1	Fuse
2	Booster Charge
3	Explosive Charge
4	Rocket Motor
5	Reinforced Nozzle

• SEEKER

So-called seeker shells are a very specialized type of ammunition designed to attack armored vehicles. It is a "smart" weapon that can provide its own terminal guidance once released. Each shell contains several sub-munitions, each equipped with a miniaturized sensor array and a parachute. As the sub-munitions fall, they seek any large, dense mass nearby. Once a sub-munition finds a target, its explosive charge turns a plate of dense metal into a hypervelocity penetrator that strikes the armored target through its weakly protected top. Seeker shells are represented by Boosted Damage ammunition (page 67 of the **Heavy Gear Technical Manual**).
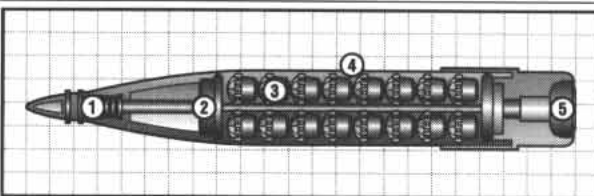
Seeker Shell

1	Delay Fuse
2	Separation Charge
3	Seeker Sub-munitions
4	Fragmentation Liner
5	Ejectable Base Plug

• SMOKE

Smoke shells contain several sub-munitions filled with a volatile gas mixture that vaporizes into thick smoke of whatever color was chosen. The artillery-fired Black Fog shells contain smoke but also chaff, flares and electronic dummies to interfere with the sensors of hostile forces. Smoke rounds are represented by Smoke and Black Fog ammunition (page 66 of the **Heavy Gear Technical Manual**).
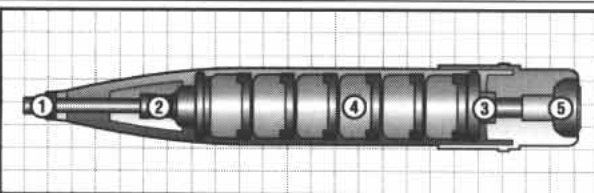
Smoke Shell

1	Fuse
2	Ejection Charge
3	Ejector Rail
4	Smoke Canisters
5	Ejectable Base Plug
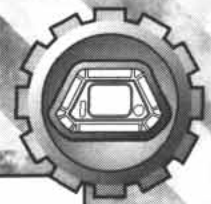
6.4 NEW PERKS

Many vehicles have special features that are not covered by the vehicle's tactical and strategic statistics. These features are represented by Perks. The following new Perks are official additions to the existing Perks and Flaws listed in the various **Heavy Gear** sourcebooks and field guides. They can be used for any type of vehicle, with any affiliation.

Perks with the designation "AUX" are defined as auxiliary systems for damage purposes.

Perks with the designation "R" have a rating that is listed next to the Perk on the data sheet.

● COUNTER-BATTERY SENSOR ▼ AUX R

A Counter-Battery Sensor (CBS for short) is a set of specialized computers linked to the radar and sensor array of the vehicle (sometimes, an additional dedicated radar unit is used). The computers are designed to locate the position of an enemy artillery battery by extrapolating the data from the trajectory and signature of its fire missions. As soon as enemy artillery fire is detected, the technician serving the CBS can supply an approximate location for the firing unit.

Usually, a vehicle equipped with a Counter-Battery Sensor will accompany an artillery battery to allow it to defend itself against enemy artillery units. It is possible to mount Counter-Battery Sensor directly on an artillery vehicle (or even a static installation), but it is rarely done because they are no advantages to it. The rules on using the Counter-Battery Sensor can be found in the *Counter-Battery Fire* section, page 24.

> **● COST = 4 + RATING ●**

● MINE DETECTORS ▼ AUX

Mine detectors are a set of highly specialized sensors designed to look for the telltale signs of the presence of minefields. They are very similar to the sensors supplied by the Geological Sensor Perk, but are specially calibrated to detect the mass and faint emissions of buried land mines. Special "sniffer" pods analyse the atmosphere to try and detect the telltale presence of explosive chemicals, while expert systems process the cameras' inputs to spot zones of recently disturbed ground.

The Mine Detectors Perk allows a vehicle to detect mines in the same way as an infantry unit equipped with the Mine Sensor apparatus (see page 48 for the complete rules). When the vehicle's crew attemps to look for mines, the vehicle's Sensor rating is added to to the crew's Electronic Warfare roll. Note that any minefield detected by the Mine Detectors is only detected, not neutralized, and remains just as dangerous as before.

> **● COST = 4 ●**

● MINELAYING EQUIPMENT ▼

The Minelaying Equipment Perk is a set of special machinery designed to dig a small trench or a series of holes along the path of the vehicle. The machinery then plants one or more land mines and buries them. The system can also "spray" the smaller anti-personnel mines behind the path of the vehicle for fast deployment.

The whole system is very efficient and can lay up to five points worth of mines every two minutes (four tactical rounds or twenty Skirmish rounds). The minefield becomes active one minute after the minelaying vehicle has left the hex, though this delay can be increased if desired. Minelaying Equipment may not be used to place Jumping Mines. The mines are not included in the Perk cost and must be bought separately.

> **● COST = 3 + 1 PER TEN TV POINTS OF MINES (ROUNDED UP) ●**

● MINESWEEPING EQUIPMENT ▼ R

Any vehicles can be equipped with mine-clearing devices, but they will work only in the primary environment for which the vehicle has been designed. For example, the mine plow of an engineering tank will be completely useless against naval mines, even if the vehicle has the Amphibious Perk.

The exact nature of the minesweeping equipment depends on the designer, but on ground vehicles it usually consists of a mine plow or a det-cord launcher. A small distributor that drops chemiluminescent sticks to mark the cleared path is included at no point cost. Minesweeping equipment may not be used to attack another unit, unless it has been specifically designed to do so. Attack-capable minesweeping systems, such as a det-cord launcher, must be included in the Offensive Score. It has a Range of one hex, an Accuracy of -2, a Damage Multiplier of x15 and a TV cost of 10 points per shot.

> **● COST = 5 PER RATING POINT ●**

GUARD DUTY

Privates Williams and Ericson were having a very long night. Smoking some old rumpled cigarettes, they were waiting in their temporary bunker. They were theoretically on guard duty, but their base hadn't had any enemy contact in three and a half weeks. They were just cooling their heels.

"Why the hell couldn't you shut your trap for once?" Williams tossed the butt of his twelfth cigarette into the darkness beyond the sandbags. "You just don't call the lieutenant a half-assed windbag and walk away."

"Well he *is* a windbag —"

"That's not the point! We could be sleeping like the rest of them instead of freezing our butts off in this bloody hole."

"Relax. Have another smoke." Ericson reached into his breast pocket and pulled out the crumpled pack. Bringing it to his mouth, he pulled out two cigarettes while he fiddled with his lighter. The tall orange flame danced before him as he dragged on the cigarettes to light them. Both soldiers were focused on the bright light, ruining their night vision. They never noticed the stealthy figures in the distance.

"So anyway, you've gotta admit that the Lew deserved it." Ericson passed one of the cigarettes to Williams, who took a deep drag before responding.

"I couldn't believe what he did to Valdez." Williams stretched again as he spoke, looking right past the concealed figures in the darkness. "She didn't even deserve to be put on report and he's threatening to get her demoted."

"He's a pompous bastard. It's just that simple."

"I still don't like being stuck out here all night. We're going on patrol tomorrow and we're going to be dead tired."

"Listen, nothing's going on. We're on a backwater base in a backwater region. We'll sleep while we're out here doing—"

They froze. The small cracking noise had come from the darkness. Williams reached for his rifle. He raised his night-vision goggles to scan the area, but didn't see a thing. Ericson hoped out of the bunker once his own goggles were placed. "I'll go take a look."

Williams watched through his own goggles as Ericson, green and grainy in the enhanced image, moved over the nearby dunes. His field of vision limited by the goggles, Williams never saw the figures creep silently past him.

Ericson signaled that he heard the sound again, although Williams couldn't. Williams raised his weapon to cover his buddy and Ericson pounced over a small dune. Williams tensed on his trigger.

Ericson stood up holding a squirming lizard. "Just a sandhopper."

Williams put down his weapon as Ericson let the creature go and slipped off his night vision gear. He trudged over the sand back toward the bunker. Williams kept his own goggles on to see him. It didn't help.

A silhouette, almost black in the light amplification goggles, popped up behind Ericson. Williams instinctively reached for his weapon, but never made it; he heard more than felt the fine steel garrote slice into his throat. His world became painful and dark, and then it ended.

The Légion Noire team hid the bodies and continued their bloody work.

7.1 BATTLEFIELD CAMPAIGNS

Too many players assume that a military-oriented **Heavy Gear** campaign has to feature Heavy Gear pilots engaged in endless skirmishes on the front. There are a lot more possibilities open to a playing group if they are willing to explore some new roles. Like the armed forces of contemporary Earth, the armies of Terra Nova consist of a wide variety of military units ranging from medical corps to tank columns and artillery units. All of these functions can be filled by Player Characters and can be used as the set for a military campaign. Many of these positions are not as glamorous as Gear pilots, but introduce new elements into the Gamemastering task.

In the case of support units, Gamemasters need to remain aware that the Player Characters are bound by tactical deployment plans that are out of their hands. Gamemasters will need to create other story lines that operate on a level in which the Player Characters can exert some additional control. In the case of Gear pilots or elite commandos, mission profiles are often quite general, allowing individual PCs to make field decisions that can lead to an exciting adventure. For artillery commanders, most battlefield decisions involve responding to support requests from the front lines. Multiple subplots and limited objectives are the keys to making such campaigns important. The overall tactical situation should be the background of the campaign rather than its central element. Player Characters should have enemies of their own, which can be rivals within the same unit, a recurring enemy unit or pesky civilians. Defeating these enemies or rivals can then become the goal of a campaign.

Creating a limited military objective can be a useful middle ground between a full-scale military campaign and the personal subplots of the Player Characters. While conquering one hill may be a simple detail in the overall tactics of the Norlight Armed Forces, for the infantry squad that has to throw itself against the gun emplacement on the hill, it becomes their whole world. Playing many adventures revolving around these small-scale objectives can create this sense of importance and allow Player Characters to gain a feeling of accomplishment.

In a military campaign, one factor which must always be kept in mind is death. Mortality is an ever-present cloud in wartime, and the Player Characters should never get the feeling that they or their allies are somehow immortal. Gamemasters should not casually kill off PCs at the drop of a hat, seeing as they are the heroes of the campaign and without them the adventures have very little meaning, but each Gamemaster and playing group will need to find the balance that best suits their style of play. One good step is to make sure all the players realize that their characters are not invulnerable. Player Characters should not get the feeling that their characters are insignificant, however. Their deaths should be a major event and remembered for the life of the campaign. When a PC or major NPC death occurs it should become the center point of play (or of a subsequent story). New Player Characters can also be introduced to fill the deceased's shoes, living with the deceased's PC's heritage on their shoulders.

Another consideration when planning a military campaign is loyalty. It can be very interesting to play a campaign in which the Player Characters' allegiances cannot be taken for granted (or are mistakenly taken for granted). These types of campaigns can also be extremely difficult to play, however, because they encourage Player Characters not to trust each other and can even lead to animosity between the players themselves. Gamemasters will need to judge whether the dynamic of their playing group can survive such a betrayal. If it can do so, then the intrigue of such a subplot can be very rewarding. If the traitor makes real friends with the other Player Characters, the personal drama can even overshadow the political consequences.

Yes, Major

Yes, Major, an extremely popular black comedy, is one of the longest running comedy holoshows in the United Mercantile Federation. *Yes, Major* tells the daily life of a support and supply camp located near the UMF battle line during the War of the Alliance. The show's title refers the camp's habit of assuring their incompetent commanding officer that everything will be done, everything is well, and any disappearing stores are just a clerical error — really.

The show relies heavily on black or cynical humor. Most characters speak in witty repartees, taking verbal potshots at each other. *Yes, Major* has been running for twelve straight cycles. The producers have already announced that the show has been renewed for yet another cycle.

Yes, Major has spawned many memorable characters, the most notable being Corporal Rowan "Weasel" Wilson, the camp's assistant quartermaster. Scheming and devious, Weasel Wilson is always hatching a new harebrained plan to make a profit on the side; the episode in which he intends to covertly sell portable refrigeration units to GREL units remains a classic to this day. Other notable characters include "Little Joe" Hart, the half-deaf artillery gunner; nurse Marian Furst, Weasel Wilson's perpetual (and inaccessible) love interest; and the camp's mascot, a really dumb herding springer called "Spiffy."

Ethan Furley-Hendrix, the creator and star of *Yes, Major*, has discovered that his brainchild is wildly popular in Port Arthur's GREL communities. Mordred-class shocktroopers are said to be especially fond of Weasel's antics, which often send them into cataclysmic belly laughs.

7.1.1 BIG GUNS

There is nothing quite so reassuring and terrifying as word of artillery support. Troops in trouble know that an artillery barrage can get them out of a tight spot by decimating those pinning them down, but they also know that this same barrage can just as easily fall onto their heads. Those who crew the great artillery machines are a strange lot. Practical jokers and firepower fanatics, they love to clear the landscape and to hear the echo of their high-explosive shells slamming into enemy positions.

An artillery unit campaign provides a forum for a type of hybrid front-line/second-line military setting. While artillery units are often part of large-scale military assaults, they are usually position several kilometers away from the battlefield. They are not, however, second-line troops stationed in protected bases: mobile and vulnerable to attack, artillery units must think like a front-line unit without seeing the same action. This setting works well for a "buddy" campaign in which the various members of the unit relieve the stress with practical jokes and hi-jinks. Indeed, the pranks of artillery men are infamous in militaries across Terra Nova. Sudden moments of seriousness as their positions are overrun can punctuate such a campaign.

Player Characters need not just be artillery vehicle drivers or gunners. They can also fill the positions of other associated personnel in the maintenance units, transport, communications or electronic warfare crews. In this way, the PC group can be involved in all the activities of their artillery barrage.

The course of an artillery campaign is intimately linked to the overall tactical situation. Artillery units are always support forces and cannot be deployed alone or in small units (although fire-support Gears do fill a similar role). To give players a role in the scope of the campaign, Gamemasters can focus their stories and character subplots on the interactions among the members of the unit. Rivalries and minor intrigues can easily be featured in the foreground, setting the shape of the campaign.

● STARTING POINT: MECHANICAL FAILURE

The artillery batteries of the Southern MILICIA often hold informal "sharp shooting" competitions. The competitions not only build unit morale, but help keep artillery skills sharp in peacetime. The Player Characters have entered such a competition, trying to prove themselves to the battery they have just joined. The competition goes well for the Player Characters in the first few rounds, and they seem to be on the verge of a surprise victory when something terrible occurs. Their battery-mates — firing high-explosive shells from a self-propelled gun — are suddenly torn apart by an explosion. All the artillery experts in attendance recognize the deadly effect of catastrophic ammunition detonation.

The subsequent investigation causes quite a stir. It stretches over several weeks and finally returns with a conclusion of "human error." The Player Characters should become angry as the names of their dead friends — who they knew to be conscientious artillery troopers — are dragged through the mud.

Security clearance, clerical errors, and every other military SNAFU imaginable will dog PCs who attempt to undertake their own investigation. Eventually, however, they will uncover evidence of mechanical failure. Apparently, the high-explosive shell detonated while it was still in the firing chamber. The burial of the truth about the explosion will become all too evident when the Player Characters discover the payments being made by Territorial Arms' local representative to the members of the investigative committee. The corporate official is willing to bribe — and perhaps kill — to bury the truth. Can the PCs expose him before he buries them?

Possible Campaign Variations

Variation	Description
1	The artillery unit is plague by sabotage.
2	The unit establishes a rivalry with an enemy unit.
3	One of the PCs is an enemy agent.
4	The unit is plagued by a bad FO and repeated friendly fire incidents
5	A rivalry is established with an allied unit
6	The unit is hampered by an incompetent, but well-connected commander

Suggested Player Characters

Character Type	Description
1	Driver
2	Gunner
3	Artillery commander
4	Forward observer
5	Communications specialist
6	Ordinance specialist

7.1.2 BLACK GUNS

Those looking for a more glamorous infantry campaign can set up adventures involving a special forces team. These elite commandos will go where no other troops would dare. These operations are rarely revealed to the public because of security concerns and the fear that the average citizen would be uncomfortable with some of the nastier missions. They are vitally important, however. Without the assassinations, commando raids behind enemy lines and black ops performed by the special forces, the large war machines of the armed forces would face much tougher opposition as enemy morale would be higher and their command, control, communications and supply structures would be much safer and far more reliable.

This type of campaign will be full of excitement and style, including special equipment, covert operations, assassinations and commando raids. Special forces campaigns work very well as a framework for bold adventures in which highly skilled Player Characters beat the odds, recreating the dazzling excitement of top action movies. Those searching for "gritty realism" should emphasize that special operations are rarely pretty or simple: local allies are sacrificed for the "greater good," assassinations are bloody affairs and good people tend to die. Intrigue can be a strong element in these campaigns as well, with double agents, ambushes and traitors behind every corner.

Player Characters can be almost any type of elite operative, but they must work together in some manner. Having a paratrooper assigned to a team that has never been inside an aircraft can be frustrating at best. Gamemasters should build a standard profile of skills for the PCs and then allow them to specialize, making sure that their proficiencies compliment one another.

The course of a special forces campaign can simply follow a war (hot or cold), but, in the tradition of the best action/intrigue fiction, it would be best to create a personal involvement for the Player Characters. By creating a recurring antagonist (perhaps an enemy intelligence bureau chief), Gamemasters can transform unrelated episodes into a series of encounters that lead to a final confrontation.

● STARTING POINT: OPERATION NOIRE

The Player Characters have attracted the interest of the Southern Republican Army's elite Légion Noire. Some will come fresh from boot camp, others from a tour in another unit, but they will all find themselves side by side through the toughest training period of their lives. They will jump from aircraft and trek through desert and swamp; they will learn to move with incredible stealth and to kill both from a great distance and close up; they will become the deadliest fighting machines they can possibly be. Throughout, they will be drilled by the sadistic Major Leyan. By the end of their training, the PCs will have bonded together as a unit, having saved each other time and time again. They will wear the Légion badge with pride.

The PCs' first mission is supposedly simple. A HALO paraglider jump into the hills near Saragossa and then a trek to a SPFI training camp. Once there, they are to eliminate the terrorists with extreme prejudice. The drop goes according to plan, and the team approaches the base by the numbers. Avoiding the anti-personnel mines and slipping through the barbed wire, they are nervous but confident — until their lead man is hit by sniper fire. Soon, SPFI guards are swarming everywhere, and the team must fight its way out as best it can.

Back at the base, lingering questions remain. Did the team blow the operation or were they set up? Could there be a traitor in the Légion?

Possible Campaign Variations

Variation	Description
1	One of the PCs is a defector from the other side. He is not trusted, but has valuable expertise.
2	The PC team is cut off by their commander while in the field and must survive on their own.
3	The PCs become tools in a shadow war between different factions on their side.
4	One of the PCs is the team's coordinator, using comm gear to keep in touch in the field.
5	One of the PCs is an enemy agent.
6	The PC team must work from the cover of a standard military unit, keeping their true missions secret.

Suggested Player Characters

Character Type	Description
1	Sniper
2	Paratrooper
3	Computer systems expert
4	Demolition expert
5	Pilot/Driver
6	Assassin
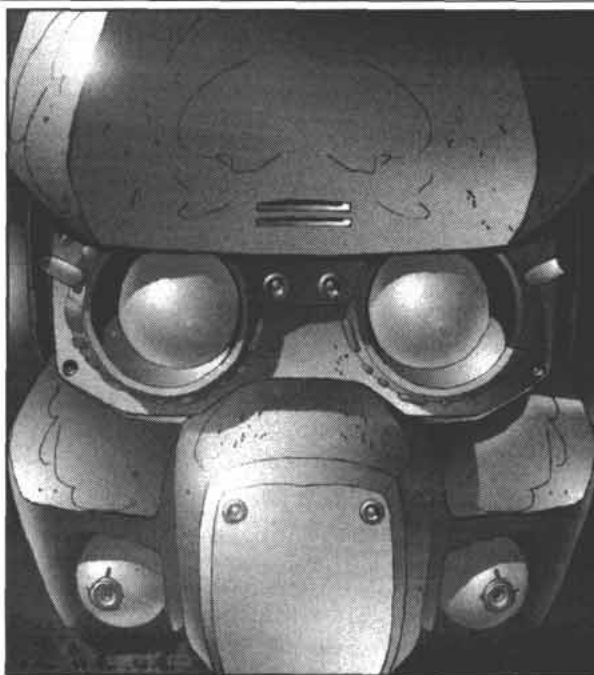
7.1.3 BRIDGE OVER THE BADLANDS

Although they receive little of the media attention and do not have the glamorous mystique of other types of soldiers, field engineers are a vital part of the military machine. When minefields need to be cleared, barrack built, foxholes dug or fortifications constructed, field engineers and their sappers are called on to do the job — usually under fire. Without their skills, infantry units would be largely defenseless and armored vehicles would be rapidly immobilized. Engineering crews may not often be classified as "combat troops," but they are often at the front lines, right behind the scout units.

A field engineer campaign brings to light a largely hidden aspect of military life. Gamemasters can provide technical problems to solve, requiring not only courage but real strategy. A combat engineering campaign demands the ultimate in cool under fire, since Player Characters must build bridges and fortifications while under a full scale assault. This creates a setting for interesting stories of self-sacrifice and camaraderie, rather then gung-ho heroism. While action is certainly not out of the question, engineers and sappers are not there to kill the enemy, but to protect their fellows and prepare the road for an assault.

Engineering crews present a variety of possible Player Characters, from the chief engineers who direct operations for the whole unit to the lowly sappers who dig foxholes and stack sandbags. Pilots for combat engineering Gears or other vehicles, demolition and mine-disposal specialists and geology experts are all part of standard field engineering teams. Player Characters can also be drawn from support personnel or those troops assigned to protect to the engineers while they do their work.

The course of an engineering campaign is quite securely tied to the tactical situation. Gamemasters might want to define smaller goals for their unit than total victory, however. The crossing of a stretch of the treacherous Barrington Basin, for example, would provide opportunities for many different engineering problems, but keep an attainable goal in sight for the length of the campaign. Longer campaigns can consist of a series of these goals.

● STARTING POINT: DEAD MAN'S VALLEY

Two days ago, the advance of the 23rd Northern Guard Armored Regiment up the Westridge Trench was halted by a deadly encounter with a concealed minefield. Without warning, proximity mines in the trench walls brought tons of rock tumbling down onto the lead column of the 23rd, killing over two dozen troopers and destroying eight vehicles. The Player Characters have been brought in to clear the mines.

The PCs rapidly discern that the minefield is a dangerous two-part system: pressure sensors buried in the soil react to heavy weights (such as armored vehicles) passing above and send a signal to the mines lodged in the trenches high walls, causing destructive landslides. The PCs are faced with either eliminating all the sensors without activating them, avoiding them altogether, disposing of the concealed mines or jamming the signal between the sensors and the explosives. Of course, the sensors are highly sensitive to manipulation and use multiple frequencies.

Player Characters will also discover that the mines bear the characteristics of CEF weaponry. The minefield may be a deadly memento of the War of the Alliance, but it could also be a newly installed Arthurian system.

Possible Campaign Variations

Variation	Description
1	The unit is plagued by supply problems.
2	False intelligence repeatedly leads to the unit walking into ambushes.
3	The unit uncovers a mass grave while clearing enemy territory.
4	One of the PCs is accused of being a smuggler.
5	The unit uncovers (or uses) chemical/biological weaponry.
6	The unit is part of a *blitzkrieg* deployment, clearing the way for rapid attack armored vehicles.

