TYPES OF ARTILLERY BATTERIES:

ARTILLERY is a general term used here to describe the guns and launchers that perform Indirect Support Fire against area (rather than 'point') targets. **All Artillery elements must be organised into units like any other ground forces, an Artillery Unit normally being referred to as a BATTERY; Batteries generally consist of from two to four guns or launchers.**

The available types of Artillery are:

RAM (Rocket-Assisted Munition) MORTARS: High-trajectory smoothbore weapons similar to "conventional" mortars, but using rocket