Suggested Player Characters

Character Type	Description
1	Chief engineer
2	Sapper
3	Engineering Gear pilot/driver
4	Demolition expert
5	Minefield specialist
6	Geologist

7.1.4 DOGS OF WAR

Despite the glamour of Heavy Gear pilots and the awe inspired by the raw power of armored columns, infantry is the heart of Terra Nova's armed forces. Simple foot soldiers must still take and hold ground, patrol the desert fringes and clear out ambush-laden enemy territory. They are still the most numerous and most expendable of military troops. These soldiers suffer high casualties and feel undervalued, but they struggle to get the job done. They are the "grunts" and victory rests squarely on their shoulders.

Infantry campaigns will rarely be glamorous. Although assaults on enemy territory are very important, foot soldiers are simply not given the status of Gear pilots or other specialists. The infantry life consists of long periods of boredom in which they hold territory and short periods of terror and death as they mount large scale assaults. Those interested in a joint roleplaying and tactical campaign can use the Skirmish Scale rules provided in *Chapter 2* to stage small-scale infantry actions in which the Player Characters can each take an individual role. This is best suited for situations when the unit is advancing on enemy positions. Life in the encampment should also be heavily featured, including the stress and low morale that comes with being stuck in a "meat grinder." Troops faced with death can break down or become heroes, and both tendencies should be featured. Sudden jolts of terror — from sniper fire, aerial bombing or ambushes while on patrol — should punctuate the troops' lives.

It is best to use a variety of foot soldiers as the Player Characters in such a campaign. The specialists in the infantry provide skills and abilities that can be used to differentiate characters. Gamemasters can also suggest a trademark ability or talent for each character, be it "eagle eyes" (high PER and Notice), being a crack shot, or having a "sixth sense" (high Combat Sense). Some other personnel such as medics or technicians can be used as well, but they will rarely be deployed in the field in the same capacity as the other PCs.

● STARTING POINT: JUNGLE HELL

Being drafted into the MILICIA was bad enough, but serving in the jungles of the Mekong Dominion leaves a great deal to be desired. For weeks on end, the only real enemies to deal with are the armies of crabflies and swamp lizards. Riding on riverboats for hours and trekking along "trails" that only exist on decade-old maps become the main components of the PCs' life. Every once in a while, they get to break up a "bandit camp" which usually ends up being nothing but a fishing village with a few old hunting rifles. Everyone realizes that the real bandits know which palms to grease to avoid MILICIA attention.

Everything changes when a standard patrol becomes anything but standard. Five hours into a swamp patrol, the point man of the escouade notices a trip-wire just before stepping on it — the unit has entered dangerous territory. Moving with as much stealth as their lackluster training allows them, the escouade will make it to a clearing. In the clearing, they see several vehicles covered with camouflage tarps, guarded by professional-looking troops. A PC may recognize two of the vehicles as *Blackwind* stealth hoppers. Could these be Northern infiltrators or Paxton agents? The PCs now must decide what to do. If they send in a report and their communication is monitored, they are a long way from any back-up...

▌ Possible Campaign Variations

Variation	Description
1	The unit is assigned to hold inhabited territory, acting as an occupying force.
2	The unit is made of misfits and given the most dangerous assignments.
3	One of the PCs is related to a general and is accused of getting special treatment.
4	The PCs stumble on evidence of war crimes and are ordered to keep quiet.
5	One of the PCs is a military intelligence officer, working under cover.
6	The PCs become national celebrities after being featured on trideo news coverage.

▌ Suggested Player Characters

Character Type	Description
1	Squad commander
2	Heavy weapons specialist
3	Communications specialist
4	Seasoned veteran
5	Green recruit
6	Combat reporter

7.1.5 FIRST ONES IN

The leading edge of any military machine consists of the specialized scout units that reconnoiter the territory and guide the way. The information gathered by scouts can be as simple as the lay of the land (usually confirming satellite imaging) or as complex as the combat readiness of enemy units. Scouts rely on skill and stealth to survive, carrying only light weaponry and moving about unseen.

Scout campaigns bring an element of exploration to military roleplaying. Unlike standard infantry troops who are ordered to accomplish specific military goals in a straight-forward manner (take this hill, destroy this bridge, etc.), scouts are sent into unknown territory and are given significant freedom of action. Highly independent, they must be able to get in, gather intelligence and get out without being observed by enemy forces. Scout PCs will always be on the forefront of a military advance, working side by side with traditional combat troops, but going in first.

Player Characters can be any one of a wide variety of scout types. Some scouts are infantrymen with additional training who lead deep recon patrols, others pilot specialized scout vehicles such as *Iguana* or *Ferret* Heavy Gears. Some are trained as forward observers for artillery or aerial bombing and use sophisticated laser targeting devices, others simply relay intelligence gathered while on patrol. Desert scouts, trained in arid-environment survival techniques and highly familiar with Badlanders and their ways of life, are a prominent part of any Terranovan military reconnaissance force.

Like all military campaigns, scout campaigns can consist of a series of missions that follow the course of whatever military conflict is ongoing. It is more interesting, however, for the PCs to establish a personal agenda within the military conflict. In the case of scouts, creating a connection with locals (among whom they must travel) can serve to give PCs a cause to fight for. As the front runs over local communities, PCs can fight to save their friends lives, or be saddened by their sacrifice.

● STARTING POINT: LONE SCOUTS

The Player Characters have just begun duty as desert guides for the 12th Infantry Battalion of the Northern Guard. Moving into the periphery of the Great White Desert, the 12th has sent the PCs forward to scout out the path of their advance. The 12th is part of a division moving across the region to display Northern power and keep local militias in line. Using ATVs and a *Longrunner* supply truck, the PCs take off across the dunes.

Distracted by tensions with local homesteaders, the PCs take a few days to notice the lone silhouettes that appear on the horizon for a few fleeting seconds, or the fresh footprints around their encampments. Never will the observers be found, but some PCs may recognize the stealth of the legendary Sand Riders.

As the PCs delve deeper into the desert, making sure that the regions neighboring the battalion's deployment zone are secure, the presence of the Riders becomes more troubling. Equipment is sabotaged and accidents begin to happen. One ATV falls into a sinkhole of white sand — one that had been meticulously covered with surface silicate. The PCs must chose whether to withdraw and try to keep the battalion out of the way, or call their comrades in to ensure the area's security. If they do the latter, they will have to fight the Riders on their own territory — and a bad storm is brewing.
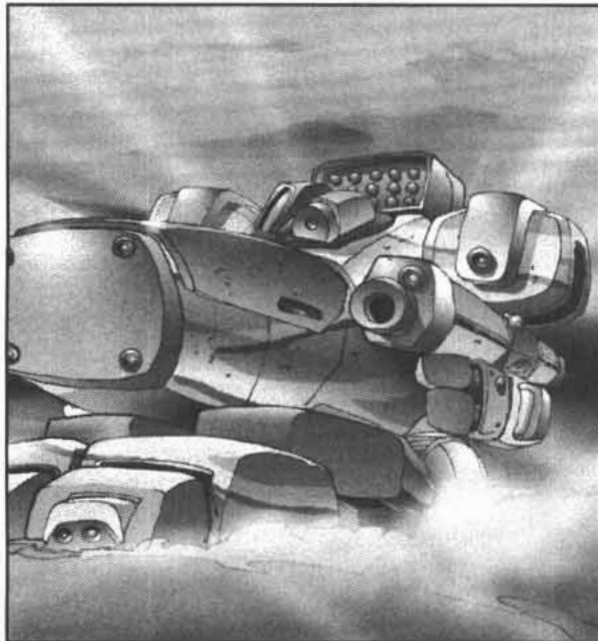
Possible Campaign Variations

Variation	Description
1	The base the scouts work out of is overrun while they are on deep recon.
2	One of the PCs is a Sand Rider and the Riders exile him for working with "outsiders"
3	The PCs are recruited to get a special forces unit behind enemy lines
4	The PCs and an enemy squad must cooperate during a white sandstorm
5	The PCs are trapped deep behind enemy lines.
6	The PCs are asked to retrain rookies in the field.

Suggested Player Characters

Character Type	Description
1	Forward observations specialist
2	Desert scout
3	Scout Gear pilot
4	"Native guide"
5	Communications specialist
6	Squad leader

7.1.6 GREAT ESCAPES

Prisoners are a fact of life in war. While all armies build up the image of their troops never surrendering, all commanders know their is a time to fight to the last and a time to lay down one's arms. Those who are taken prisoner are usually shipped off to POW camps. Many armies treat their prisoners of war relatively well (food and cramped quarters), other see POWs as slave labor or don't keep prisoners at all. Straight execution of prisoners is relatively rare, but brainwashing techniques (from simple propaganda to hypnotherapy) are employed to one degree or another by most armed forces.

POW campaigns are best used to tell stories of hope, triumph over the odds and simple heroism. Player Characters will start locked away, but may devise an escape plan or find a way to survive during the war years. Bold stories of large-scale prisoner revolts are possible, as are covert, small-scale escape adventures. Human stories of survival and strange friendships are also very appropriate, with PCs struggling to keep themselves sane in hellish conditions.

A POW campaign gives Gamemasters the perfect tool to bring together a wide variety of Player Characters in a desperate situation. POWs need have nothing in common save their national allegiance before their imprisonment, and many leagues intentionally try to separate prisoners of the same unit to further undermine morale. Local political prisoners and undesireables could also be involved in a campaign set in a general prison camp.

The course of a POW campaign is based on the ultimate goal of freedom. This can take the form of an elaborate and long-term escape plan or underground railroad in which PCs spend many adventures planning a full scale escape. Freedom would also be granted by the end of hostilities and a campaign of long-term POWs facing the panic of their jailers as the war comes to an end could also create many stories. A series of POW adventures can also set the stage for another campaign based on the connections made while prisoners.

● STARTING POINT: A LIGHT IN THE DARK

It is always night in Camp 21. No windows break the monotony of the cells' stone walls; no bare bulbs hang from the ceilings. No lighters, lamps or matches are tolerated. There is only the darkness, the heavy footfalls of the guards and the maddening screams of the prisoners. No glimmer of hope is allowed to shine.

The Player Characters came to Camp 21 at different times and for different reasons. Some were enemy soldiers, others were political undesirables ready for reeducation and still others did nothing but offend the wrong official. Those differences are no longer important, for there is no life beyond the darkness. The PCs share a few adjoining cells and whisper to each other to keep themselves sane. They know each others names, but have no idea what they look like. On rare occasions, the prisoners are brought into the blinding sunlight of the courtyard to remind them of what they must live without — but are not allowed to speak or otherwise identify themselves. Just as their burning eyes adjust to the unfamiliar light, the prisoners are brought back inside.

Perhaps a day, a week or a cycle after entering the Camp — time is immaterial in the darkness — a simple plastic stick drops into the cell. When a Player Character shakes it, it glows a dull green. Light enters the darkness, if only in a pale form. For the hour that the stick remains fluorescent, hope returns. Two nights later, another stick appears and the PCs notice the footfalls of a guard nearby. Some suspect that the guard is trying to help them survive; others fear that they are being shown the "carrot" in the indoctrination equation. Should they resist, or are they willing to be "reformed" in the hope of light?

Possible Campaign Variations

Variation	Description
1	The PCs are subject to intense brainwashing or torture.
2	The PCs become friends of a sort with prison staff/guards.
3	The PCs are sent to infiltrate the camp.
4	Prisoners are used as "human shields" at strategic emplacements.
5	One of the PCs is a plant from the local intelligence agency
6	The PCs are covert operatives and their government denies their existence.

Suggested Player Characters

Character Type	Description
1	Long term prisoner
2	Local political activist
3	Intelligence agent
4	Prison guard
5	New prisoner
6	Local civilian

7.1.7 HEAVY METAL

The heavy fist of Terranovan armed forces, armored vehicles — be they tanks, striders or AFVs — run over the battlefield delivering mobile heavy firepower wherever it is needed. The crews of these armored beasts are reputed to be wild men, caught between the strengths and limitations of their machines. Sitting behind layers of heavy composite armor, they sometimes feel indestructible when charging through enemy formations. Yet tanks are far from impervious and the slow-moving vehicles can make easy pickings for fast-moving units using the right equipment. The close quarters of a tank make anti-tank ammunition extremely deadly and crewmen are well aware of this fact.

A campaign featuring armored vehicle crew members is in some ways similar to a Gear pilot campaign. The PCs will likely be part of the same squadron, deployed together and relying upon each other in combat. Tankers are not Gear-jocks, however. They do not have the high-tension glamour of duels and high-speed combat as part of their repertoire. Instead, tankers function as a team, both within each tank and between tanks, with each crewman responsible for certain duties and using resources with an eye toward tactics and position.

Player characters can fill a variety of functions in an armored column, from tank commander to gunner to pilot. Many armored crewmen have secondary specialties such as communications, vehicle repair or electronic warfare. Striders and tanks (and even Gears) can be deployed together, so a mixture of these crew types is possible. The vehicles themselves are often looked upon affectionately by their crews and given nicknames. They can almost become "characters" in their own right.

The course of an armored campaign will likely be set by strategic concerns. Tanks and striders are support vehicles that are rarely deployed alone, meaning that the PCs' battlefield experience will likely come as part of larger assaults. Those using *blitzkrieg* tactics may see armored columns deployed ahead of other troops, but even then they will be part of a large campaign. For tank battles, it is probably best to use Skirmish-scale combat, allowing each player to control his function in a vehicle.

● STARTING POINT: CITY STREETS

When the Player Characters trained in the tanks and Striders they man, they were told that military doctrine called for infantry or Gear units to bear the brunt of urban warfare. Unfortunately, doctrine and reality are two very different things. Friendly infantry is pinned down in street fighting in a nearby city state, and the PCs' unit is being brought in to provide fire support.

Unfortunately, the enemy moves first. As the PCs vehicles crawl toward the targeted fortifications, enemy air support streaks over the city. Hoppers and attack helicopters fly just over the rooftops to avoid anti-aircraft fire and decimate allied positions. Before they know it, the PCs are told that the infantry they were sent to support is falling back at a fast clip. Soon enemy Gears and infantry are within sight, advancing from cover to cover. The lead Strider opens up with machinegun fire and heavy rockets, blowing out a hotel from which enemy fire was coming. Before the PCs can cheer, however, an enemy anti-tank missile returns the favor, reducing the Strider to a burning wreck.

The PCs are faced with a dangerous game. They must use their big guns to keep the enemy back until the friendly infantry units can regroup, but they must also seek cover from the anti-armor weapons of their opponents.
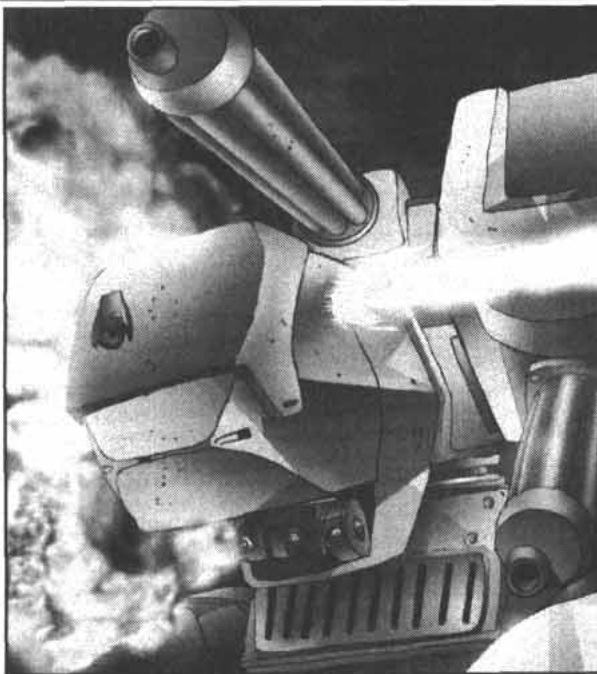
Possible Campaign Variations

Variation	Description
1	The PCs crew an APC/AFV, deploying with infantry troops.
2	The PCs crew one or more outdated vehicles, suffering from maintenance and equipment problems.
3	The PCs' vehicles are fitted with experimental weaponry.
4	The PCs' position is overrun and they are stranded behind enemy lines
5	A combat reporter is assigned to their crew for PR purposes
6	One of the PCs' vehicles is refitted as a covert Electronic Warfare platform.

Suggested Player Characters

Character Type	Description
1	Armored column commander
2	Strider pilot
3	Tank driver
4	Gunner
5	Forward observation Gear pilot
6	Transported infantryman

7.1.8 PATCH 'EM UP!

Just over the hill from the front lines, operating from temporary and highly mobile shelter is a Mobile Army Surgical Hospital (MASH). The doctors, nurses, medics and technicians who staff the MASH live on the rear edge of the war zone, patching together the soldiers who are constantly being brought in from the front. The ultimate emergency room, those assigned to a MASH unit live under excessive stress, having to save lives with severely limited supplies while subject to enemy attack.

Campaigns set in a MASH unit provide the opportunity to show the nastiest side of war. No victories are won by these doctors and nurses, they only see the human cost of every battle and struggle to limit the suffering around them. Although action can form part of such a campaign, the focus will more likely be on the human factor. Of course the campaign should consist of more than a series of First Aid and Medicine skill rolls. Instead, the human interactions, friendships, rivalries, hatreds and loves that grow under stressful conditions should form the center of the campaign.

Medical personnel are the most obvious characters in a MASH chronicle, but others can appear as well — both as Player Characters and as NPCs. The soldiers who are the unit's patients should be prominently featured, with friendships and other bonds growing between the "docs" and the "grunts." Other military personnel, be they command staff, clerks, technicians, military guards or intelligence officers can all be assigned to a MASH for a time and add a harder military core to the campaign.

The course of a MASH campaign will likely follow the tide of war, with the unit's fortunes being determined on the battlefield. The most interesting time frames to play in are those when the warfront is shifting, be it during the opening or closing period of the war. This permits a dynamic element to be added to the campaign, since the scope of casualties, the risk to the unit itself and the chances of going home are always changing.

STARTING POINT: WELCOME TO THE WAR

The Player Characters arrive at their new assignment, the 18th Mobile Army Surgical Hospital, filled with enthusiasm and pride. Whether fresh out of medical training, veterans of urban emergency rooms, or support technicians, they are ready and willing to save lives. Their youthful hope is shattered by the first evening.

It starts at around 1800 hours, when the unit receives word of an offensive beginning nearby; the MASH gets ready to receive casualties. Within fifteen minutes the first C-Evac hoppers pop over the horizon, emergency medical gurneys strapped to their sides. The PCs begin triage faced with a dazzling variety of wounds. One soldier has had both legs blown off by an anti-personnel mine, countless others are riddled with bullets and shrapnel. Then the burn cases come in. The enemy is using incendiary rockets to halt an infantry advance, and doomed kids arrive with third degree burns on 95% of their bodies — their flak armor melted into their flesh. The second hour is worse.

As the PCs struggle to save those they can, they fail to notice the growing thunder of the enemy war machines. They only become aware of what is going on when an attack helicopter screams over the nearby ridge and launches rockets into the MASH's vehicle pool. Panic ensues and the PCs must help manage a retreat while still treating patients.

By the following morning, they have withdrawn and settled into a new position. They have become bitter veterans a day after they arrived.

Possible Campaign Variations

Variation	Description
1	The MASH is overrun and the PCs become prisoners of war
2	The MASH is being used as a cover for a military intelligence unit
3	Wounded soldiers suffering from chemical warfare injuries appear.
4	The MASH suffers from repeated friendly fire incidents.
5	One of the unit members is an enemy agent.
6	The unit is the center of a military contraband ring.

Suggested Player Characters

Character Type	Description
1	Surgical doctor
2	Field Medic
3	Nurse
4	Medivac Pilot
5	Unit Commander
6	Unit Technician

7.2 NEW SKILLS

The **Heavy Gear** roleplaying game offers a good number of skills. However, for those wishing for a more complete and varied campaign — especially one which features characters who strive in battlefield support operations — new skills such as those listed below may be a welcome addition. Individual Gamemasters may want to create new ones as long as they make sure they are not overly specific or unbalancing.

New Skills

• Forward Observing [PER based]

Complexity:	Simple
Specializations:	Specific Terrain, Specific Weapon
Pre-Requisites:	n/a
Often Possessed By:	Forward Observers, Artillery Crew, Officers

Forward Observing is the ability to direct fire from remote weapons onto a target. It is a rather specialized skill which is usually taught only to artillery teams and Forward Observers. This skill includes some basic map and compass reading as well as terrain recognition and evaluation to clearly transmit targetting coordinates and provide rapid corrections. The Forward Observing skill also includes the ability to chose and request the best type of ordinance for a given situation as well as the basic ability to maintain and care for the laser designators and communications equipment used to "tag" or identify targets.

• Sniping [PER based]

Complexity:	Simple
Specializations:	Specific Weapon
Pre-Requisites:	Small Arms 2
Often Possessed By:	Snipers, Elite Troops

Sniping is the ability to place extremely accurate small arms fire onto a target. This skill includes some basic meteorological knowledge to gauge wind influence and some terrain recognition and evaluation abilities. When used instead of the normal Small Arms skill, Sniping allows the firer to place his shot into a specific body part or system (if firing at a vehicle) with no penalty. The human head and the vehicles' Auxiliary system are exception to this rule and are both -1 to hit. In addition, use of the skill adds a +1 modifier to shots made at Long and Extreme ranges. The firer must be stationary when using the Sniping skill and cannot use burst fire.

• Haggling [INF based]

Complexity:	Simple
Specializations:	Specific Commodity, Specific Culture, Barter
Pre-Requisites:	n/a
Often Possessed By:	Quartermasters, Officers, Merchants

Haggling measures a character's ability to influence the final price in a transactions (be it for cash, credit or barter). Haggling is an opposed skill roll with the MoS x 5% as the maximum discount possible. If the skill roll is failed, the price will go up, using the MoF x 5% as the typical increase. A Player's roleplaying should always be weighed as powerfully as the die roll, however, and the specific circumstances should be kept in mind. Many stores have fixed pricing that can't be altered by bargaining.

7.3 STOCK NON-PLAYER CHARACTERS

Because of the underlying storyline inherent to Heavy Gear, Non-Player Characters have been divided into five categories: Historical Figures (Kings/Queens), Restricted Characters (Rooks), Very Important People (Knights), Social Encounters (Bishops) and Expendables (Pawns). These categories will help the Gamemaster determine which character he can use in his campaign and who among them is expendable. Gamemasters may deviate from the main storyline, but they should be aware that killing important characters may make their campaign incompatible with the official Heavy Gear universe.

• Expendables

These are the typical, faceless characters who populate Terra Nova by the millions. They also include those characters who are meant to challenge the players during scenarios. While mindless slaughter should never be encouraged, these are the most expendable characters.

ARTILLERY COMMANDER

● Attributes

AGI	0	APP	0	BUI	0	CRE	0	FIT	0
INF	1	KNO	1	PER	0	PSY	0	WIL	1
STR	0	HEA	0	STA	25	UD	4	AD	3

● Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Camouflage	1	0	Drive	1	0	Leadership	2	1
Combat Sense	2	0	Elec. Warfare	1	0	Notice	1	0
Communications	2	1	Gunnery (Artillery)	2	0	Small Arms	1	0
Computer	1	1	Hand-to-Hand	1	0	Tactics	2	0

● Description

Artillery support can be the last hope for a beleaguered combat unit. Most soldiers feel better if they know they are going to be backed by artillery during a mission. Each gun platform in an artillery unit is supervised by an artillery commander, although his exact title and rank may vary from force to force. The artillery commander directs the loading operations and assigns the fire mission requests he receives to his crew, who then carry them out. He is also responsible for the safety of his unit and decides when to move to avoid counter-battery fire. Artillery officers tend to be "hands on" commanders, working right along side their crew to ensure the unit's success. The big guns of artillery units leave little room for pretty-boy commanders and any with pretentions of grandeur will be greeted with low morale and a rowdy crew.

Typical equipment: tactical map display, personal communications headset, unit status dataglove.

ARTILLERY CREWMAN

● Attributes

AGI	0	APP	0	BUI	1	CRE	0	FIT	0
INF	0	KNO	0	PER	1	PSY	0	WIL	0
STR	0	HEA	0	STA	30	UD	4	AD	4

● Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Camouflage	1	0	Forward Obs.	1	1	Mechanics	1	0
Combat Sense	1	0	Gunnery (Artillery)	2	1	Notice	1	1
Computer	1	0	Hand-to-Hand	1	0	Small Arms	1	0
Drive	2	0						

● Description

An artillery gun would not be very useful without its crew. Artillery crewmen are usually divided between gunners and loaders, although some specific vehicles also require sensor and communication operators. Each crewman is assigned a specific post, but receives at least some training in the other tasks to ensure the continued operation of the battery in case of casualties. Artillery crewmen are the ground forces equivalent of bomber pilots and take great pleasure in the amount of destruction they can inflict in short order. They also boast of their accuracy, claiming to be able to easily pick out enemy forces. Friendly fire incidents, however, remain all too common for these claims to be taken seriously among front-line foot soldiers. These same incidents often lead to a certain animosity between front-line soldiers and artillery troopers.

Typical equipment: emergency repair kit, binoculars, targeting dataglove display.
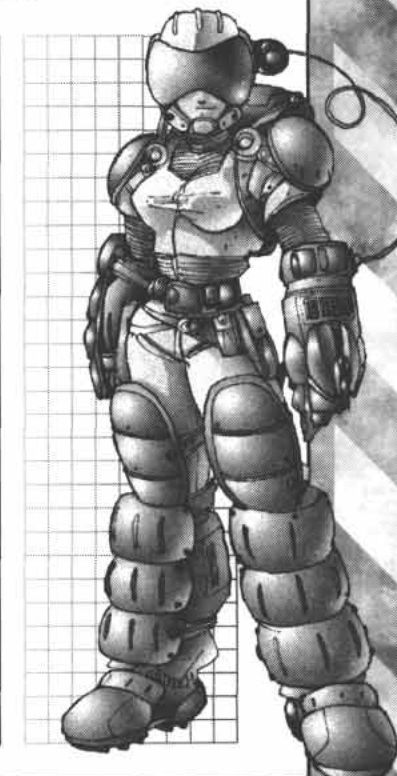
CHAPLAIN

• Attributes

AGI	0	APP	0	BUI	0	CRE	0	FIT	0
INF	+1	KNO	+1	PER	0	PSY	+1	WIL	0
STR	0	HEA	0	STA	25	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Bureaucracy	1	1	Leadership	1	1	Small Arms	1	0
Drive	1	0	Literature	1	1	Streetwise	1	0
Etiquette	2	1	Notice	1	0	Teaching	2	0
F. Language	2	1	Psychology	2	1	*(specialization)		
History	2	1	Soc. Sc. (Theo.)*	3	1			

• Description

A lynch pin in the structure of military morale, chaplains, mentors and other religious soldiers serve to keep the unit directed and sane. Part father-figure, part unit psychologist and part motivational expert, a chaplain is a valuable part of the military structure. The specifics of role and duty change from one army to the next — with the most influence coming in the heavily religious Norlight Armed Forces. In some forces a chaplain is considered as non-fighting personnel and is assigned on a regimental basis, while in other forces he fights alongside regular soldiers and deploys with each company or even each platoon. In every case, a chaplain knows the soldiers' morale and often acts as a consultant to the unit commander.

Typical equipment: religious texts, standard military uniform and equipment, religious paraphernalia for marriage, baptism, last rites and other ceremonies.

FIELD ENGINEER

• Attributes

AGI	0	APP	0	BUI	0	CRE	1	FIT	0
INF	0	KNO	1	PER	0	PSY	0	WIL	0
STR	0	HEA	0	STA	25	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Camouflage	2	1	Earth Sciences	2	1	Notice	1	0
Computer	1	1	Electronics	1	1	Phy. Sciences	2	1
Demolition	2	1	Elec. Warfare	1	1	Small Arms	1	0
Drive	2	0	Mechanics	2	1	Tinker	2	1

• Description

Field engineers design all the earthworks, shelters, roads and fortifications that must be built in the field. Infantry units are especially dependent on the skill of the field engineers to provide them with earthen fortifications and foxholes that allow them to dig in and defend their position. Field engineers are often university trained, with talents ranging from geology and physics to mechanical and electrical engineering. Their greatest skill is perhaps their ability to improvise in the field, using very limited supplies to clear roads and ready fortifications — all with the help of the strong-backed sappers they recruit. Normal soldiers often have a love-hate relationship with engineers; grunts grumble constantly when they are recruited to dig foxholes or fill sandbags, but appreciate them greatly when the bullets start to fly.

Typical equipment: CAD dataglove, tactical maps, engineering vehicle, communications gear.

FORWARD OBSERVER

• Attributes

AGI	1	APP	0	BUI	0	CRE	0	FIT	0
INF	0	KNO	0	PER	1	PSY	0	WIL	0
STR	0	HEA	0	STA	25	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Camouflage	1	0	Elec. Warfare	2	0	Notice	2	1
Combat Sense	1	1	F. Language	1	0	Small Arms	1	1
Communications	2	0	Forward Obs.	2	1	Stealth	2	1
Drive	1	0	Leadership	1	0	Tactics	1	0

• Description

For every artillery barrage, aerial precision bombing, or indirect fire attack there must be a brave scout to call in the proper coordinates. These observers usually use small, fast-moving vehicles and sophisticated laser designators. Those penetrating deep into enemy territory often operate by foot, acting more like snipers than simple scouts. Some use scout Gears as well, although in that situation they often fulfill combat reconnaissance functions in addition to their regular duties. Operating from cover, forward observers try to spot the enemy before they themselves are spotted. Well aware of how easy it is to tag a target from hiding, they are relatively nervous when in a fire base and constantly scan the horizon looking for enemy spotters. Forward observation specialists tend to operate alone or be assigned to a new unit every mission; consequently, they often have a lesser degree of *esprit de corps* than the soldiers they serve with, making up for it with strong pride in their task.

Typical equipment: small vehicle, binoculars w/range-finder, laser designator, communications gear.
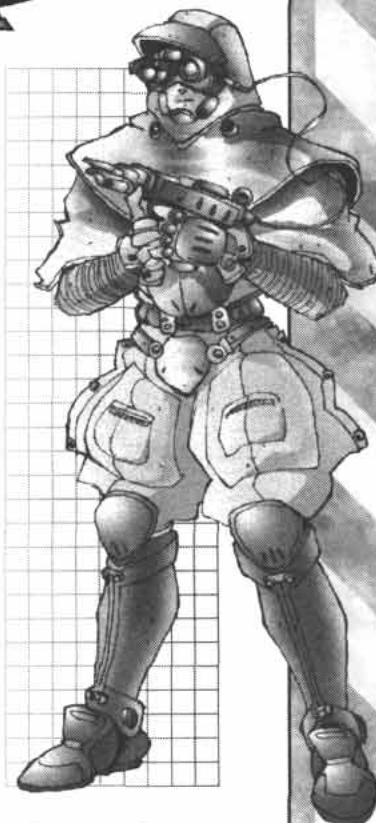
NBC SPECIALIST

• Attributes

AGI	0	APP	0	BUI	0	CRE	1	FIT	0
INF	0	KNO	1	PER	0	PSY	0	WIL	1
STR	0	HEA	0	STA	25	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Combat Sense	1	0	Earth Sciences	1	0	Notice	1	0
Computer	2	0	First Aid	2	0	Physical Sciences	2	0
Drive	1	0	Life Sciences	2	0	Small Arms	1	0

• Description

Called in when chemical, nuclear or biological weapons (or lethal byproducts) are encountered on the battlefield, NBC specialists are highly trained soldiers who deal with the deadliest materiel on Terra Nova. They are familiar with all the latest decontamination, containment and disposal techniques and are trained to recognize the side effects of the deadly poisons they deal with. Most weaponry on Terra Nova is conventional in nature, but there are few powers of note that do not have their own NBC stockpiles and programs. NBC specialists are fairly scarce, usually deployed on the brigade level. Specialized units are also available as reinforcements in case of heavy use of NBC weaponry. Their presence is rarely appreciated by average soldiers because of their association with the weapons they deal with. Many soldiers call NBC specialists "ghouls" or "zombies."

Typical equipment: NBC suit, specialized med-kit, sampling and decontamination kit.
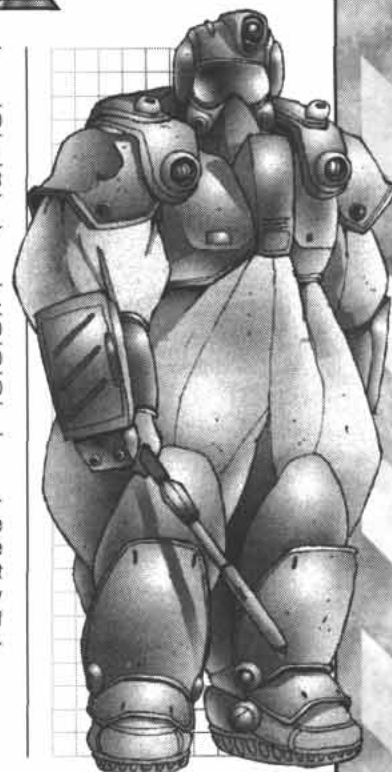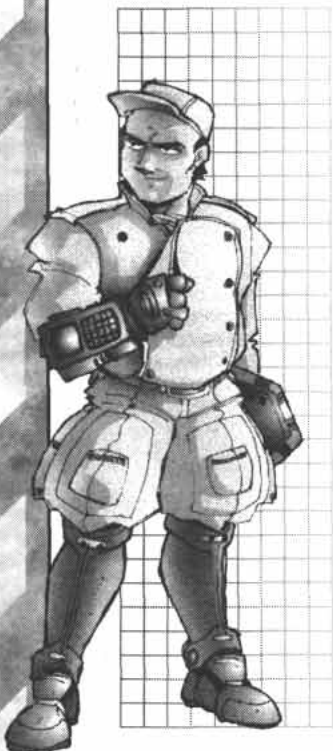
QUARTERMASTER

Attributes

AGI	0	APP	0	BUI	0	CRE	1	FIT	0
INF	0	KNO	1	PER	0	PSY	0	WIL	0
STR	0	HEA	0	STA	25	UD	3	AD	3

Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Bureaucracy	2	1	Etiquette	1	0	Intimidate	2	0
Business	2	1	F. Language	1	1	Investigation	1	0
Computer	1	0	Forgery	2	1	Streetwise	2	1
Drive	1	0	Gambling	1	0			

Description

The soldiers best friend and worst enemy, the quartermaster is the NCO responsible for a unit's supplies. He oversees almost every aspect of daily life, providing quarters, food, clothes, fuel and ammunition to the troops. Soldiers soon learn that keeping the quartermaster happy is the first rule of military survival (not to mention comfort). Particularly during wartime, many of the quartermaster's duties involve using "unofficial" channels to get supplies. Everything is available in very limited quantities and it is often connections and favors that determine who receives what. These NCOs are widely thought of as corrupt since they accept bribes and smuggle supplies, but without their back room dealings, few units could operate at all. Most quartermasters take a bizarre pride in their ability to go around regulations to get the job done.

Typical equipment: vital supplies, contraband goods, lots of requisition forms.

ROOKIE PRIVATE
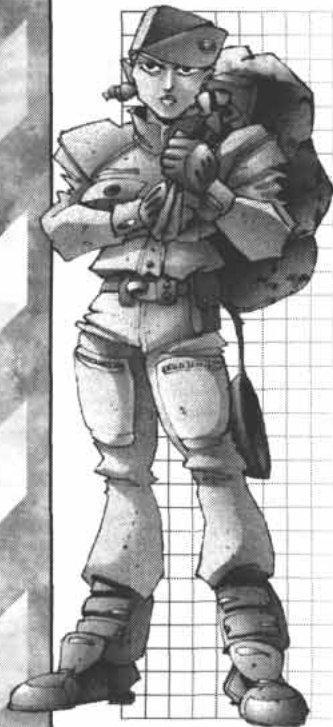
Attributes

AGI	1	APP	0	BUI	0	CRE	0	FIT	0
INF	0	KNO	0	PER	0	PSY	1	WIL	-1
STR	0	HEA	0	STA	25	UD	4	AD	4

Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Ambush	1	0	Dodge	1	1	Melee	1	1
Athletics	1	1	Drive	1	1	Small Arms	2	1
Camouflage	1	0	First Aid	1	0	Survival	1	0
Combat Sense	1	0	Hand-to-Hand	1	1			

Description

As the militaries of Terra Nova call on citizens to join the march toward war, units are flooded with fresh recruits. Wide-eyed and barely trained, these "green" privates usually out of their depth. They have no real combat experience and only have their buddies to count on — and they have very few buddies. Many will become competent soldiers, finding their own ways to survive the war, but some will always remain innocent, until they are killed on the battlefield. Veteran troops tend to be very hard on fresh recruits, treating them like dirt and assigning them to the most unpleasant or dangerous duties. A few will try to guide the newcomers, but such kindness involves a veteran admitting that he too was once "green," and very few are willing to do that.

Typical equipment: standard issue uniform and equipment, photograph of high-school sweetheart.

SAPPER

• Attributes

AGI	0	APP	0	BUI	2	CRE	1	FIT	1
INF	0	KNO	0	PER	0	PSY	0	WIL	0
STR	1	HEA	0	STA	35	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Camouflage	1	0	Drive	2	0	Melee	1	0
Combat Sense	2	0	Earth Sciences	1	0	Notice	2	0
Demolition	1	0	Mechanics	1	0	Small Arms	2	0

• Description

Field engineers may design the fortifications that infantry and other units rely on, but sappers actually build them. Chosen more for their size and strength then their technical skill, sappers nonetheless gain much on-the-job training and end their tours well versed in several technical skills. Standard foot soldiers tend to snicker at troops who carry a shovel along with their rifle, but they are more then happy to duck behind the earthen barrier the sapper has built when enemy fire comes raining down. Sappers sometimes find themselves acting as improvised mine-clearing specialists, trusting their instincts and directions from field engineers to protect them. This is work they are barely trained for and the rate of attrition during such duties can be grizzly. Sappers often revel in the grim prospects of their duties, calling themselves "dead men" or "walking corpses." Field engineers rarely appreciate this gallows humor, but there is very little they can do about it.

Typical equipment: rifle, shovel, demolition equipment.
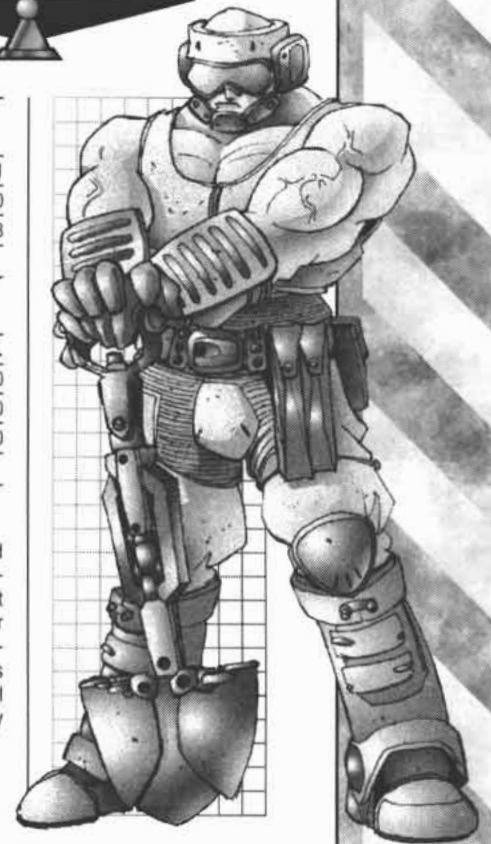
SNIPER

• Attributes

AGI	1	APP	0	BUI	0	CRE	0	FIT	0
INF	0	KNO	0	PER	1	PSY	0	WIL	1
STR	0	HEA	0	STA	25	UD	3	AD	3

• Skills

Skill	Level	Attr.	Skill	Level	Attr.	Skill	Level	Attr.
Athletics	1	0	Hand-to-Hand	1	0	Sniping	2	1
Camouflage	2	0	Notice	2	1	Stealth	2	0
Combat Sense	2	0	Small Arms	3	1	Survival	1	0
Communications	1	0						

• Description

Precision long-distance killers, snipers are the elite riflemen of the armed forces. Using specialized weaponry, they take up hidden positions and pick off their targets from far away. They pride themselves on killing with a single shot and use their skills both to eliminate key personnel (often officers) or to strike terror into enemy forces by picking off troops behind the lines. Snipers are not only elite marksmen, but trained infiltration troops who can conceal themselves with frightening ease. Snipers tend to be haughty and speak in almost mystical terms about the experience of placing a shot on target. Other troops often see them as cold and full of themselves — prima donna assassins rather than traditional soldiers. Their reputation is not helped by the devastating effects enemy snipers have on morale.

Typical equipment: 15 mm Sniper Rifle, camouflage equipment.
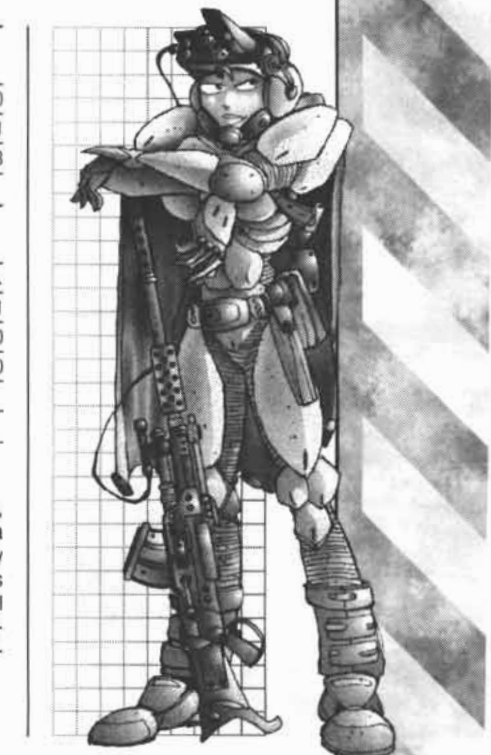
STEEL COLUMNS
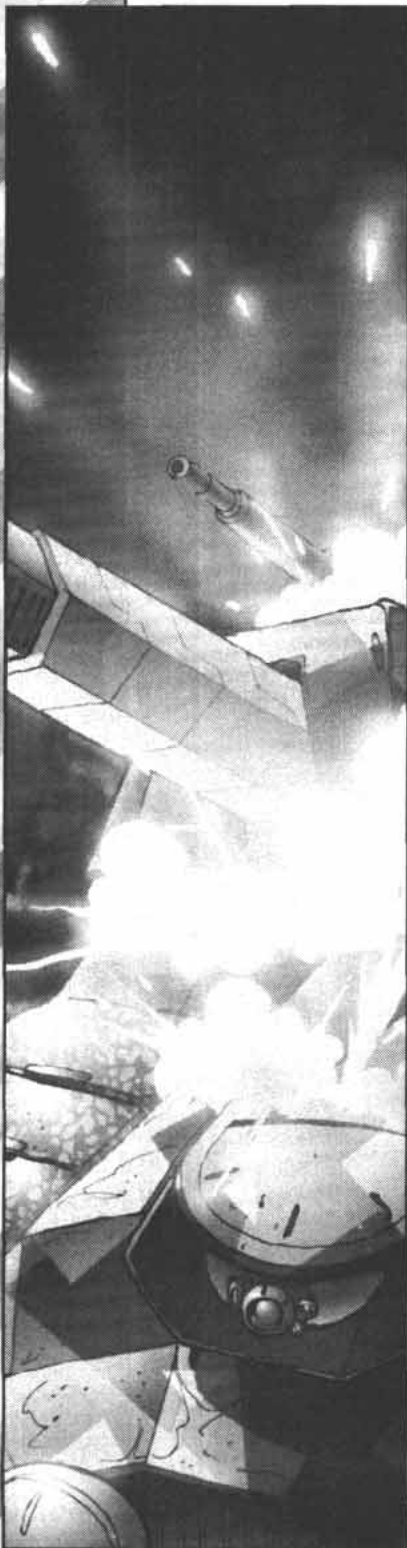
Garner closed his eyes and listened to the machines. The others thought he was a little touched, but he had yet to lead them astray.

The *Allers* made the most noise, of course. Their heavy treads dug deep into the packed sand and earth of the desert fringe, making a repetitive metallic clicking sound that told Garnet they were running efficiently.

"Fall back to number 5 tank." The driver next to Garner carried out his command and pulled up next to the last of the massive MBTs.

Garner concentrated. The massive thundering of the tank — now only a few meters away — was all he could hear once he turned down his command headset. The techs had reported problems with this one's drive and the last thing he needed was a surprise. The rhythmic clatter of the treads was right, but the low rumbling whine of the AGP-865 gas turbine engines seemed off pitch. Garner turned his headset back on and signaled the commander.

"Yes Sergeant?" Captain Marrat's voice crackled with static.

"Number 5 *Aller* from squadron two isn't running 100% Cap. Better protect her if things get hairy. Maybe we could move squadron three forward instead." Garner could almost hear Marrat calling up the tactical display in the C&C vehicle on the other side of the armored column.

"Looks good, Sergeant." A faint click indicated that Marrat was opening a channel to the Rangers commanding the two *Aller* squadrons. "Two, fall back to position gamma. Three, take up forward beta position."

As the ten massive MBTs maneuvered to exchange position, all hell broke loose. Garner was aware of the attack a split second before his comm set came to life with reports, a flash of cold dread running down his spine.

"Contact. Hostile infantry." The report from the *Cheetah* scout squadron was punctuated by bursts of pack gun and anti-personnel grenade fire. Garner activated a magnification window on his heads-up display: he could now see the nimble Gears bound over a high dune about a klick ahead.

"Disperse formation!" Marrat barked. "Get me weapons info on them."

It was only a second before Marrat got his answer. A sound like concentrated thunder rolled over the dunes, piercing through the rumble of the tank columns now that Garner's driver had moved their vehicle off to the side. One of the enemy troopers must have been a forward observer — that was the sound of heavy artillery guns.

"Squadron Four. Set down for counter-battery fire." Garner had barely given his order before the high-explosive shells slammed into the *Allers* of squadron two. Two near-misses produced clouds of sand and grit, but Garner could still see the lead tank was it was hit. The shells punctured the massive hull and detonated inside, separating the turret and lifting the whole MBT off the desert floor for a split-second.

The five *Tybur* self-propelled guns of squadron four swivelled their weapons around and returned fire at the estimated position of the enemy artillery. The other tanks were retreating, trying to break up their formation. The *Tyburs* added to the thunder, deafening Garner.

Garner wasn't sure he would ever hear again. Any second, enemy artillery would send the next salvo.
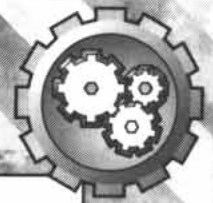
8.1 SUPPORT VEHICLES

Support vehicles, as their name indicates, are used to provide support to front line battlefield units, either directly (artillery, minelayers) or indirectly (MASH unit, cargo trucks, etc.). They play a vital, though often discrete, role in modern armed forces, for no army has ever been able to march on an empty stomach or function without supplies. The following section contains twenty-five vehicles covering the entire range from the heavy self-propelled gun to the lowly jeep.

Support vehicles are designed differently from front line combat vehicles because they face different operating conditions and requirements. Most are more vulnerable than battle units and do not carry a significant amount of weapons or armor. This is because they are not expected to find themselves in combat — additional armor or weapons would thus be a waste of resources. Many support vehicles, however, will carry at least a certain amount of metal or polymer plating to protect them against shrapnel and allow them to survive on the fringes of the occasional attack. One or two light weapons, often pintle-mounted, give them some bite against marauding infantry.

The vehicles introduced in the next few pages represent the various types of support vehicles currently used in the armies of Terra Nova. Although space restrictions prevent the inclusion of a model from each and every armed forces, all support vehicles allocated to a specific role usually have similar specifications. The statistics provided may thus be used in a generic way, perhaps modifying one or two values to create a different model. For the sake of simplicity, the vehicles in this chapter are organized into combat, engineering, specialized and transport units.

Combat units include artillery and fire-support vehicles. The *Artemis* anti-aircraft tank is the South's answer to the technical difficulties of laser AA emplacements. Using sturdy 20mm chainguns, the *Artemis* is a reliable and mobile air interdiction weapon. Artillery platforms include the *Red Bull* Strider, the *Stinger* missile truck and the *Vandal* artillery tank. Paxtons' *Red Bull* is a specialized artillery vehicle, designed to bring heavy firepower into difficult terrain such as mountains. The North answered the need for inexpensive firepower by converting the ubiquitous *Camel* supply truck to carry artillery missiles and calling it the *Stinger*. The *Vandal* carries the most firepower, using the huge *Visigoth* chassis to carry *Hellbringer* artillery missiles. Both poles have also developed heavy fire support Striders, bringing mobile firepower onto the battlefield. The Northern *Damocles* uses the tried and true *Mammoth* chassis to mount a light artillery cannon, while the South has developed an all-new chassis for its *Sagittarius*. Tracked self-propelled guns remain popular weapons despite the presence of such Striders, however, and the Southern *Ostrogoth* and Northern *Verder* represent such vehicles.

Engineering units include all those vehicles designed specifically to aid field engineers in their critical duties. While not designed to engage in combat, most of them are modifications of combat units. The Northern *Baxter* engineering vehicle — based on the *Klemm* chassis — represents a class of dedicated heavy lifting vehicles designed to free even massive MBTs from ditches and mud. The *Celt* light tank (modified from the *Hun*) is a dedicated minesweeper capable of rapidly clearing the deadly minefields that greet most attacking forces. Both poles utilize a variety of engineering Gears, taking advantage of their versatility and mobility — the *Engineering Cobra* and *Engineering Grizzly* are the standard heavy models. Finally, the *Valence* Work Gear is a Paxton Arms civilian model that is often pressed into military service.

Specialized units include the many support vehicles that serve highly precise functions and often feature cutting-edge electronics and all too little armor. The *Evil Eye* forward observer variant of the tried and true *Elan*, the *Murdock* command vehicle, the *Nightingale* medical evacuation vehicle, and the *Seeker* information gathering vehicle all fit into this category.

The final category of support vehicles falls into the "low-tech" end of the spectrum, bringing together all the supply trucks and transports that are the least glamorous — and perhaps most critical — part of any military's logistical complement. The *Antelope* all-terrain transport is a versatile, all-purpose vehicle, that moves troops, supplies and commanders across Terra Nova. The *Five-Ton* and *Springer* are standard supply trucks of different weight classes that haul the military's cargo, be it K-rations or spare uniforms. While other trucks bring food for the troops, the *Tanker* does so for the vehicles, carrying the massive quantities of fuel necessary for any military action.

BROTHERS IN ARMS

"There's this strange relationship between the front line guys and the supply people, or at least in my old regiment there was. They used to nag us all the time about us not being real soldiers and all because we weren't on the front — not that they were too serious about it. They knew all too well that we were the ones keeping them fed and well supplied, and they sure didn't want us on their bad side, no sir... Not if they wanted to eat more than C-rations for a whole season. <chuckle>

"Still, that didn't stop all the practical joking. They'd do innocent stuff like paint 'Lazy Bum Wagon' and other unfunny slogans on our trucks, and we'd reply in kind. Sometimes, when we were away from the front, we'd send cratefuls of assorted junk instead of the usual packs of goodies, and then watch the boys scramble and run around for awhile before they came begging for their sweets and magazines. But this was all good-natured banter, you understand. When the crap hit the fan, the boys up front knew they could count on us to back them up, because we counted on them to keep our butts out of the line of fire. We were all part of the same big family, ya know.

"Of course not everyone appreciated our sense of humor. I remember one Gear regiment commander — a real stuck-up type; he just didn't get it when we sent him three thousand copies of *Barnaby Loves You: Live in Canterbury* the day before a general inspection. He fired off about eighteen official complaints and reprimands. Too bad they were accidentally misplaced by the couriers."

Excerpt from an interview with Baccus Peshtarelle, published in **BattleLogs**, Summer TN 1933.

AA-64 ARTEMIS
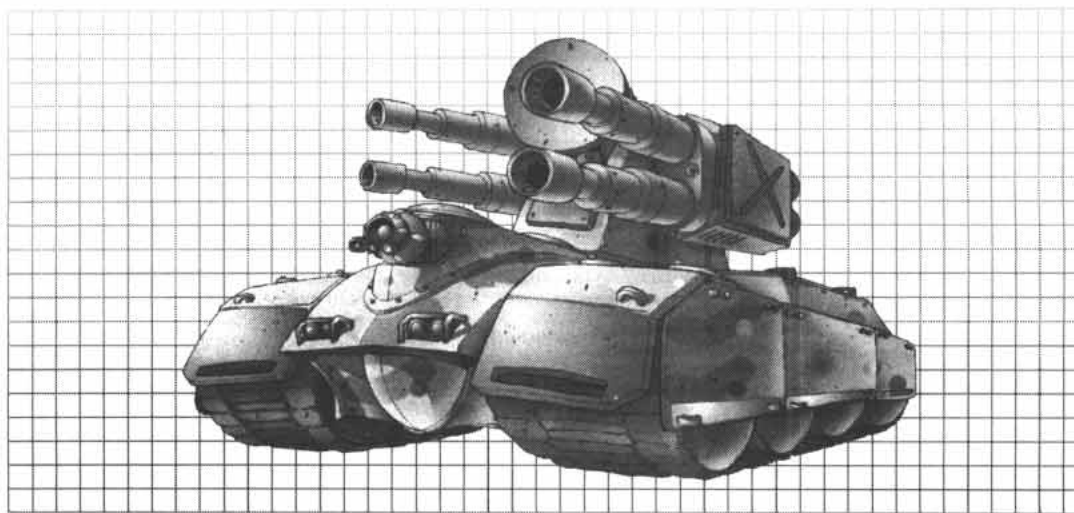
• OVERVIEW

Modern anti-aircraft duties are usually handled by a dedicated laser or particle beam weapon system. Their direct line-of-sight and practically instantaneous response time generally means that once a target is acquired it is shot down. Energy weapons are temperamental beasts, however, requiring more maintenance and specialized training than projectile weapons.

The *Artemis* anti-aircraft vehicle has been designed to address this problem. It is intended to serve as a rugged field air interdiction platform, relying on relatively simple 20 mm liquid-cooled chainguns rather than laser arrays. The four autocannons are turret-mounted and slaved to the same fire control computer, allowing them to fill entire areas of the sky with deadly shrapnel. The ammunition feed process is fully automated, the gunner concentrates instead on acquiring targets.

The hull and suspension of the vehicle are of a classic design, with high-strength alloy torsion bars and a computer-controlled, hydraulically-assisted suspension. The addition of the latter allows the *Artemis* to lay down covering fire even on the move, increasing its survival rate against strafing runs.

• SERVICE RECORD

Artemises are presently found in most Southern armies thanks to licenses sold to various armored vehicle manufacturers throughout the hemisphere. The vehicle's relative simplicity and low cost (for its capabilities) has made it popular with foreign buyers and even small town militias. The *Artemis'* one main default is its ravenous appetite for ammunition, which can prove problematic both budget-wise and when setting up supply lines.

• SPECIFICATIONS

Code name:	Artemis	Production code:	AA-64
Manufacturer:	various	Use:	anti-aircraft weapon platform
Height:	2.8 meters	Length:	7.5 meters
Average armor thickness:	120 mm	Armor material:	alloy plating w/Armoplast
Standard operational weight:	17,870 kg	Maximum speed on clear ground:	59 kph
Powerplant:	2 x gas turbines	Horsepower:	2 x 800 hp

• WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
4 x 20 mm Buzzsaw MkII Chainguns	4 drums of 500 belted rounds		

• OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Fragmentation Ammo for all drums	6667	Add smoke launchers (10 shots)	1463
Add pintle w/9 mm chaingun	1442		

ARTEMIS ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Artemis
THREAT VALUE:	1441
▶ OFFENSIVE:	2862
▶ DEFENSIVE:	244
▶ MISCELLANEOUS:	1216
SIZE:	9
▶ ORIGINAL DEFAULT SIZE:	11
CREW:	2
▶ BONUS ACTION:	1
COST:	880,611 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(59 kph) 10
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	500 km

ELECTRONICS ▼

SENSORS:	+1
▶ SENSOR RANGE:	5 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	15 km
FIRE CONTROL:	+1

ARMOR ▼

LIGHT DAMAGE:	22
HEAVY DAMAGE:	44
OVERKILL:	66

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Automation	2	Autoloader; replace 2 crewmembers
Sniper Systems	-	4 chainguns; +1 to L and Ex attacks
Weapon Link	-	Links all chainguns (4)

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Fire Control	-	"FC" hits are one level worse

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
20 mm Chainguns	LAAC	T	2	4	8	16	0	x8	4	500 ea.	ROF6

DAMAGE ▼

■■■■■■■■	10		60
■■■■■■■■	20		70
■■	30		80
	40		90
	50		100

PAW-12 RED BULL

OVERVIEW

Many artillery units have poor off-road maneuverability because of their weight, limiting a commander's options when placing his artillery support on the field. The *Red Bull* strider is designed to put gun batteries into hard-to-reach spots, regardless of the location chosen.

The *Red Bull* earned the first part of its nickname because of the red ceramite plating chosen for the dorsal armor panels. Two artillery cannons jut out of its massive back like twin, grotesque horns. Each gun is automatically fed by a 12-cassette magazine, each cassette containing six shells and the liquid propellant required to fire them.

The *Red Bull* has a classic four-legged design: close to the ground, chosen for stability. The large clawed feet enable the vehicle to handle the trickiest of ground, and their great surface area limits the ground pressure to acceptable levels. The strider's limited speed is a major problem, especially when trying to move to avoid counter-battery fire, but intelligent officers will deploy it only in extremely broken terrain where there is ample cover.

SERVICE RECORD

The operating and maintenance costs of a *Red Bull* tend to be quite high, which limits its use to a few specialized artillery units. Its limited mobility and the complexity of its on-board system make its deployment useful in a very narrow range of missions. Still, the *Red Bull* had its moments of glory.

During the War, the self-christened Mad Bulls were instrumental in preventing the CEF advance toward UMF territory. Waging an artillery guerilla war from the heights of the Westridge range, the Mad Bulls helped stall the advance of the invading forces for nearly two seasons before being forced to disengage due to a lack of supplies.

SPECIFICATIONS

Code name:	Red Bull	Production code:	PAW-12
Manufacturer:	Paxton Arms	Use:	artillery strider
Height:	6.6 meters	Length:	12.4 meters
Average armor thickness:	320 mm	Armor material:	durasheet w/composite
Standard operational weight:	47,500 kg	Maximum speed on clear ground:	31 kph
Powerplant:	2 x gas turbines	Horsepower:	2 x 1700 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
2 x 75 mm Electrothermal GE-86 Howitzer	2 x 12 salvoes of six shells		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add grenade launcher (APGL, F, 30 shots)	740	Add smoke launchers (10 shots)	738
Add smoke launchers (10 shots)	738	Add Electronic Warfare pod (ECCM 2)	769
Add Camo Netting	738	Add Chaff/Flare Dispenser (rating 1, 20 shots)	793
Add Ram Plate	738	Red Bull I-D (Anti-Missile System, rating 1, 20 shots)	806
Add Weapon Link (both LAGs)	748	Red Bull I-F (Ammo/Fuel Containment System)	769
Add Anti-Personnel Charges (rating 1, 50 charges)	769	Red Bull I-NBC (Limited Life Support)	748
Red Bull I-K (Haywire Resistant)	849	Red Bull I-COM (Satellite Uplink)	849

RED BULL ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Red Bull
THREAT VALUE:	729
▶ OFFENSIVE:	1434
▶ DEFENSIVE:	533
▶ MISCELLANEOUS:	221
SIZE:	12
▶ ORIGINAL DEFAULT SIZE:	9
CREW:	2
▶ BONUS ACTION:	1
COST:	273, 375 marks/dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Walk
▶ COMBAT SPEED:	3
▶ TOP SPEED:	(31 kph) 5
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-4
DEPLOYMENT RANGE:	250 km

ELECTRONICS ▼

SENSORS:	+1
▶ SENSOR RANGE:	5 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	15 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	40
HEAVY DAMAGE:	80
OVERKILL:	120

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Automation	2	Act as two crewmembers
Back-up Sensors	-	Absorbs first "Sensor" hit
HEAT Resistant Armor	5	Add to Armor vs HEAT weapons
Hostile Environment	-	Desert
Improved Off-Road Ability	-	-1 MP cost per hex, min. 1

FLAWS ▼

NAME	RATING	GAME EFFECT
Difficult to Modify	-	-1 to all Repair and Modify rolls
Large Sensor Profile	3	Easier to detect
Sensor Dependent	-	Must rely on sensors in combat

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
75 mm Cannon	LAG	FF	25	50	100	200	-2	x12	2	12	AE0, IF, MR10

DAMAGE ▼

▪▪▪▪▪▪▪▪▪▪ 10	_____ 60
▪▪▪▪▪▪▪▪▪▪ 20	_____ 70
▪▪▪▪▪▪▪▪▪▪ 30	_____ 80
▪▪▪▪▪▪▪▪▪▪ 40	_____ 90
_____ 50	_____ 100

HEAVY GEAR

MAP-6/5 STINGER

OVERVIEW

The *Stinger* Missile Artillery Platform is a light battlefield missile delivery system built on the reliable *Camel* truck chassis. It is made exclusively by Davenger Industries, which purchased the *Camel* license in the late TN 1800s.

The primary *Stinger* modification is the addition of a large boxy launcher to the rear deck of the truck. Hydraulic jacks raise the launcher above the cabin into the firing position, while exhaust gases are vented through special vents at the rear and sides. A sensor package located on top of the cabin can be used to direct the first leg of the flight, allowing the crew to make minor corrections to the trajectory of the rockets as they sail toward their target. These sensors are quite fragile, and many crews simply remove them completely as they fail.

In the latter part of the War, engineers at Davenger perfected a variant of the *Stinger* that used the heavier Talon-IV artillery missiles normally used to defend fortifications. The resulting modifications lowered the number of missiles carried to eight, but increased the firepower of the vehicle. The added weight, however, also made the vehicle more sluggish.

SERVICE RECORD

Stinger missiles trucks were put to extensive use during the initial days of the War of the Alliance to try and slow down the advance of the CEF troops. They were only mildly successful because the vaunted speed of the enemy hovertanks made it difficult to saturate an area with the inaccurate artillery missiles. Hundreds of *Stingers* were abandoned where they were parked, their launching racks empty and their supply trucks in flames. Although many were sabotaged by their crews, the CEF salvaged quite a few to use as free cargo trucks for their rear areas.

SPECIFICATIONS

Code name:	Stinger	Production code:	MAP-6/5
Manufacturer:	Davenger Industries	Use:	missile artillery platform
Height:	3.6 meters	Length:	5.8 meters
Average armor thickness:	12 mm	Armor material:	rolled armor steel
Standard operational weight:	5120 kg	Maximum speed on clear ground:	65 kph
Powerplant:	diesel engine	Horsepower:	1100 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
150 mm Stinger Alpha-III missiles	8 missiles		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Stinger Talon (MAM x 4, Ammo 8, Man. -4)	5594	Add smoke launchers (10 shots)	1469

STINGER ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Stinger
THREAT VALUE:	1469
● OFFENSIVE:	4306
● DEFENSIVE:	27
◆ MISCELLANEOUS:	73
SIZE:	8
◆ ORIGINAL DEFAULT SIZE:	11
CREW:	2
◆ BONUS ACTION:	1
COST:	1,009,938 marks
◆ PRODUCTION TYPE:	Mass Production
◆ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
◆ COMBAT SPEED:	6
◆ TOP SPEED:	(65 kph) 11
SECONDARY MOVEMENT MODE:	n/a
◆ COMBAT SPEED:	-
◆ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	350 km

ELECTRONICS ▼

SENSORS:	0
◆ SENSOR RANGE:	4 km
COMMUNICATION:	0
◆ COMMUNICATION RANGE:	20 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Hostile Environment Protection	-	Desert
Passenger Seating	-	2 seats in cabin
Stabilizer Mount	-	Stabilizers for artillery missiles

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Movement System	-	"Movement" hits are one level worse
Large Sensor Profile	1	Easier to detect

DEFECTS ▼

NAME	RATING	GAME EFFECT
Movement SystemDefect	-	-1 MP; already factored in stats

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Stinger Alpha-III	LAM	FF	50	100	200	400	-3	x12	1	16	G, AE 0, MR 40

DAMAGE ▼

☐☐☐☐☐☐☐	10
	20
	30
	40
	50
	60
	70
	80
	90
	100

HEAVY GEAR

ST-18 VANDAL

OVERVIEW

The *Vandal* is the proverbial "big gun" unit. Designed to provides heavy tactical artillery support, it is based on the chassis of the *Visigoth* main battle tank. Both vehicles share the same engine and drive train for simplified maintenance in the field.

The driver is seated forward in the hull while the system operator sits in the rear, just under and forward of the launcher. The turret has been removed and replaced by twin launching rails for *Hellbringer* tactical artillery missiles. The twin hypervelocity missiles are carried semi-externally, which makes them somewhat vulnerable to enemy fire. This is usually not a problem because the *Vandal* operates far from the action.

The *Vandal* is usually found parked at the extreme limit of the combat zone, its crew ever attentive to requests from the forward observer. Because the tank carries only two missiles, it must chose its targets carefully: each shot must count.

SERVICE RECORD

The *Vandal* is currently only found in the army of the Southern Republic. Other Southern leagues consider it too inefficient for the cost and too limited because of its ammunition load. Many argue that the tactical advantage afforded by the incredible acceleration of the missiles (and thus its short flight time and reduced vulnerability to enemy defensive fire) is not worth the increased cost.

SPECIFICATIONS

Code name:	Vandal	Production code:	ST-18
Manufacturer:	Republican Tank Arsenal	Use:	heavy tactical missile transporter
Height:	3.20 meters	Length:	8.2 meters
Average armor thickness:	325 mm	Armor material:	Armoplast w/alloy webbing
Standard operational weight:	56,200 kg	Maximum speed on clear ground:	54 kph
Powerplant:	4 x electric motors, 2 x gas turbines	Horsepower:	4 x 500 hp, 2 x 1000 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
Hellbringer Artillery Missile	2 missiles		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add dozer blade (Light Mine Equipment)	2029	Add smoke launchers (10 shots)	1962
Add pintle mount w/9 mm machinegun	1948	Add pintle mount w/9 mm chaingun	1948
Add pintle mount w/37 mm grenade rifle	1950		

VANDAL ▼
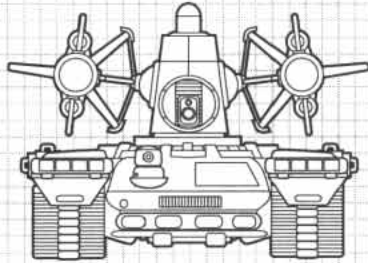
VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Vandal
THREAT VALUE:	1947
▶ OFFENSIVE:	4628
▶ DEFENSIVE:	641
▶ MISCELLANEOUS:	573
SIZE:	13
▶ ORIGINAL DEFAULT SIZE:	12
CREW:	2
▶ BONUS ACTION:	1
COST:	898,615 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(54 kph) 9
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	310 km

ELECTRONICS ▼

SENSORS:	+1
▶ SENSOR RANGE:	5 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	30 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	40
HEAVY DAMAGE:	80
OVERKILL:	120

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Autopilot	-	Act as level 1 pilot
Back-up Communications	-	Absorbs first "Communication" hit
Backup Sensors	-	Absorbs first "Sensors" hit
HEAT-resistant Armor	10	Added to Base Armor vs HEAT weapons
Hostile Environment	-	Desert
Pintle Mount	-	Can hold one infantry weapon
Rugged Movement System	-	Absorbs first "Movement" hit
Smoke Launchers	-	10 shots

FLAWS ▼

NAME	RATING	GAME EFFECT
Large Sensor Profile	2	Easier to detect
Sensor Dependent	-	Must rely on sensors during combat

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Hellbringers	MAM	FF	60	120	240	480	-3	x18	1	2	G, AEO, MR40

DAMAGE ▼

▭▭▭▭▭▭▭▭▭▭ 10	▭ 60
▭▭▭▭▭▭▭▭▭▭ 20	▭ 70
▭▭▭▭▭▭▭▭▭▭ 30	▭ 80
▭▭▭▭▭▭▭▭▭▭ 40	▭ 90
▭▭▭▭▭▭▭▭▭▭ 50	▭ 100

HEAVY GEAR

NORTHERN FIELD ARTILLERY

● DESCRIPTION

The Northern standard field artillery carriage is a simple alloy structure equipped with two large low pressure, armored tires and a modular weapon mount. The modular mount can be adapted to carry a wide variety of battle-field weapons, but most carriages are equipped with a single light field gun.

Artillery carriages are mainly used to bolster static defensive works, since they take too much time to set up to be an effective battlefield weapon. Almost any vehicle with sufficient engine power can tow one through a standard towing hitch.

● SPECIFICATIONS

Manufacturer:	various
Length (w/o weapon):	4.7 meters
Width:	4 meters
Standard operational weight::	3610 kg
Powerplant:	N/A

● OPTIONS

Name	Modified Threat Value
Heavy Laser (replace LFG by HLC, F, 20 shots)	238
Twin Mortars* (replace LFG by 2xHGM, F, 2x15 shots)	562
*Both weapons are linked together.	

SOUTHERN FIELD ARTILLERY
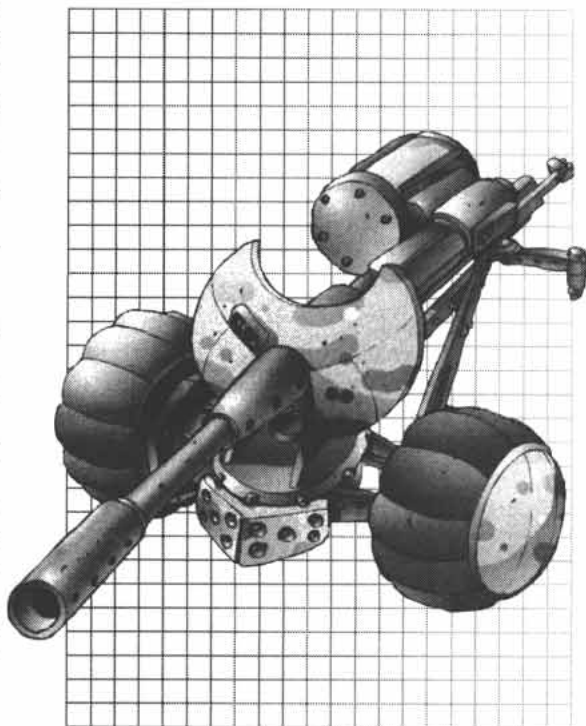
● DESCRIPTION

The Southern version of the standard light artillery carriage is very similar to its Northern cousin. Both share a similar basic chassis and modular weapon mount, but the resemblance ends there. This unit features a more rounded appearance and has slightly different design characteristics.

The Southern unit is equipped with cheaper unarmored tires, making it more vulnerable to immobilizing hits. It does carry extra armor on the gun to soak up more damage in combat. The field gun-equipped version is the most common, but other types of armaments have been seen as well.

● SPECIFICATIONS

Manufacturer:	various
Length (w/o weapon):	4.7 meters
Width:	4.1 meters
Standard operational weight::	3500 kg
Powerplant:	N/A

● OPTIONS

Name	Modified Threat Value
Heavy Laser (replace LFG by HLC, F, 20 shots)	238
Heavy Rockets (replace LFG by HRP/48, F)	249
*Both weapons are linked together.	
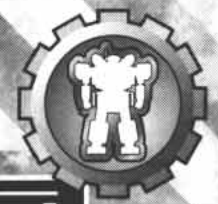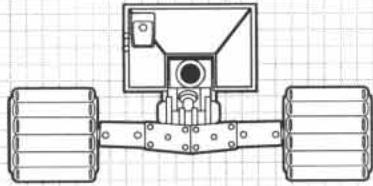
NORTHERN FIELD ARTILLERY ▼

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
► COMBAT SPEED:	0
► TOP SPEED:	0 kph) 0
SECONDARY MOVEMENT MODE:	n/a
► COMBAT SPEED:	-
► TOP SPEED:	-
MANEUVER:	-1
DEPLOYMENT RANGE:	0 km

ELECTRONICS ▼

SENSORS:	n/a
► SENSOR RANGE:	n/a
COMMUNICATION:	n/a
► COMMUNICATION RANGE:	n/a
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Field Artillery
THREAT VALUE:	334
► OFFENSIVE:	959
► DEFENSIVE:	43
► MISCELLANEOUS:	0
SIZE:	5 (10)
► ORIGINAL DEFAULT SIZE:	4
CREW:	0
► BONUS ACTION:	0
COST:	267,200 marks
► PRODUCTION TYPE:	Mass Production
► INDV. LEMON DICE:	3

PERKS ▼

NAME	RATING	GAME EFFECT
Hostile Environment Protection	-	Desert
Reinforced Armor	2	Front
Rugged Movement System	-	Absorbs first "Movement" hit

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Fire Control System	-	"Fire Control" hits are one step higher
No Sensor	1	Cannot use Active Sensors
No Communication	1	Cannot communicate

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Main gun	LFG	F	5	10	20	40	0	x22	1	12	IF

SOUTHERN FIELD ARTILLERY ▼

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
► COMBAT SPEED:	0
► TOP SPEED:	(0 kph) 0
SECONDARY MOVEMENT MODE:	n/a
► COMBAT SPEED:	-
► TOP SPEED:	-
MANEUVER:	-1
DEPLOYMENT RANGE:	0 km

ELECTRONICS ▼

SENSORS:	n/a
► SENSOR RANGE:	n/a
COMMUNICATION:	n/a
► COMMUNICATION RANGE:	n/a
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Field Artillery
THREAT VALUE:	334
► OFFENSIVE:	959
► DEFENSIVE:	43
► MISCELLANEOUS:	0
SIZE:	5 (10)
► ORIGINAL DEFAULT SIZE:	4
CREW:	0
► BONUS ACTION:	0
COST:	267,200 dinars
► PRODUCTION TYPE:	Mass Production
► INDV. LEMON DICE:	3

PERKS ▼

NAME	RATING	GAME EFFECT
Hostile Environment Protection	-	Desert
Reinforced Armor	2	Front
Shielded Weapon	-	Absorbs first "Fire Control" hit

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Movement System	-	"Movement" hits are one step higher
No Sensor	1	Cannot use Active Sensors
No Communication	1	Cannot communicate

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Main gun	LFG	F	5	10	20	40	0	x22	1	12	IF

WACS-01FS-ART DAMOCLES

OVERVIEW

The *Damocles* is based on the frame of the standard *Mammoth* but shed the two battle arms and sport a reconfigured rear body. The crewmen, one pilot and one system operator, still sit in the classic tandem configuration.

The *Damocles'* armament is designed with long range fire support in mind. The machine carries a large artillery gun on its back, where the auxiliary engine is normally located. The gun draws its ammunition from a twenty-shot heavily armored magazine mounted underneath. Reliable Sergon Optics laser turrets are placed on the side torsos to protect the unit against air strikes and counter-battery fire. Finally, two turret-mounted machineguns protect the vehicle from any troublesome infantry units.

The chassis does not have the battle arms normally used by the standard *Mammoth*, which often cause problems to inexperience pilots trying to get the machine back on its feet after a fall. The stabilizer pads of the original design are still present and are put to good use by the *Damocles*.

Although the *Damocles* is still a relatively new design, several test variants of the basic chassis have been designed and tested by the project's engineers. Among those, a command unit, equipped with a Satellite Uplink, is the most promising. Ideally, each battery of *Damocles* would have a least one of these in its ranks, enabling them to answer fire mission requests from almost anywhere within firing range.

SERVICE RECORD

A few artillery units of the Northern Guard have started to receive the *Damocles* for evaluation and combat trials. All models currently in existence seem to suffer from somne kind of flaw. High Command hopes that field trials will help the Hartmore engineers figure things out.

SPECIFICATIONS

Code name:	Damocles	Production code:	WACS-01FS-ART
Manufacturer:	Hartmore Motor Co.	Use:	fire support vehicle
Height (w/o gun):	6.8 meters	Width:	4.2 meters
Average armor thickness:	145 mm	Armor material:	durasheet w/ceramic
Standard operational weight:	23,450 kg	Maximum speed on clear ground:	30 kph
Powerplant:	V-Engine (x2)	Horsepower:	1200 Hp x 2

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
Northco KLG-675 Howitzer	4 shells	Sergon Optics 15 MW laser turret	15 shots
Sergon Optics 15 MW laser turret	15 shots	HG-76 machineguns	250 shells
HG-76 machineguns	250 shells		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add APGL with 6 shots in Fixed Forward mount	693	Add ECM pod (ECM, rating 2)	726
Add smoke launchers (10 shots)	695	Add Camo Netting	695
Unit Leader (Satellite Uplink, Backup Sensors)	890	Improved frame (+1 Armor)	693
Leg armor (Reinforced Location Armor: Movement)	695	Reinforced frame (Armor +3, -1 MP)	708
Replace one HMG by APGL (12 shots)	669	Add Digging Cannon (F, 5 shots)	689
Add Light Duty Mining Equipment	738	Add Ram Plate	695
Add Resistant to Haywire	805		

VEHICLE RECORD SHEET

08

DAMOCLES ▼

PERKS ▼

NAME	RATING	GAME EFFECT
Ammo/Fuel Containment System	-	Subtract 2 from "Ammo/Fuel" hit rolls
Back-up Sensors	-	Absorbs first "Sensor" hit
HEAT-resistant armor	6	Added protection versus HEAT
Hostile Environment Protection	-	Desert
Limited Life-Support	-	Provide support for up to a week
Reinforced Armor	4	Front

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Damocles
THREAT VALUE:	687
▶ OFFENSIVE:	1623
▶ DEFENSIVE:	251
▶ MISCELLANEOUS:	187
SIZE:	9
▶ ORIGINAL DEFAULT SIZE:	9
CREW:	2
▶ BONUS ACTION:	1
COST:	687,000 marks
▶ PRODUCTION TYPE:	Early Production
▶ INDV. LEMON DICE:	3

FLAWS ▼

NAME	RATING	GAME EFFECT
Annoyance	-	Continual lurching movement
Large Sensor Profile	2	Easier to detect
Sensor Dependent	-	Extremely small vision slits

DEFECTS ▼

NAME	RATING	GAME EFFECT
Annoyance	-	-1 Piloting to get back on feet
Proble-prone	-	+1 Individual Lemon die

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	
▶ COMBAT SPEED:	3
▶ TOP SPEED:	(30 kph) 5
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	140 km

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Light Artillery Gun	LAG	FF	25	50	100	200	-2	x12	1	4	ROF1,IF,MR10,AE0
Laser Turret	SLC	F	5	10	20	40	+1	x12	2	15	-1RB
Heavy Machinegun	HMG	F	1	2	4	8	0	X4	2	250	ROF3,AI

ELECTRONICS ▼

SENSORS:	+1
▶ SENSOR RANGE:	3 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	15 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	25
HEAVY DAMAGE:	50
OVERKILL:	75

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

DAMAGE ▼

10 20 30 40 50 60 70 80 90 100

85

OWCS-54X SAGITTARIUS

OVERVIEW

The *Sagittarius* is one of the most recent strider designs developped by the preceptors assigned to weapon research in the Humanist Alliance. An unusual strider chassis, the *Sagittarius* is intended to provide heavy long range support to very mobile armored forces.

The strider is quite agile and fast for a vehicle of its size (in great part because of its unstable two-legged design), but suffer from overly fragile actuators and long maintance downtime.

The pilot and system operator sit side-by-side in the large pod-like main body. A large clamshell-type armored hatch provides excellent protection, though it forces the crew to rely on the vehicle's sensor apparatus (which is otherwise excellent).

The *Sagittarius'* nickname comes from the rack of eight Spiculum hyper-velocity artillery missiles carried atop the main hull. Each carries eight sub-munitions that can be set for grouped or wide dispersion, depending on the requirement of the fire mission. A light autocannon and a heavy machinegun round out the close-in defense armament of the vehicle; although it is not expected to have to face direct fire.

SERVICE RECORD

The *Sagittarius* has begun limited distribution to front line Alliance units under the watchful eye of the Republican military observers. The Republic has already received two *Sagittarius* for field testings and evaluation, but seem currently unaware that the vehicles they received were downgraded models. How long can the Alliance's Portectors keep the design to themselves (and why) is anybody's guess.

SPECIFICATIONS

Code name:	Sagittarius	Production code:	OWCS-54X
Manufacturer:	Allied Defense Works	Use:	fire support vehicle
Height:	7.8 meters	Width:	4.3 meters
Average armor thickness:	202 mm	Armor material:	armoplast, ceramic alloy
Standard operational weight:	24,790 kg	Maximum speed on clear ground	60 kph
Powerplant:	gas turbine x 2	Horsepower:	760 hp x 2

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
PW20 20 mm autocannon	160 shells	PW987 12 mm machinegun	500 belted shells
Spiculum Artillery Launch System	8 missiles		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Republican model (-1 FC, -1 Sensors, -1 MP)	1008	Add Smoke Launchers (10 shots)	1767
Command type (Satellite Uplink, Back-up Sensors)	1972	Improved frame (+2 Armor)	1779
Leg armor (Reinf. Location Armor: Movement, -1 MP)	1766	Add AMS (F, Rating 2. 50 shots)	1972
Add Camo Netting	1767	Add Grapple Launcher (50 m, Rating 10)	1777
Add Light Duty Mining Equipment	1812	Add Manipulator Arm 3	1772
Add Ram Plate	1767		

SAGITTARIUS

PERKS

NAME	RATING	GAME EFFECT
ECM	2	Offensive Electronic Warfare equipment
HEAT-resistant Armor	5	Add to Armor versus HEAT weapons
Hostile Environment Protection	-	Desert
Improved Off-road	-	-1 MP for hexes with cost 2+
Sniper System	-	Artillery Missiles
Stabilizer Mount	-	Stabilizer for artillery missiles
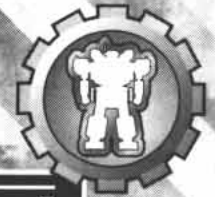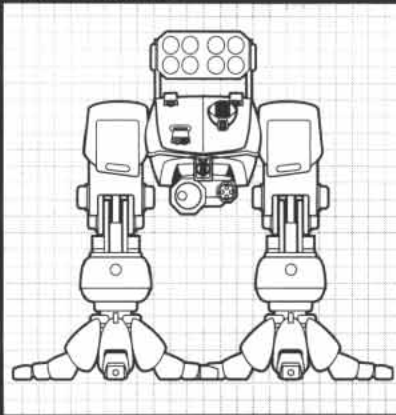
VEHICLE DESCRIPTION

VEHICLE TYPE:	Sagittarius
THREAT VALUE:	1757
▶ OFFENSIVE:	4440
▶ DEFENSIVE:	519
▶ MISCELLANEOUS:	314
SIZE:	9
▶ ORIGINAL DEFAULT SIZE:	12
CREW:	2
▶ BONUS ACTION:	1
COST:	2,342,667 dinars
▶ PRODUCTION TYPE:	Early Production
▶ INDV. LEMON DICE:	3

FLAWS

NAME	RATING	GAME EFFECT
Difficult to Modify	-	-1 to repair and Modify rolls
Exposed Movement System	-	"Movement" hits are one step worse

DEFECTS

NAME	RATING	GAME EFFECT
Annoyance	-	?

MOVEMENT

PRIMARY MOVEMENT MODE:	Walk
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(60 kph) 10
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	500 km

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Light Autocannon	LAC	Forward	2	4	8	16	0	x8	1	200	ROF2
Heavy Machinegun	HMG	Forward	1	2	4	8	0	X4	1	500	ROF3,AI
Artillery Missiles	LAM	Fixed F.	10	20	40	80	-2	x20	1	8	ROF

ELECTRONICS

SENSORS:	+1
▶ SENSOR RANGE:	4 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	12 km
FIRE CONTROL:	0

ARMOR

LIGHT DAMAGE:	32
HEAVY DAMAGE:	64
OVERKILL:	96

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

DAMAGE

10	60
20	70
30	80
40	90
50	100

OSTROGOTH

ST-79 OSTROGOTH

OVERVIEW

The *Ostrogoth* is a light self-propelled gun designed to provide fire support to units in small engagements or skirmishes. Unlike the northern *Tyburr* design, which uses a field gun that allows it to act as a direct fire unit, the *Ostrogoth* is purely a fire support vehicle and is not intended to find itself in direct confrontation with the enemy.

The principal objective of the design team was to preserve the mobility of the vehicle since it needed to operate near the battlefield and would have to frequently change positions. The lower chassis and drivetrain share many parts with the standard *Hun* light tank, making it easier to maintain in the field. The addition of slightly more powerful turbines allow the *Ostrogoth* to carry the increased weight of its gun with relative ease.

The main gun is a 75 mm electrothermal cannon, capable of firing a large variety of ammunition. It is mounted in a large turret located at the rear of the hull for an improved field of fire. The internal design of the turret prevents a complete rotation, but this is not viewed as a major liability since the vehicle is meant to enter direct combat. The ammunition is partially stored in the turret itself to ensure fast reloading during salvo firing. Large armored doors at the rear of the vehicle allow a few able men to resupply the unit with shells in only a few minutes.

SERVICE RECORD

Ostrogoth are common in front-line artillery units because they are less expensive to operate and more flexible than the larger artillery vehicles in the Southern arsenal. They handle well in the field and all crew have been quite satisfied with the performances of their vehicles so far.

SPECIFICATIONS

Code name:	Ostrogoth	Production code:	ST-79
Manufacturer:	various	Use:	light self-propelled artillery unit
Height:	2.26 meters	Length (w/o gun):	5.22 meters
Average armor thickness:	97 mm	Armor material:	Armoplast w/ceramite
Standard operational weight:	24,600 kg	Maximum speed on clear ground:	65 kph
Powerplant:	gas turbine x 2	Horsepower:	2 x 690 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
75 mm electrothermal gun	12 salvoes of four shells		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add smoke launchers (10 shots)	936	Add APGL (FF, 6 shots)	930
Add bulldozer blade and digging charges (Light Mining Equipment)	992	Add additional side armor (Reinforced Location Armor 1: Movement)	930

OSTROGOTH ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Ostrogoth
THREAT VALUE:	924
▶ OFFENSIVE:	2045
▶ DEFENSIVE:	315
▶ MISCELLANEOUS:	412
SIZE:	10
▶ ORIGINAL DEFAULT SIZE:	10
CREW:	3
▶ BONUS ACTION:	1
COST:	462,000 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	6
▶ TOP SPEED:	(67 kph) 11
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	400 km

ELECTRONICS ▼

SENSORS:	0
▶ SENSOR RANGE:	5 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	20 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	25
HEAVY DAMAGE:	50
OVERKILL:	75

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Autopilot	-	Act as level 1 driver
HEAT-resistant Armor	5	Add to Armor against HEAT weapons
Hostile Environment Protection	-	Desert
Reinforced Armor	2	Front
Shielded Weapons	-	Absorbs first "Weapon" hit

FLAWS ▼

NAME	RATING	GAME EFFECT
Annoyance	-	Low ceiling for driver; max. Build is 0

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
75 mm Gun	LAG	T	25	50	100	200	-2	x12	1	12	AEO,ART,MR10

DAMAGE ▼

■■■■■■■■■■	10		60
■■■■■■■■■■	20		70
■■■■■	30		80
	40		90
	50		100

HEAVY GEAR

NA-3 VERDER

OVERVIEW

The pride of several Northern artillery units, the *Verder* is a heavy self-propelled gun based on the hull and drive train of the *Aller* main battle tank. The lower chassis remains the same, but the upper hull of the MBT has been extensively modified to accomodate the *Verder*'s characteristic heavy 200 mm artillery gun and its associated machinery.

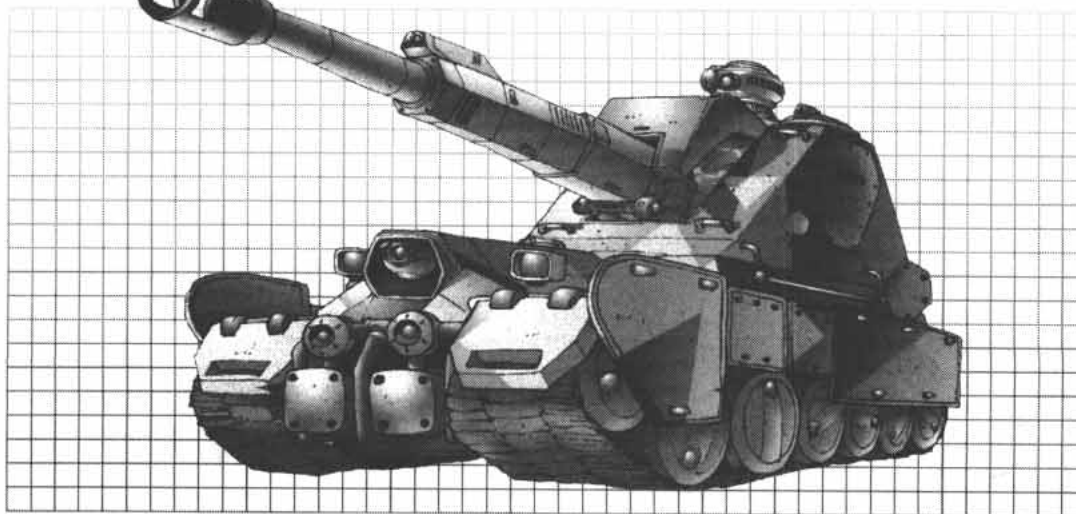The large *Aller* turret is gone, replaced by a sloping gun mount and armor plating. The gun mount is fixed forward in azimut but is capable of almost 70° elevation. In addition to its large gun, the *Verder* carries a single Sergon Optics laser turret for anti-aircraft defense. The removal of the main turret has increased the effective armor profile of the vehicle, and so the *Verder* does not carry the additional armor plating of the *Aller*.

Shells are automatically loaded from a six-shell cassette, allowing the entire salvoe to be fired in under ten seconds. The cassette is mechanically extracted from the gun and replaced by a new one. The process is automated, but prone to jamming. For this reason, a crewman serves as loader. Additional crew are often assigned to increase the rate of fire of the unit. They do not ride with the Verder, but follow in an APC which also carries additional ammunition and spare parts for the battery.

SERVICE RECORD

Verder gunners boast they can "nail a hopper on its scrawny butt at two klicks." While somewhat exaggerated, the claim has some basis in reality. During the War of the Alliance, some of the best gunnery teams available were assigned to *Verders*. They soon specialized in trying to pick off hovertanks individually. The battle of Barnyard Ridge, in TN 1916, was won almost single-handedly by concentrated fire from *Verder* support units.

SPECIFICATIONS

Code name:	Verder	Production code:	NA-3
Manufacturer:	Brok Motor	Use:	heavy self-propelled gun
Height:	3.45 meters	Length (w/o gun):	8.5 meters
Average armor thickness:	370 mm	Armor material:	durasheet w/ceramic
Standard operational weight:	69,200 kg	Maximum speed on clear ground:	53 kph
Powerplant:	2 x AGP-865 gas turbines	Horsepower:	2 x 2000 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
200 mm artillery gun	1 cassette of six shells	Sergon Optics 9 MW laser cannon	20 shots

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
NA-3K (add Haywire Resistant)	4509	Add smoke launchers (10 shots)	4236

VERDER ▼

PERKS ▼

NAME	RATING	GAME EFFECT
Autopilot	-	Act as level 1 pilot
Automation	1	Act as one crewmember
Back-up Sensors	-	Absorbs first "Sensor" hit
HEAT-resistant Armor	10	Add to Armor against HEAT weapons
Hostile Environment	-	Desert
Pintle Mount	-	Can hold one infantry weapon
Reinforced Crew Compartment	-	Absorbs first "Crew" hit
Rugged Movement System	-	Absorbs first "Movement" hit
Smoke Launchers	-	10 shots
Sniper System	-	+1 to HAG at Long and Extreme ranges
Stabilizer Mount	-	Required to fire HAG

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Verder
THREAT VALUE:	4209
▶ OFFENSIVE:	10172
▶ DEFENSIVE:	707
▶ MISCELLANEOUS:	1748
SIZE:	14
▶ ORIGINAL DEFAULT SIZE:	16
CREW:	3
▶ BONUS ACTION:	1
COST:	2,405,143 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

FLAWS ▼

NAME	RATING	GAME EFFECT
Large Sensor Profile	2	Easier to detect
Sensor Dependent	-	Must rely on sensors during combat

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(53 kph) 9
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	540 km

ELECTRONICS ▼

SENSORS:	+1
▶ SENSOR RANGE:	5 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	20 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	42
HEAVY DAMAGE:	84
OVERKILL:	126

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
200 mm Cannon	HAG	FF	40	80	160	320	-2	x22	1	1	AE2,IF,MR20
9 MW laser gun	SLC	T	5	10	20	40	+1	x12	1	20	-1 RB

CREW ▼

PILOT [LVL/ATTR]:	
GUNNERY [LVL/ATTR]:	

DAMAGE ▼

▪▪▪▪▪▪▪▪▪ 10	_____ 60	
▪▪▪▪▪▪▪▪▪ 20	_____ 70	
▪▪▪▪▪▪▪▪▪ 30	_____ 80	
▪▪▪▪▪▪▪▪▪ 40	_____ 90	
▪▪ 50	_____ 100	

HEAVY GEAR

ENT-2 BAXTER

OVERVIEW

The *Baxter* answers a need for a dedicated battlefield "towtruck" capable of salvaging the heaviest Main Battle Tank. The name of the vehicle comes from Jon T. Baxter, the noted field engineer who practically wrote the book on modern field support procedures.

The *Baxter* is based on the chassis of the *Klemm*, the most common light battle tank in the Norlight army. This helps simplify both maintenance and resupply, as the v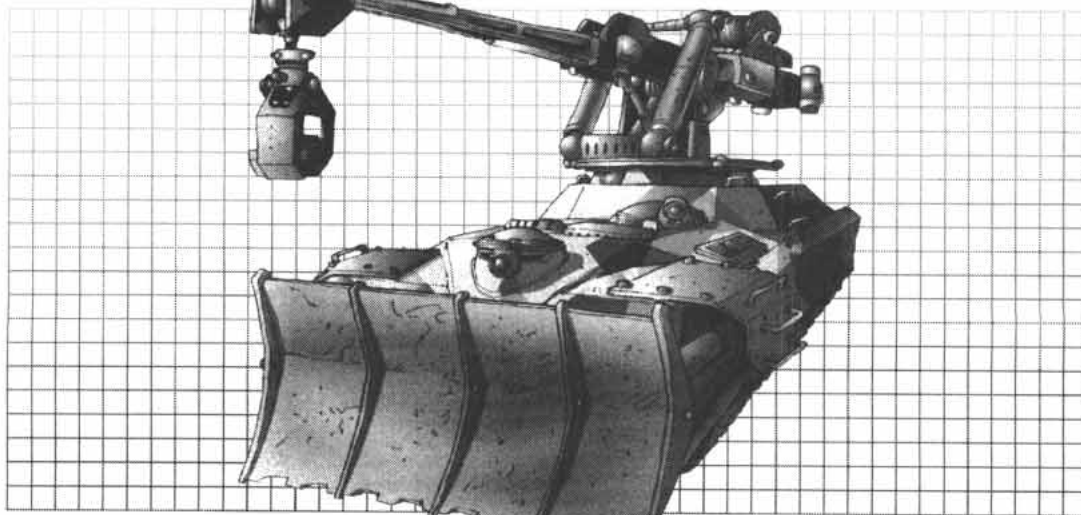ehicles of the *Klemm* family share multiple components. In this case, however, the chassis has been extensively modified and strengthened for its new role. The engine and transmission have both been replaced by more powerful systems for an increased towing capacity.

The turret is a new high torque model. Instead of a gun, it carries a sturdy crane capable of lifting nearly 50 tons with the tank appropriately braced. A hydraulically-activated earthmoving blade is attached to the front of the hull for filling in ditches and digging earthworks. Attachment points for digging cannons are provided on both sides of the hull, which also features numerous handles and tie-down rings.

SERVICE RECORD

The Northern Guard engineering companies attached to mechanized units always have at least one *Baxter* in service, more if they can manage to get them. Since they are unarmed, *Baxters* are kept out of the way during battles. The Southern forces' engineer units field similar engineering vehicle designs, many of them based on the chassis of the *Hun* or other Southern light tanks.

SPECIFICATIONS

Code name:	Baxter	Production code:	ENT-2
Manufacturer:	Norlight Industries	Use:	armored engineering vehicle
Height:	2.52 meters	Length (w/o crane):	5.48 meters
Average armor thickness:	125 mm	Armor material:	durasheet w/ceramic
Standard operational weight:	26,086 kg	Maximum speed on clear ground:	54 kph
Powerplant:	HT-NI-68 gas turbine	Horsepower:	900 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add twin Digging Cannons (5 shots each)	772	Add pintle mount w/9 mm machinegun	772
Add pintle mount w/9 mm chaingun	772	Add pintle mount w/37 mm grenade rifle	774
Add smoke launchers (10 shots)	801		
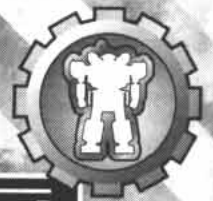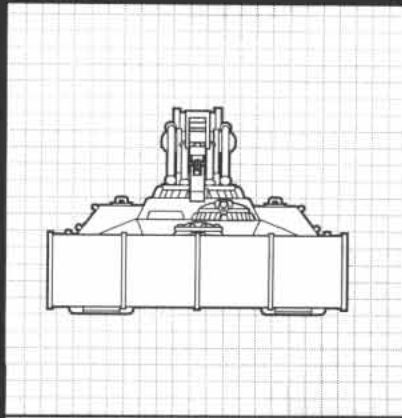
BAXTER

VEHICLE DESCRIPTION

VEHICLE TYPE:	Baxter
THREAT VALUE:	771
▶ OFFENSIVE:	0
▶ DEFENSIVE:	213
▶ MISCELLANEOUS:	2100
SIZE:	10
▶ ORIGINAL DEFAULT SIZE:	9
CREW:	2
▶ BONUS ACTION:	1
COST:	346,950 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(54 kph) 9
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	500 km

ELECTRONICS

SENSORS:	-1
▶ SENSOR RANGE:	2 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	12 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	23
HEAVY DAMAGE:	46
OVERKILL:	69

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Grapple Launcher	12	13-hex range, can tow size 12
HEAT-resistant Armor	3	Add to Armor against HEAT weapons
Hostile Environment	-	Desert
Light Mining Equipment	-	Earthmoving blade, cannot attack
Pintle Mount	-	Can hold one infantry weapon
Reinforced Armor	5	Front
Wide Angle Searchlight	3	150 m range, front
Tool Arm	12	Turret-mounted crane, cannot punch
Triple Towing capacity	-	Can tow up to three times its weight

FLAWS

NAME	RATING	GAME EFFECT
Annoyance	-	Cramped combat chamber, max. Build is 0

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪▪▪▪▪▪▪ 10	60
▪▪▪▪▪▪▪▪▪▪ 20	70
▪▪▪ 30	80
40	90
50	100

HEAVY GEAR

EST-89 CELT

OVERVIEW

Minesweeping is a dangerous task, best handled by specialist units. The *Celt* has been designed especially for this purpose. The lower hull and drive train are based on the *Hun* light tank, though considerable modifications have been made to reinforce the structure to face the requirements of the new operational role.

The entire front section of the tank is occupied by a large armored mine plow. The sensor pods, which contain the highly sensitive mine detectors, are placed in blisters placed on either side of the chassis. Extra armor is bonded to the bottom of the hull. In addition, the low fuel capacity and the improved self-sealing tanks further reduce the chances of catastrophic detonation in case a mine slips by.

The turret is replaced by a det-cord launcher which uses plastic explosive hoses carried by small rockets to clear a path through the suspected minefield area. Some crew, faced unexpectedly with the enemy, have used these to defend themselves with some measure of success. A few *Celts* have been modified to carry a snub cannon to blow up obstacles, although crews all too often think they have been given a tank destroyer.

SERVICE RECORD

Celts and other minesweepers are now rarely encountered by grunts. The fluid battlefield and skirmish tactics used nowadays don't mix well with extensive minefields. In general, minesweepers stay far from the front lines or are busy clearing mines in areas not yet garrisoned.

SPECIFICATIONS

Code name:	Celt	Production code:	EST-89
Manufacturer:	various	Use:	light engineering tank
Height:	2.26 meters	Length:	5.22 meters
Average armor thickness:	97 mm	Armor material:	Armoplast w/ceramite
Standard operational weight:	24,600 kg	Maximum speed on clear ground:	61 kph
Powerplant:	gas turbine x 2	Horsepower:	2 x 670 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add grenade launcher (APGL, F, 30 shots)	658	Add smoke launchers (10 shots)	675
Add Snub Cannon (FF, 5 shots Anti-Struc.)	804		
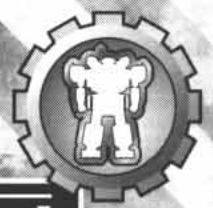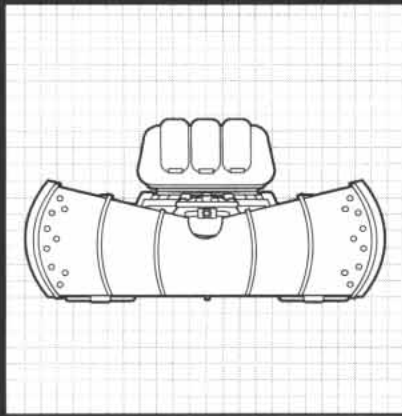
CELT

VEHICLE DESCRIPTION

VEHICLE TYPE:	Celt
THREAT VALUE:	647
▶ OFFENSIVE:	0
▶ DEFENSIVE:	251
▶ MISCELLANEOUS:	1690
SIZE:	10
▶ ORIGINAL DEFAULT SIZE:	9
CREW:	3
▶ BONUS ACTION:	1
COST:	291,150 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	5
▶ TOP SPEED:	(61 kph) 10
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	200 km

ELECTRONICS

SENSORS:	+2
▶ SENSOR RANGE:	1 km
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	0

ARMOR

LIGHT DAMAGE:	25
HEAVY DAMAGE:	50
OVERKILL:	75

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Ammo/Fuel Containment System	-	-2 on Ammo/Fuel damage roll
Autopilot	-	Act as level 1 driver
HEAT-resistant Armor	10	Add to Armor against HEAT weapons
Hostile Environment Protection	-	Desert
Mine Detectors	-	Used to detect mines
Minesweeping Equipment	2	Used to destroy mines
Reinforced Armor	5	Bottom

FLAWS

NAME	RATING	GAME EFFECT
Annoyance	-	Low ceiling; maximum Build is 0

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

■■■■■■■■■□	10			60
■■■■■■■■□□	20			70
■■■■■□	30			80
	40			90
	50			100

ENGINEERING COBRA

OVERVIEW

The *Engineering Cobra* is an all-purpose engineering Gear chassis based on the frame of Territorial Arms' famous *Spitting Cobra* support unit. It is a basic machine designed to enhance a worker lifting capacity and performance on heavy duty jobs, such as construction and ammunition handling.

The first *Engineering Cobras* were designed as ad-hoc field engineering units during the War of the Alliance. For simplicity, the new machine was designed around the frame of the '*Spit*' because it was a common (and large) Heavy Gear. In fact, *Engineering Cobras* were often cobbled together from remnants of destroyed *Cobras*. They were quickly put to work building fortifications to protect vulnerable Terranovan positions.

Because they are often build from second-hand parts, most *Engineering Cobras* have a reduced damage capacity. They do not feature a head unit or the reinforced armor plates which normally protect the cockpit to reduce cost; a simple roll cage and transparent windshield protect the pilot. Additional crashbars have been mounted on the body to prevent damage from the minor collisions caused by engineering work.

Variants and modifications on the basic models are common. Among those, the *Engineering Cobras* with an additional backpack-mounted radiator, designed to help cool a more powerful transmission, are the most frequently seen.

SERVICE RECORD

The *Engineering Cobra* can now be found on most MILICIA construction sites, and many Southern armies have a few to load and off load material. The parts are fully interchangeable with the *Spitting Cobra*, which helps to extend the machine's service time.
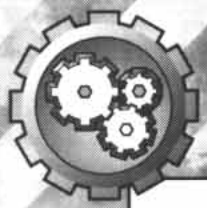
SPECIFICATIONS

Code name:	Engineering Cobra	Production code:	OACS-01H/ENG
Manufacturer:	Territorial Arms	Use:	field engineering
Height:	5.1 meters	Width:	3.2 meters
Average armor thickness:	68 mm	Armor material:	armoplast
Standard operational weight:	8760 kg	Maximum speed on clear ground:	60.5 kph
Powerplant:	WV-1500TC/A V-engine	Horsepower:	940 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard			

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Logger (replace pincers by chaincutters)	114	Reloader (replace pincers by Size 7 crane arms)	114
Geared down transmission (Ground 3/6, Triple Towing Capacity)	197	Cleats (Improved Off-road Capacity)	115
Add Light MG w/200 shots in arm mount (F fire arc)	134	Add six-shot AP Grenade Launcher (fixed to one arc)	120
Foreman (Coomunication 0, Back-up Sensors)	115	Miner (Geological Sensors, Micro-Lab)	123
Spitting Cobra frame (+2 Armor)	132	Reinforced frame (Armor +3)	141
Replace one Tool Arm by Manipulator 7	114	Add Camo Netting	114
Add Grapple Launcher (250 m, Rating 7)	117	Add Ram Plate	114
Add Light Duty Mining Equipment	114	Add Snub Cannon (F, 5 shots Anti-Structure)	341

ENGINEERING COBRA ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Engineering Cobra
THREAT VALUE:	114
◆ OFFENSIVE:	0
◆ DEFENSIVE:	274
◆ MISCELLANEOUS:	67
SIZE:	7
◆ ORIGINAL DEFAULT SIZE:	5
CREW:	1
◆ BONUS ACTION:	0
COST:	40,714 dinars
◆ PRODUCTION TYPE:	Mass Production
◆ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Walk
◆ COMBAT SPEED:	3
◆ TOP SPEED:	(36 kph) 6
SECONDARY MOVEMENT MODE:	Ground
◆ COMBAT SPEED:	5
◆ TOP SPEED:	(60.5 kph) 10
MANEUVER:	-1
DEPLOYMENT RANGE:	400 km

ELECTRONICS ▼

SENSORS:	-2
◆ SENSOR RANGE:	2 km
COMMUNICATION:	-1
◆ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	19
HEAVY DAMAGE:	38
OVERKILL:	57

CREW ▼

PILOT [LVL/ATTR]:	
GUNNERY [LVL/ATTR]:	

PERKS ▼

NAME	RATING	GAME EFFECT
Hostile Environment Protection	-	Desert
Tool Arm x 2	8	Claw-tipped
Searchlight	-	50 meters, Fixed Forward

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Crew Compartment	-	"Crew" hits are one step higher
Large Sensor Profile	1	Easier to detect

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE ▼

■■■■■■■■■ 10		60
■■■■■■■■■ 20		70
30		80
40		90
50		100

ENGINEERING GRIZZLY

HACS-02HG-ENG ENGINEERING GRIZZLY
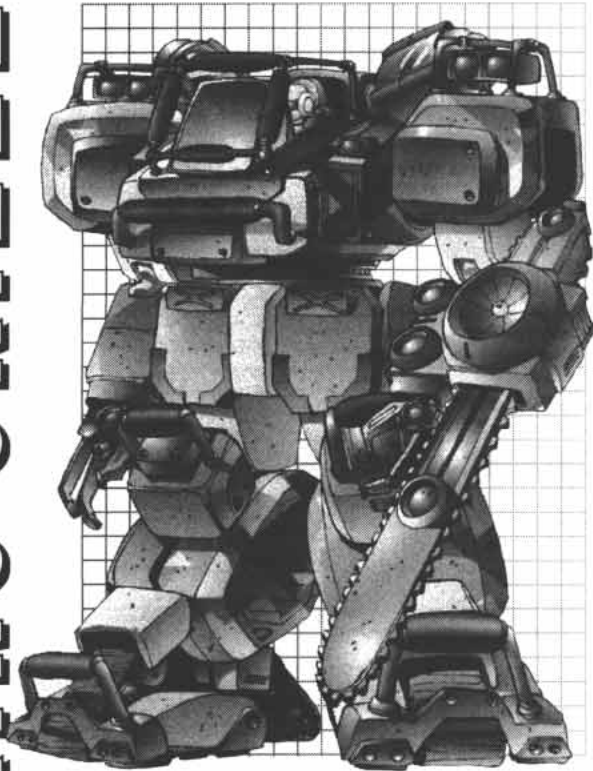
• OVERVIEW

The *Engineering Grizzly* is a field engineering vehicle based on the basic frame and chassis of Northco's popular *Grizzly* fire support vehicle. The two share almost 80% of their components, allowing easy repairs. The engineering version does not feature the armored head unit of the combat vehicle, and many armor panels are thinner to save both weight and money.

Like the civilian *Prairie Dog*, the *Engineering Grizzly*'s tool arms are semi-modular: they can be exchanged for another pair through a relatively simple operation that only takes a few hours to perform. Common tools include specialized lift pads for heavy crates, powered cutter for logging operations and trenchers for digging.

Engineering Grizzlies are strong enough to defend themselves in combat (some have even been equipped with weaponry), but their real purpose is anything but battle. Their size and strength makes them ideal for large scale military construction and field engineering operations.

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• SERVICE RECORD

When the military high command wishes to build an advanced base, up to a full engineering company can be sent to build the required installations. The standard machine is used for tasks such as light construction, forestry work and heavy machinery reparation.

• SPECIFICATIONS

Code name:	Engineering Grizzly	Production code:	HACS-02HG-ENG
Manufacturer:	Northco	Use:	field engineering
Height:	5.1 meters	Width:	3.1 meters
Average armor thickness:	52 mm	Armor material:	durasheet
Standard operational weight:	8940 kg	Maximum speed on clear ground:	65 kph
Powerplant:	S-V2200Z V-engine	Horsepower:	956 hp

• WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

• OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Field Variant II-B (replace one Tool Arm by Manipulator 7)	105	Field Variant IV (add Light Duty Mining Equipment)	120
Add Light MG w/200 shots in arm mount (F fire arc)	122	Add six-shot AP Grenade Launcher (fixed to one arc)	107
Replace one pincer by chaincutter	101	Replace one pincer by plasma cutting torch	101
Replace one pincer arm by a Size 7 crane arm	101	Cleats (Improved Off-road Capacity)	126
High Torque (Walk 3/5, Triple Towing Capacity)	153	Foraging (Improved Sensors (+1), Micro-Lab)	140
Miner (Geological Sensors, Micro-Lab)	147	Reinforced frame (+2 Armor)	116
Add Grapple Launcher (250 m, Rating 7)	133	Add Snub Cannon (F, 5 shots Anti-Structure)	328

ENGINEERING GRIZZLY ▼

PERKS ▼

NAME	RATING	GAME EFFECT
High Towing Capacity	-	Can tow up to twice its weight
Hostile Environment Protection	-	Desert
Reinforced Armor	2	Front
Searchlight	-	50 m, Fixed Forward
Tool Arm x 2	7	Claw-tipped
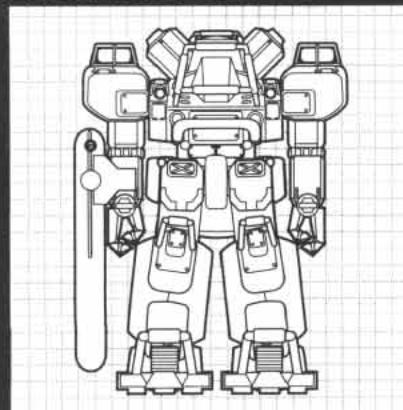
VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Engineering Grizzly
THREAT VALUE:	101
◆ OFFENSIVE:	20
◆ DEFENSIVE:	207
◆ MISCELLANEOUS:	77
SIZE:	7
◆ ORIGINAL DEFAULT SIZE:	5
CREW:	1
◆ BONUS ACTION:	0
COST:	36,071 marks
◆ PRODUCTION TYPE:	Mass Production
◆ INDV. LEMON DICE:	3

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Crew Compartment	-	"Crew" hits are one step higher
Large Sensor Profile	1	Easier to detect

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Walk
◆ COMBAT SPEED:	3
◆ TOP SPEED:	(36 kph) 6
SECONDARY MOVEMENT MODE:	Ground
◆ COMBAT SPEED:	6
◆ TOP SPEED:	(65 kph) 11
MANEUVER:	-1
DEPLOYMENT RANGE:	400 km

ELECTRONICS ▼

SENSORS:	-2
◆ SENSOR RANGE:	2 km
COMMUNICATION:	-1
◆ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	0

ARMOR ▼

LIGHT DAMAGE:	16
HEAVY DAMAGE:	32
OVERKILL:	48

CREW ▼

PILOT [LVL/ATTR]:	
GUNNERY [LVL/ATTR]:	

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Chainsaw	CS	F	0	0	0	0	0	x9	1	n/a	-

DAMAGE ▼

■■■■■■■■■ 10	60
■■■■■■ 20	70
30	80
40	90
50	100

HEAVY GEAR

PW-05 VALENCE

OVERVIEW

The *Valence* is an all-purpose Work Gear chassis designed by Paxton both for its internal use and for foreign sales. It is quite similar in layout and function to other commercial Work Gear designs such as the *Ground Hog* or *Prairie Dog*. Like them, it features semi-modular arms to which a wide variety of tools can be attached.

The pilot/operator sits in an open cockpit protected by thick rollbars. Padding is often added to the rollbars to reduce damage from minor collisions and scrapes that occur during routine work. The *Valence* carry just enough sensor equipment to supply its neural net with basic environmental information; the pilot must rely on his own eyes and judgment for the rest. For the same economic reasons, the *Valence* is not equipped with a fire control computer, though it is possible to jury-rig basic circuitry to handle minor anti-personnel weapons.

The basic frame of the machine is quite sturdy but completely unarmored. A new model, the *Valence*-II, offers and enclosed cockpit with air conditioning. The powerful V-engine, located in the backpack, is manufactured exclusively for the *Valence*.

The backpack assembly features an improved transmission and main pump assembly, cooled by an extra radiator, to provide high pressure levels to the various actuators. Parts are readily available at all Paxton retail outlets.

SERVICE RECORD

Paxton will sell *Valences* to anyone with the money to buy them. So far, only a few homesteads and villages in the nearby Paxton Protectorate have purchased the machine. Most of the production goes to work in Paxton's own factories and warehouses, where it is the only design in use.

SPECIFICATIONS

| Code name:	Valence	Production code:	PW-05
Manufacturer:	Paxton	Use:	all-purpose commercial Work Gear
Height:	4.4 meters	Width:	3.1 meters
Average armor thickness:	15 mm	Armor material:	steel alloy
Standard operational weight:	6235 kg	Maximum speed on clear ground:	30 kph
Powerplant:	V-engine	Horsepower:	750 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard			

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
(replace pincers by chaincutters)	39	(reinforced frame (+2 Armor))	48
(replace pincers by Size 6 crane arms)	39	(Ground 2/4, Triple Towing Capacity)	85
(Improved Off-road Capacity)	60	Add basic fire control (FC -1, required for weapons)	-
Add Light MG w/200 shots in arm mount (F fire arc)	49	Add six-shot AP Grenade Launcher (fixed to one arc)	42
Replace one pincer by plasma cutting torch	39	Replace one Manipulator Arm by Tool Arm 6: Pincer	39
Foraging (Sensors -1, Micro-Lab)	41	Miner (Geological Sensors, Micro-Lab)	46
Valence-II (remove Exposed Crew Compartment)	39	Add Grapple Launcher (250 m, Rating 7)	41
Add Light Duty Mining Equipment	39	Add Ram Plate	39
Add Snub Cannon (F, 5 shots Anti-Structure)	266		
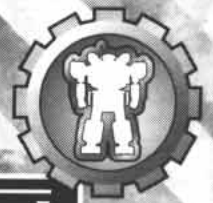
VALENCE
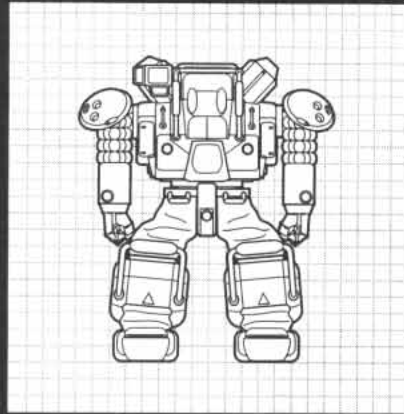
VEHICLE DESCRIPTION

VEHICLE TYPE:	Valence
THREAT VALUE:	39
♦ OFFENSIVE:	0
♦ DEFENSIVE:	33
♦ MISCELLANEOUS:	83
SIZE:	5
♦ ORIGINAL DEFAULT SIZE:	4
CREW:	1
♦ BONUS ACTION:	0
COST:	15,480 marks/dinars
♦ PRODUCTION TYPE:	Mass Production
♦ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
♦ COMBAT SPEED:	3
♦ TOP SPEED:	(31 kph) 5
SECONDARY MOVEMENT MODE:	-
♦ COMBAT SPEED:	-
♦ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	450 km

ELECTRONICS

SENSORS:	-3
♦ SENSOR RANGE:	1 km
COMMUNICATION:	-3
♦ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

CREW

PILOT [LVL/ATTR]:	
GUNNERY [LVL/ATTR]:	

PERKS

NAME	RATING	GAME EFFECT
Double Towing Capacity	-	Can tow up to twice its weight
Hostile Environment	-	Desert
Manipulator Arms x 2	6	Can punch
Searchlight	1	Fixed Forward, 50 m range

FLAWS

NAME	RATING	GAME EFFECT
Exposed Movement System	- -	Damage against "Movement" is one step worse
Exposed Crew Compartment	- -	Damage against "Crew" is one step worse
Large Sensor Profile	2	Easy to detect

DEFECTS

NAME	RATING	GAME EFFECT
Annoyance	-	Lmited field of vision

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪▪▪▪▢▢▢ 10	60
20	70
30	80
40	90
50	100

FOV-4X EVIL EYE

OVERVIEW

Forward observers have the thankless job of exposing themselves to enemy fire to spot for friendly artillery. To increase both their efficiency and their survival rate, they are often assigned lightly armored vehicles such as a Heavy Gear or an all-terrain armored car like the *Evil Eye*.

The *Evil Eye* is built on the sturdy *Elan* chassis. The entire hull has been covered with light steel alloy plate. The rear passenger seats are removed to make room for the electronic suites of the radio and sensor systems, leaving minimal room for the electronic system operator. The four electric engines are supplemented by a standard diesel burner for increased autonomy and power to haul around all the extra mass of the armor and additional equipment.

The *Evil Eye* is only lightly armed with a small autocannon, which is often only used to mark targets. The gun is placed on a restricted travel mount just above and to the right of the driver, who directs it with a small set of controls placed on the wheel. The roof-mounted target designator illuminates targets for the kill by support units, giving its name to the vehicle. A deployable antenna mast located at the rear right side transmits the data back to the waiting artillery unit. Many variants also sport a roof-mounted satellite uplink, but the increased cost of such a piece of equipment makes these vehicles rare.

SERVICE RECORD

Evil Eyes have seen service in most conditions, but they are most often associated with the large savannahs of the Southern Hemisphere. *Evil Eyes* helped defend the borders against CEF intrusions, often patrolling weeks at a time. Numerous legends and folk's tales have been created by these "ghosts of the night" which often appeared out of nowhere to rain distant fire on unsuspecting CEF troops.

SPECIFICATIONS

|			
Code name:	Evil Eye	Production code:	FOV-4X
Manufacturer:	various	Use:	forward observer
Height:	1.86 meters	Length:	3.6 meters
Average armor thickness:	20 mm	Armor material:	steel w/composite
Standard operational weight:	1800 kg	Maximum speed on clear ground:	119 kph
Powerplant:	diesel/electric	Horsepower:	90 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
15 mm OV-975 autocannon	100 belted shells		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add Sat. Uplink, Exposed Aux. Systems	276	Add smoke launchers (10 shots)	165
Add ECCM 2, Vulnerable to Haywire	112		
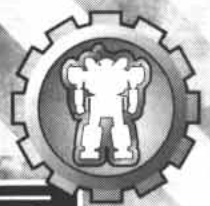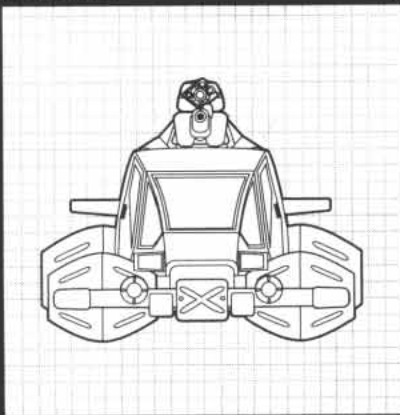
EVIL EYE

VEHICLE DESCRIPTION

VEHICLE TYPE:	Evil Eye
THREAT VALUE:	156
▶ OFFENSIVE:	44
▶ DEFENSIVE:	50
▶ MISCELLANEOUS:	374
SIZE:	4
▶ ORIGINAL DEFAULT SIZE:	5
CREW:	2
▶ BONUS ACTION:	1
COST:	97,500 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	10
▶ TOP SPEED:	(119 kph) 20
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-1
DEPLOYMENT RANGE:	650 km

ELECTRONICS

SENSORS:	+1
▶ SENSOR RANGE:	2 km
COMMUNICATION:	+2
▶ COMMUNICATION RANGE:	30 km
FIRE CONTROL:	-1

ARMOR

LIGHT DAMAGE:	7
HEAVY DAMAGE:	14
OVERKILL:	21

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Backup Sensors	-	Absorbs one "Comm." hit
ECCM	1	Defensive electronic warfare equipment
Target Designator	3	Used to target Guided weapons

FLAWS

NAME	RATING	GAME EFFECT
Exposed Aux. Systems	-	"Aux." hits are one step worse

DEFECTS

NAME	RATING	GAME EFFECT
Annoyance	-	System operator seat is cramped

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
15 mm cannon	VLAC	F	2	4	8	16	0	x6	1	100	ROF3

DAMAGE

☐☐☐☐☐☐☐ 10   60
20   70
30   80
40   90
50   100

HEAVY GEAR

CV-3 MURDOCK

OVERVIEW

Maintaining the chain of command is one of the prime concerns of the modern military commander. This requires extensive communication equipment as well as several advisers (both human and electronic) to separate the useful information from the rest and quickly place it in front of the commander. The *Murdock* is designed as a mobile field HQ and C3 (Command, Control and Communication) vehicle, capable of coordinating the attack and movement of several different combat groups at once over a large and extremely mobile battlefield.

The vehicle rests on a sturdy six-wheeled chassis powered by a single gas turbine positioned along the long axis of the vehicle. Each wheel has its own independant suspension to minimize jarring during transport. The driver sits up front in an armored cabin. The spacious rear portion of the vehicle houses the large communication system and holographic display which insure that the command staff remains in contact with its combat groups at all times. Two technicians operate the radio equipment and ECCM equipment comes as standard to ensure that enemy ECM will not stop transmissions. All communication systems are heavily redundant and can continue operating after taking severe combat damage. The *Murdock* has a single, roof-mounted, automatic grenade launcher to defend against marauding infantry. It is normally controlled by the driver, though duplicate controls are found in the officer's chamber. Heavier weaponry is not needed because the vehicle is often escorted by "bodyguards."

SERVICE RECORD

The *Murdock Cee-Three*, as its crew call it, is rarely seen in the various Terranovan hot spots. In general, it is only used during large or extended campaigns. It is simply not cost efficient enough to bring it out of the hangar for every small skirmish or patrol.

SPECIFICATIONS

Code name:	Murdock	Production code:	CV-3
Manufacturer:	Hansens Electronics Ltd.	Use:	light mobile C3 unit
Height:	3.5 meters	Length:	7.8 meters
Average armor thickness:	14 mm	Armor material:	durasheet
Standard operational weight:	1,670 kg	Maximum speed on clear ground:	73 kph
Powerplant:	gas turbine	Horsepower:	180 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
Avey Industries 40 mm grenade launcher	80 belted grenades		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add pintle mount w/9 mm chaingun	315	Add smoke launchers (10 shots)	332
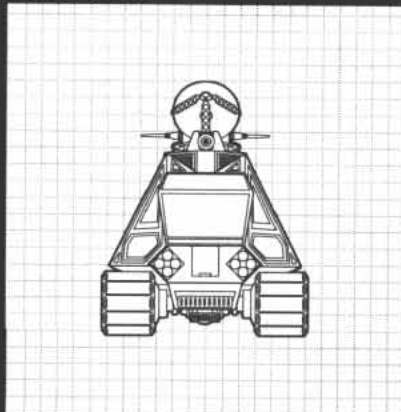
MURDOCK

VEHICLE DESCRIPTION

VEHICLE TYPE:	Murdock
THREAT VALUE:	314
▶ OFFENSIVE:	60
▶ DEFENSIVE:	35
▶ MISCELLANEOUS:	846
SIZE:	4
▶ ORIGINAL DEFAULT SIZE:	7
CREW:	3
▶ BONUS ACTION:	1
COST:	274, 750 marks/dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	6
▶ TOP SPEED:	(73 kph) 12
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	500 km

ELECTRONICS

SENSORS:	0
▶ SENSOR RANGE:	2 km
COMMUNICATION:	+2
▶ COMMUNICATION RANGE:	30 km
FIRE CONTROL:	0

ARMOR

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Backup Communications	-	Redundent/reinforced systems
ECCM	3	Defensive Electronic Warfare equipment
Laboratory (Leadership)	1	Holotank and C³ equipment
Passenger Seating	-	4 seats for officers
Satellite Uplink	-	Allows orbital communications

FLAWS

NAME	RATING	GAME EFFECT
Exposed Aux. Systems	-	"Aux." hits are one step higher
Exposed Fire Control	-	"Fire Control" hits are one step higher
Vulnerable to Haywire	-	Haywire weapons get three damage rolls

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
Gren. Launcher	APGL	T	1	2	4	8	-1	x3	1	80	AI, IF, AEO

DAMAGE

▪▪▪▪▪▪▪▪▪▫	10	60
	20	70
	30	80
	40	90
	50	100

NIGHTINGALE

MDU-15 NIGHTINGALE

OVERVIEW

Mobile Army Surgical Hospitals (MASH) have been around for many centuries. They are generally assigned to the regimental level, though units engaged in long and difficult campaigns have been known to bring more MASHs with them. Although most designs are made of modular structures that are brought by trucks and assembled near the front, few truly mobile MASH designs have been developped by the millitary. Casualty Evacuation (Cas-Evac) vehicles, both on the ground and in the air, are used to bring patients back.

The *Nightingale* is a typical example of one such vehicle. It is a cross between an armored ambulance and a full-fledged surgical center. Because it places the emphasis on mobility, it can care for only a few patients at a time and then only for a short period. The steel/composite armor ensures the safety of the wounded should the *Nightingale* finds itself under fire. As a medical vehicle, the *Nightingale* is rarely, if ever, equipped with weapons.

The vehicle is built around a large, sturdy hydraulic suspension to minimise jarring the patients. Twin gas turbines placed side by side underneath the chassis power both the drive train and the generators providing power to the medical equipment inside. The medical compartment contains four beds and one complete operating theater. The vehicle is also equipped with a micro-lab featuring the latest biological research equipment, allowing medics to perform advanced medical analysis on the spot.

SERVICE RECORD

As the soldiers like to say, it is better to never have to see a MASH up close, but their presence is a comfort to the troops. Rescue vehicles such as the *Nightingale* are generally used closer to the front line and saw extensive action during the War of the Alliance.

SPECIFICATIONS

| Code name:	Nightingale	Production code:	MDU-15
Manufacturer:	various	Use:	MASH vehicle
Height:	6.2 meters	Length:	3.5 meters
Average armor thickness:	45 mm	Armor material:	steel w/bonded composite
Standard operational weight:	5400 kg	Maximum speed on clear ground:	72 kph
Powerplant:	2 x gas turbines	Horsepower:	2 x 800 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add extra armor (+1 Armor)	115	Add smoke launchers (10 shots)	122
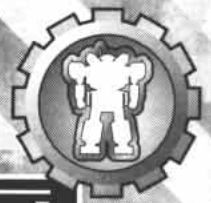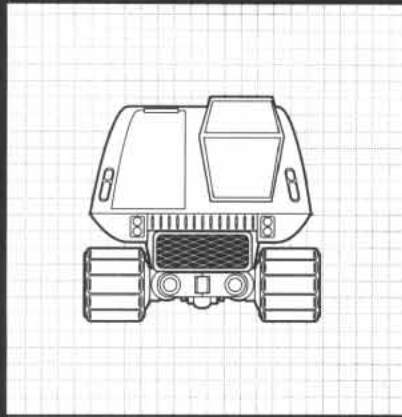
NIGHTINGALE

VEHICLE DESCRIPTION

VEHICLE TYPE:	Nightingale
THREAT VALUE:	112
▶ OFFENSIVE:	0
▶ DEFENSIVE:	35
▶ MISCELLANEOUS:	302
SIZE:	6
▶ ORIGINAL DEFAULT SIZE:	5
CREW:	1
▶ BONUS ACTION:	0
COST:	46,667 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	6
▶ TOP SPEED:	(72 kph) 12
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	500 km

ELECTRONICS

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	0
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	9
HEAVY DAMAGE:	18
OVERKILL:	27

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Emergency Medical	-	Absorbs one "Crew Stunned" result (5 people)
Micro-lab	1	No penalty for Life Sciences rolls
Passenger Accomodations	-	Medical beds for two patients
Passenger Seating	-	4 seats for medical personnel and patients

FLAWS

NAME	RATING	GAME EFFECT
No Sensors	-	Cannot use Active Sensor

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪▪▪▪▪▫	10			60
	20			70
	30			80
	40			90
	50			100

EWV-7 SEEKER

OVERVIEW

The *Seeker* is purely an information gathering vehicle. It carries only minimal armor and weaponry, and relies on its limited stealth abilities and the training of its crew to avoid being shot. Its mission is to locate enemy forces, place listening posts and intercept and block enemy transmissions. Many *Seekers* work in conjunction with one or two scout Heavy Gears which act as its ears and hands on the field.

Like the *Murdock*, the *Seeker* sensor vehicle is based on a sturdy six-wheeled chassis powered by a single gas turbine. A small auxiliary generator is also present to run the sensor equipment without the main turbine. The *Seeker* has a large sensor array , allowing it to keep tabs on almost anything that moves within its sensor range. Two technicians operate the equipment from workstations placed in a roomy compartment in the back. ECCM systems come as standard equipment to ensure that enemy ECM will not stop transmission of the *Seeker*'s findings.

The vehicle has a roof-mounted machine gun for defense against marauding infantry and a small rocket pod for use against anything heavier. Both are placed within a small limited-transverse turret (to avoid hitting the sensor equipment placed on the roof). The weapons are normally controlled by the driver, though duplicate controls are found at both crew stations.

SERVICE RECORD

Seekers can be found in very few front line units, as these usually prefer the more nimble Heavy Gear for scouting purposes. The *Seeker* is better suited to extended scouting operations, however, and is often assigned to a headquarter unit during large or extended campaigns. Much like the *Murdock* command vehicle, the *Seeker* is not cost efficient for small skirmishes or patrol.

SPECIFICATIONS

Code name:	Seeker	Production code:	EWV-7
Manufacturer:	Hansens Electronics Ltd.	Use:	light mobile C3 unit
Height:	3.5 meters	Length:	7.8 meters
Average armor thickness:	14 mm	Armor material:	durasheet
Standard operational weight:	1,670 kg	Maximum speed on clear ground:	73 kph
Powerplant:	gas turbine	Horsepower:	180 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
10 mm Guessen machine gun	80 belted rounds	45 mm Q6 rocket pod	8 rockets

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Artillery Support (add Counter Battery Sensors)	616		

SEEKER ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Seeker
THREAT VALUE:	520
▶ OFFENSIVE:	91
▶ DEFENSIVE:	35
▶ MISCELLANEOUS:	1435
SIZE:	4
▶ ORIGINAL DEFAULT SIZE:	8
CREW:	4
▶ BONUS ACTION:	2
COST:	520,000 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	6
▶ TOP SPEED:	(73 kph) 12
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	500 km

ELECTRONICS ▼

SENSORS:	+2
▶ SENSOR RANGE:	10 km
COMMUNICATION:	+1
▶ COMMUNICATION RANGE:	30 km
FIRE CONTROL:	-1

ARMOR ▼

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

CREW ▼

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS ▼

NAME	RATING	GAME EFFECT
Backup Communications	-	Redundant/reinforced system
ECM	2	Offensive Electronic Warfare equipment
ECCM	3	Defensive Electronic Warfare equipment
Crew Accomodation	-	Couches for the technicians (2)
Satellite Uplink	-	Allows orbital communications

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Aux. Systems	-	"Aux." hits are one step higher

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
10 mm MG	HMG	F	1	2	4	8	0	x4	1	80	AI, ROF3
45 mm Rockets	VLRP/8	F	1	2	4	8	-1	x8	1	8	IF, ROF2

DAMAGE ▼

☐☐☐☐☐☐☐☐ 10   60
20   70
30   80
40   90
50   100

ANTELOPE

• OVERVIEW

There has always been a need for a small transport vehicle capable of limited cross-country travel: the ubiquitous "jeep," from the name of one of the first such vehicles. They can act as courier, infantry transport or light combat vehicles and are always inexpensive both to produce and field. The *Antelope* is a design that is found in virtually every armed force on the planet. Although its name and overall appearance may differ slightly from place to place, the *Antelope* and its copies share a similar performance profile and role.

The vehicle is built around a sturdy metal frame. A rugged suspension and a diesel engine (replaced in some variants by a V-engine with a similar performance) are bolted to it and covered with a light sheet-metal hull. This shell is thick enough to stop small shrapnel, but is powerless against most infantry weapons. The open-topped design makes this a moot point, however, since the crew receives no protection from the waist up

The simple and rugged design of the vehicle means that several variants have cropped up over the years, most of them increasing the vehicle's capabilities in some ways.

• SERVICE RECORD

It would be pointless to try and list the service record of such a utility vehicle since *Antelope*-like designs have been used since the early colonization days. They are found in the ranks of all armed forces and salvaged vehicles from the War can often be seen as personal all-terrain vehicles in Badlands communities.

• SPECIFICATIONS

Code name:	Antelope	Production code:	various
Manufacturer:	various	Use:	light utility vehicle
Height:	0.9 meters	Length:	3.6 meters
Average armor thickness:	5 mm	Armor material:	steel sheet
Standard operational weight:	900 kg	Maximum speed on clear ground:	92 kph
Powerplant:	diesel engine	Horsepower:	60 hp

• WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	–		

• OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add APGL (F, 30 shots)	51	Add pintle mount + 9 mm Lt. Machinegun	48
Add pintle mount + 9 mm Chaingun	48	Add pintle mount + 37 mm Grenade Rifle	50
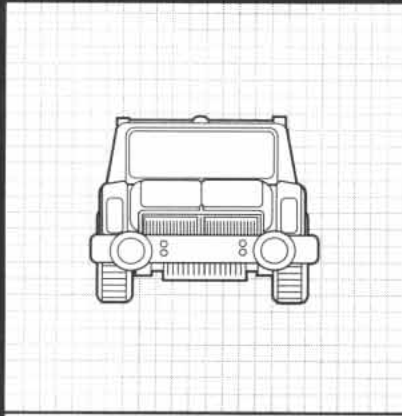
ANTELOPE

VEHICLE DESCRIPTION

VEHICLE TYPE:	Antelope
THREAT VALUE:	47
▶ OFFENSIVE:	0
▶ DEFENSIVE:	19
▶ MISCELLANEOUS:	123
SIZE:	3
▶ ORIGINAL DEFAULT SIZE:	4
CREW:	1
▶ BONUS ACTION:	0
COST:	31,333 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	8
▶ TOP SPEED:	(92 kph) 15
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-1
DEPLOYMENT RANGE:	550 km

ELECTRONICS

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	-2
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	4
HEAVY DAMAGE:	8
OVERKILL:	12

CREW

PILOT [LVL/ATTR]:	
GUNNERY [LVL/ATTR]:	

PERKS

NAME	RATING	GAME EFFECT
Easy to Modify	-	+2 to Repair and Modify rolls
Pintle Mount	-	Can hold one infantry weapon

FLAWS

NAME	RATING	GAME EFFECT
Exposed Crew Compartment	-	"Crew" hits are one level worse
No Sensors	-	Cannot use Active Sensor

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪	10
	20
	30
	40
	50

	60
	70
	80
	90
	100

HEAVY GEAR

FIVE-TON

FIVE-TON

OVERVIEW

Supply trucks like the *Five-Ton* or the *Camel* have been around since the invention of the motorized army. They are used for just about anything: troop transport, fuel tanker, ammunition carrier, etc. Whenever there is a road (or at least a relatively flat surface), the *Five-Ton* can deliver its cargo without problems. The truck can also venture onto more treacherous grounds if needed, but will have to be extremely careful not to get stuck. The *Five-Ton* is intended for road transport and does not have a true off-road capacity.

The *Five-Ton* uses the classic six-wheeled layout, with the cargo bay at the back and the driver and passengers in the cabin. A sturdy gas turbine is linked to a computer-controlled transmission for increased reliability and power at reduced fuel consumption. The cargo area is usually covered with a light heat-formed polymer cover to protect against the elements, but the cover can be removed easily if a tall charge needs to be carried. Some units have replaced their factory-provided polymer covers with more manageable cloth or tarp covers.

The driver sits in a roomy forward cabin. There are two additional seats for passengers, although there have been instances of more than two people crowding in them. The cabin is not armored, though it is made of tough steel plating that may be sufficient to stop small caliber weapons and low velocity shrapnel. The windows are slightly polarized to protect against glare and targeting laser devices.

SERVICE RECORD

Five-Tons are mostly seen in rear areas, ferrying troops and supplies from one post to the next. Trucks of similar design are sometimes used by security and police forces in the city-states. This truck is also very similar to several civilian designs, although the military model is somewhat sturdier.

SPECIFICATIONS

Code name:	Five-Ton	Production code:	various
Manufacturer:	various	Use:	transport vehicle
Height:	2.8 meters	Length:	5.3 meters
Average armor thickness:	6 mm	Armor material:	steel plates
Standard operational weight:	3,100 kg	Maximum speed on clear ground:	80 kph
Powerplant:	diesel engine	Horsepower:	180 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add pintle mount w/9 mm machinegun	29	Civilian Truck (Armor 5, No Communication System)	26
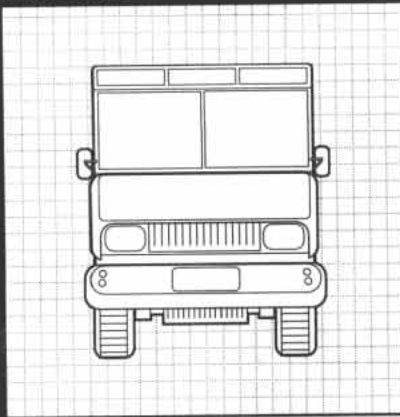
FIVE-TON

VEHICLE DESCRIPTION

VEHICLE TYPE:	Five-Ton
THREAT VALUE:	28
◆ OFFENSIVE:	0
◆ DEFENSIVE:	17
◆ MISCELLANEOUS:	66
SIZE:	5
◆ ORIGINAL DEFAULT SIZE:	3
CREW:	1
◆ BONUS ACTION:	0
COST:	8,400 marks
◆ PRODUCTION TYPE:	Mass Production
◆ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
◆ COMBAT SPEED:	6
◆ TOP SPEED:	(70 kph) 12
SECONDARY MOVEMENT MODE:	n/a
◆ COMBAT SPEED:	-
◆ TOP SPEED:	-
MANEUVER:	-3
DEPLOYMENT RANGE:	400 km

ELECTRONICS

SENSORS:	n/a
◆ SENSOR RANGE:	n/a
COMMUNICATION:	-2
◆ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	6
HEAVY DAMAGE:	12
OVERKILL:	18

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Cargo Bay	-	30 m³ (4x2.5x3 meters)
Double Towing Capacity	-	Can tow up to twice its weight

FLAWS

NAME	RATING	GAME EFFECT
Large Sensor Profile	1	Easier to detect
No Sensor	-	Cannot do Active Sensor sweeps
Poor Off-Road ability	-	MP Cost increased by one in hexes 2+

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

☐☐☐☐☐☐	10	60
	20	70
	30	80
	40	90
	50	100

HEAVY GEAR

SPRINGER

OVERVIEW

The designation cargo jeep is usually assigned to small utilitarian vehicles used to ferry light cargo over short or medium distances. The *Springer* is a perfect example of such a vehicle. Although it is in service with the Southern army (being the standard light cargo hauler of the MILICIA), similar designs can be found in all Terranovan armies.

The *Springer* has a rugged suspension that gives it good off-road performance for a wheeled design, although not at the level of a true off-road capable vehicle. The entire vehicle is built around a standard diesel engine, a powerplant that is simple and easy to replace and repair. Some models have salvaged V-engines from Gears, but the complex transmission required sometimes more problems than field technicians are willing to cope with.

The spacious rear cargo bay can easily accomodate several different kinds of supplies, such as ammo boxes, food packs, water or fuel tanks, or even stretchers. The cargo bay (or the entire vehicle, for that matter) is not armored — the hull is made of thin metal sheets stamped into shape and bolted over the chassis. Some models have a removable cargo bay cover to transport tall cargo.

SERVICE RECORD

The *Springer* or one of its many cousins can be found on almost all Southern military bases. Designs vary, but most have about the same performance. Civilian models are also sold without the military communication equipment. They are extremely popular with Badlanders because of their extremely sturdy construction.

SPECIFICATIONS

Code name:	Springer	Production code:	various
Manufacturer:	various	Use:	light cargo vehicle
Height:	1.8 meters	Length:	3.4 meters
Average armor thickness:	6 mm	Armor material:	steel plates
Standard operational weight:	1,200 kg	Maximum speed on clear ground:	92 kph
Powerplant:	diesel engine	Horsepower:	150 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add pintle mount w/9 mm machinegun	41	Add pintle mount w/9 mm chaingun	41
Add pintle mount w/37 mm grenade rifle	43	Add smoke launchers (10 shots)	40

SPRINGER

VEHICLE DESCRIPTION

VEHICLE TYPE:	Springer
THREAT VALUE:	40
▶ OFFENSIVE:	0
▶ DEFENSIVE:	18.6
▶ MISCELLANEOUS:	102
SIZE:	3
▶ ORIGINAL DEFAULT SIZE:	3
CREW:	1
▶ BONUS ACTION:	0
COST:	20,000 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	8
▶ TOP SPEED:	(92 kph) 15
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-2
DEPLOYMENT RANGE:	500 km

ELECTRONICS

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	-2
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	5
HEAVY DAMAGE:	10
OVERKILL:	15

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Cargo Bay	-	10 m³ (2.5x2x2)
Hostile Environment Protection	-	Desert
Passenger Seating	-	2 seats in cabin

FLAWS

NAME	RATING	GAME EFFECT
No Sensors	-	Cannot use Active Sensor

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪▪	10	60
	20	70
	30	80
	40	90
	50	100

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TANKER

OVERVIEW

Fuel is a vital commodity for troops on the march. Although most military engines can gulp down almost any liquid that can burn, their performance usually suffers unless they run on properly refined fuel. Armored fuel trucks such as the *Tanker* can be seen on all military bases and in convoys.

This particular vehicle is based on a sturdy welded alloy chassis which is light but very strong. A hydraulic self-correcting suspension gives the vehicle a limited off-road capacity, allowing the truck to follow the troops in almost any terrain. Each of the smaller road wheel can be adjusted separately should the driver needs it. Even though the vehicle is not supposed to find itself under combat conditions, the sides of the truck are armored for protection against light weapon fire and shrapnel. The driver and up to two helpers ride in the forward cab, which contains an air conditioning system for long haul operations. The high position of the cab gives an excellent field of vision to the crew.

Several 50-meter long flexible fuel hoses are carried in compartments located under the chassis or are simply rolled on a drum mounted on the rear of the vehicle. Some trucks, notably on airbases, are also equipped with an extendable ladder for refueling tall aircraft and shuttles. A few rare models have robotic tool arms equipped with high pressure pumps for fast refueling.

SERVICE RECORD

Fuel trucks of similar designs to the *Tanker* can be found on military bases across the planet. Civilian models are also similar, but do not feature the rugged off-road suspension nor the armor plating protecting the fuel. They also tend to be smaller and have a lower fuel capacity.

SPECIFICATIONS

Code name:	Tanker	Production code:	various
Manufacturer:	various	Use:	fuel transport
Height:	6.6 meters	Length:	12.9 meters
Average armor thickness:	60 mm	Armor material:	steel plating
Standard operational weight:	8200 kg	Maximum speed on clear ground:	68 kph
Powerplant::	diesel engine	Horsepower:	250 hp

WEAPONS

Name	Ammunition Payload	Name	Ammunition Payload
None as standard	-		

OPTIONS

Name	Modified Threat Value	Name	Modified Threat Value
Add Light Flamer (F, 20 Fire-Fighting Foam ammo)	43	Add pintle mount w/9 mm machinegun	43
Add extendable ladder (Size 2 Tool Arm, can't punch)	42	Civilian truck (Poor Off-Road, Armor 5)	47
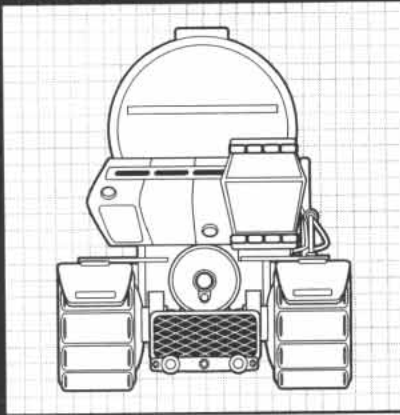
TANKER

VEHICLE DESCRIPTION

VEHICLE TYPE:	Tanker
THREAT VALUE:	42
▶ OFFENSIVE:	0
▶ DEFENSIVE:	23
▶ MISCELLANEOUS:	102
SIZE:	7
▶ ORIGINAL DEFAULT SIZE:	3
CREW:	1
▶ BONUS ACTION:	0
COST:	9000 marks/dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	6
▶ TOP SPEED:	(68 kph) 11
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	-4
DEPLOYMENT RANGE:	500 km

ELECTRONICS

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	-2
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-2

ARMOR

LIGHT DAMAGE:	8
HEAVY DAMAGE:	16
OVERKILL:	24

CREW

PILOT (LVL/ATTR):	
GUNNERY (LVL/ATTR):	

PERKS

NAME	RATING	GAME EFFECT
Cargo Bay	-	160 m³ fuel tank
Hostile Environment Protection	-	Desert
Passenger Seating	-	2 seats in forward cabin

FLAWS

NAME	RATING	GAME EFFECT
No Sensors	-	Cannot use Active Sensor

DEFECTS

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS

NAME	CODE	FIRE ARC	S	M	L	EX	ACC	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

DAMAGE

▪▪▪▪▪▪▪▪▫	10
	20
	30
	40
	50

	60
	70
	80
	90
	100

HEAVY GEAR

JACKRABBIT

DESCRIPTION

The *Jackrabbit* is a typical example of the various models of combat bikes used by motorized infantry forces around the world. It is light enough to be lifted by one man and nimble enough to go almost anywhere. Its small size and great agility combine to make the bike a very difficult target.

Jackrabbits are too small to carry any armament, though the passenger may fire his personal weapon(s). Some models have been modified to accept a sidecar equipped with a pintel mount, increasing the firepower of the unit at the cost of some maneuverability. The sidecar also allows more cargo to be carried, although the space could be occupied (uncomfortably) by a passenger.

SPECIFICATIONS

Manufacturer:	various
Length:	2.1 meters
Standard operational weight::	275 kg
Maximum speed on clear ground:	96 kph
Powerplant::	gas engine/40 hp

OPTIONS

Name	Modified Threat Value
Sidecar (add one passenger, 1 m³ cargo, Man. 0)	15
Pintle Mount (require sidecar)	15

WALLABY
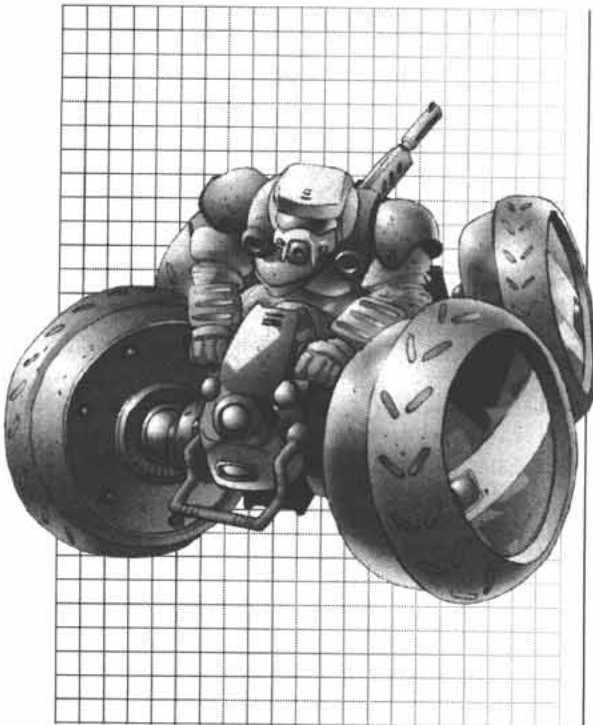
DESCRIPTION

The *Wallaby* is a rugged All-Terrain Vehicle (ATV) designed to carry heavily-equipped infantry troops in difficult conditions. Its large wheels are powered by two independant V-engines placed in tandem in the main body, each engine supplying torque to the four wheels. The computer-controlled transmissions, one for each wheel, are protected by the armored hub of the wheel itself.

Wallabies can be modified to accept a special parafoil package that makes them airdroppable. The parafoil's design, along with the bike's suspension, allow the driver to be dropped with his vehicle and be operational almost as soon as he touches the ground.

SPECIFICATIONS

Manufacturer:	various
Length:	1.8 meters
Standard operational weight::	250 kg
Maximum speed on clear ground:	84 kph
Powerplant::	2 x V-engine/2 x 30 hp

OPTIONS

Name	Modified Threat Value
Airdroppable	32
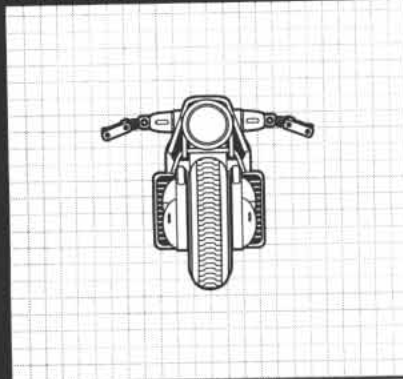
JACKRABBIT ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Jackrabbit
THREAT VALUE:	27
▶ OFFENSIVE:	0
▶ DEFENSIVE:	53
▶ MISCELLANEOUS:	27
SIZE:	2
▶ ORIGINAL DEFAULT SIZE:	3
CREW:	1
▶ BONUS ACTION:	0
COST:	20,250 dinars
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	8
▶ TOP SPEED:	(96 kph) 16
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	+2
DEPLOYMENT RANGE:	250 km

ELECTRONICS ▼

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	-2
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-5

ARMOR ▼

LIGHT DAMAGE:	2
HEAVY DAMAGE:	4
OVERKILL:	6

PERKS ▼

NAME	RATING	GAME EFFECT
Cargo Bay	-	Saddle bags, total space 1 m³
Passenger Seat	-	Seat for one passenger

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Crew Compartment	-	All "Crew" hits are one level higher
Exposed Movement System	-	All "Movement" hits are one level higher

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

WALLABY ▼

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:	Wallaby
THREAT VALUE:	21
▶ OFFENSIVE:	0
▶ DEFENSIVE:	27
▶ MISCELLANEOUS:	36
SIZE:	2
▶ ORIGINAL DEFAULT SIZE:	3
CREW:	1
▶ BONUS ACTION:	0
COST:	15,750 marks
▶ PRODUCTION TYPE:	Mass Production
▶ INDV. LEMON DICE:	3

MOVEMENT ▼

PRIMARY MOVEMENT MODE:	Ground
▶ COMBAT SPEED:	7
▶ TOP SPEED:	(84 kph) 14
SECONDARY MOVEMENT MODE:	n/a
▶ COMBAT SPEED:	-
▶ TOP SPEED:	-
MANEUVER:	+1
DEPLOYMENT RANGE:	275 km

ELECTRONICS ▼

SENSORS:	n/a
▶ SENSOR RANGE:	n/a
COMMUNICATION:	-2
▶ COMMUNICATION RANGE:	10 km
FIRE CONTROL:	-5

ARMOR ▼

LIGHT DAMAGE:	3
HEAVY DAMAGE:	6
OVERKILL:	9

PERKS ▼

NAME	RATING	GAME EFFECT
Cargo Bay	-	1 m3; saddle bags
Improved Off-road	-	-1 MP cost for hexes with cost 2+
Passenger Seat	-	Seat for one passenger

FLAWS ▼

NAME	RATING	GAME EFFECT
Exposed Crew Compartment	-	All "Crew" hits are one level higher

DEFECTS ▼

NAME	RATING	GAME EFFECT
None	-	-

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special
None as standard	-	-	-	-	-	-	-	-	-	-	-

Skirmish Scale

Time:	Each round lasts 6 seconds
Ground Scale:	Each hex represents 10 meters
Movement Points:	Remain identical
Weapons' Rate of Fire:	Remain identical
Actions:	One extra action allowed

The Skirmish Combat Round

Step One:	Declaration Phase
Step Two:	Initiative Phase
Step Three:	Activation Phase
Step Four:	Miscellaneous Events Phase

Repeat steps 1 to 4 until the battle is resolved or pre-planned objectives are met. A combat group may only move once per combat round.

Additional Terrain Obscurement

Terrain Type	Minimum Number of Hexes for +1 Obscurement
Clear	-
Rough	-
Sand	-
Woodland	5
Jungle	3
Smoke	5*
Swamp	5
Water	3**

Smoke produces 2 points of Obscurement per five hexes.

** Water only produces Obscurement if the defender is in a Water hex and is submerged.*

Blast Effect

1d6	Result
1-2	The vehicle remains upright
3-4	The vehicle ends up on its side (roll randomly which one)
5-6	The vehicle is overturned

Minefield TV Cost Multipliers

Proximity	x1
"Dumb" Proximity	x0.5
Remote-detonated	x2
Time-detonated	x0.2
Haywire	x1.5
Jumping	x1.5
Minefield is known by both sides	x0.33

Command Points

One Command Point can be used for:

1	Buy one additional regular action, incurring no die penalty
2	Buy a +2 modifier to a single Defense roll
3	Activate a unit out of sequence (unit must not have been activated)
4	Turn a unit around by up to 180 degrees, even if it has already been activated

Advanced Skirmish Terrain Costs

Terrain Type	Walker MP	Ground MP	Hover MP	Naval/Sub MP	Obscurement?
Clear	1	1	1	n/a	N
Rough	1	2	2	n/a	N
Sand	2	2	1	n/a	N
Woodland	2	4	n/a	n/a	Y
Jungle	3	n/a	n/a	n/a	Y
Swamp	3	4	1	n/a	Y
Water	3*	4*	1	1	**
+1 elevation	add 2	add 2	add 4	n/a	N
-1 elevation	add 1	-	-	n/a	N

* Only amphibious walkers and ground vehicles may enter Water hexes. Other walkers and ground vehicles will flood and automatically be put out of action. Amphibious vehicles cannot enter or exit water while moving at Top Speed.

** Water only produces obscurement if the defender is in a Water hex and is submerged. In this case, water produces 1 point of obscurement per 3 hexes.

Artillery Response Time

Distance of battery in meters	Flight Time (Tactical)	Flight Time (Skirmish)
3200 and less	0 round	0 round
3201 to 6400	0 round	1 round
6401 to 9600	0 round	2 rounds
9601 to 12,800	0 round	3 rounds
12,801 to 16,000	0 round	4 rounds
16,001 to 19,200	1 round	5 rounds
Etc.		

Artillery Delay Time

Availability	Delay (tactical)	Delay (Skirmish)
Unassigned	12 rounds	60 rounds
Attached	6 round	30 rounds
Reserved	2 round	10 rounds

Minefields

Minefield Type	Dmg Multiplier	vs. Vehicles	vs. Infantry	TV per Hex
Anti-Personnel	x5	4	7	2
Improved Anti-Personnel	x7	4	8	3
General Purpose	x10	6	6	5
Heavy General Purpose	x15	6	6	7
Anti-Armor	x15	7	4	8
Heavy Anti-Armor	x25	8	3	10

New Weapon Systems

Name	Code	Rating	Range	Dam	Acc	RoF	Ammo	Min. Size	Special
Light Artillery Gun	LAG	1107	25/50/100/200	x12	-2	+1	4.4	8	IF, AE0, MR10
Medium Artillery Gun	MAG	3488	30/60/120/240	x18	-2	+1	13.9	12	IF, AE1, MR15
Heavy Artillery Gun	HAG	15702	40/80/160/320	x22	-2	0	53.4	16	IF, AE2, MR20
Very Heavy Artillery Gun	VHAG	35124	60/120/240/480	x30	-2	0	115.4	20	IF, AE2, MR20
Light Artillery Missile	LAM	6729	50/100/200/400	x12	-3	+4	16.8	8	G, AE0, MR4
Medium Artillery Missile	MAM	7630	60/120/240/480	x18	-3	+3	25	12	G, AE0, MR4
Heavy Artillery Missile	HAM	40361	90/180/320/640	x22	-3	+2	108.3	16	G, AE1, MR4
Very Heavy Artillery Missile	VHAM	121912	150/300/600/1200	x30	-3	+1	293.5	20	G, AE1, MR4

New Terrain Types

Terrain Type	Walker MP	Ground MP	Hover MP	Obscurement
White Sand (WS)	2	2	1	-
WS Rough	1	2	1	-
WS Deposits	2	2	1	-
Snow	2	2	1	-
Deep Snow	3	4	1	1
Ice	2	3	1	-
Tar Sand	3	4	1	-
+1 elevation	add 2	add 2	add 4	-
-1 elevation	add 1	-	-	-

Hull-Down Table

Terrain Type	MP Cost	Covers	Protection
Clear	n/a	n/a	none
Rough	+2	2 to 4	15
Sand	+3	3 to 4	10
Woodland	+2	2 to 4	15
Jungle	+1	2 to 6	20
Swamp	+1	2 to 6	10
Water*	+3	2 to 6	5
Urban	+2	2 to 6	15
Dense Urban	+1	2 to 6	20
Elevation change**	+1	2 to 6	15

* Water only produces hull-down effects if the vehicle is completely immersed.

**It is assumed that the vehicle is located at the edge of the elevation level.

Reloading Summary

Number of Men	Actions	Ammo Points per Round
1	1	0.5
2	2	1
4	3	1.5
8	4	2
16	5	2.5

Reloading Modifiers

Engineering Squad	x2	Vehicle with Arms present	x2
Rookies (skill level 1)	x0.5	Veteran (skill level 3+)	x1.5
Under Fire	x0.5		

Technician Tv Cost

Technician Rating	Threat Value
1	50
2	100
3	200
4	400
5	800
6	1600
7	3200
8	6400

Damage Effect Modifier Table

Damage Effect	Labor Point Modifier
MP Loss (up to half total)	+2 per MP
Maneuverability Loss	+4 per point
Weapon Accuracy Loss	+2 per point/weapon
Power Transfer Failure	+10
Auxiliary Systems Perk	+Perk Cost x 2

Field Repair Threshold Table

Damage Effect	Tech Skill Threshold
MP Loss	1+1 per MP loss
Maneuverability Loss	2+2 per point
Weapon Accuracy Loss	2+1 per point/weapon
Power Transfer Failure	5
Auxiliary Systems Perk	3+ 10% of perk cost (round down)

Situation	Modifier
Under fire (at any time in the process)	+3
No enemy within LoS	-1
Vehicle with arms (of any type) helping	-1

Morale Checks

Event	Modifier to Threshold
Before the set-up phase	0
Single vehicle is destroyed	0
Per additional vehicle destroyed during the round	+1
Two infantry soldiers are hit within a single squad	0
Per additional trooper hit during the round	+1
Combat group is under fire by artillery	+1

Top Vehicle

NAME:

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:

THREAT VALUE:

▶ OFFENSIVE:

▶ DEFENSIVE:

▶ MISCELLANEOUS:

SIZE:

▶ ORIGINAL DEFAULT SIZE:

CREW:

▶ BONUS ACTION:

COST:

▶ PRODUCTION TYPE:

▶ INDV. LEMON DICE:

MOVEMENT ▼

PRIMARY MOVEMENT MODE:

▶ COMBAT SPEED:

▶ TOP SPEED:

SECONDARY MOVEMENT MODE:

▶ COMBAT SPEED:

▶ TOP SPEED:

MANEUVER:

DEPLOYMENT RANGE:

ELECTRONICS ▼

SENSORS:

▶ SENSOR RANGE:

COMMUNICATION:

▶ COMMUNICATION RANGE:

FIRE CONTROL:

ARMOR ▼

LIGHT DAMAGE:

HEAVY DAMAGE:

OVERKILL:

PERKS ▼

NAME	RATING	GAME EFFECT

FLAWS ▼

NAME	RATING	GAME EFFECT

DEFECTS ▼

NAME	RATING	GAME EFFECT

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special

Bottom Vehicle

NAME:

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:

THREAT VALUE:

▶ OFFENSIVE:

▶ DEFENSIVE:

▶ MISCELLANEOUS:

SIZE:

▶ ORIGINAL DEFAULT SIZE:

CREW:

▶ BONUS ACTION:

COST:

▶ PRODUCTION TYPE:

▶ INDV. LEMON DICE:

MOVEMENT ▼

PRIMARY MOVEMENT MODE:

▶ COMBAT SPEED:

▶ TOP SPEED:

SECONDARY MOVEMENT MODE:

▶ COMBAT SPEED:

▶ TOP SPEED:

MANEUVER:

DEPLOYMENT RANGE:

ELECTRONICS ▼

SENSORS:

▶ SENSOR RANGE:

COMMUNICATION:

▶ COMMUNICATION RANGE:

FIRE CONTROL:

ARMOR ▼

LIGHT DAMAGE:

HEAVY DAMAGE:

OVERKILL:

PERKS ▼

NAME	RATING	GAME EFFECT

FLAWS ▼

NAME	RATING	GAME EFFECT

DEFECTS ▼

NAME	RATING	GAME EFFECT

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special

A

NAME:

VEHICLE DESCRIPTION ▼

VEHICLE TYPE:

THREAT VALUE:

◆ OFFENSIVE:

◆ DEFENSIVE:

◆ MISCELLANEOUS:

SIZE:

◆ ORIGINAL DEFAULT SIZE:

CREW:

◆ BONUS ACTION:

COST:

◆ PRODUCTION TYPE:

◆ INDV. LEMON DICE:

MOVEMENT ▼

PRIMARY MOVEMENT MODE:

◆ COMBAT SPEED:

◆ TOP SPEED:

SECONDARY MOVEMENT MODE:

◆ COMBAT SPEED:

◆ TOP SPEED:

MANEUVER:

DEPLOYMENT RANGE:

ELECTRONICS ▼

SENSORS:

◆ SENSOR RANGE:

COMMUNICATION:

◆ COMMUNICATION RANGE:

FIRE CONTROL:

ARMOR ▼

LIGHT DAMAGE:

HEAVY DAMAGE:

OVERKILL:

CREW ▼

PILOT (LVL/ATTR):

GUNNERY (LVL/ATTR):

PERKS ▼

NAME	RATING	GAME EFFECT

FLAWS ▼

NAME	RATING	GAME EFFECT

DEFECTS ▼

NAME	RATING	GAME EFFECT

WEAPONS ▼

NAME	CODE	FIRE ARC	S	M	L	EX	Acc	Dam	Qty	Ammo	Special

DAMAGE ▼

▢▢▢▢▢▢▢▢▢▢	10	▢▢▢▢▢▢▢▢▢▢ 60
▢▢▢▢▢▢▢▢▢▢	20	▢▢▢▢▢▢▢▢▢▢ 70
▢▢▢▢▢▢▢▢▢▢	30	▢▢▢▢▢▢▢▢▢▢ 80
▢▢▢▢▢▢▢▢▢▢	40	▢▢▢▢▢▢▢▢▢▢ 90
▢▢▢▢▢▢▢▢▢▢	50	▢▢▢▢▢▢▢▢▢▢ 100

HEAVY GEAR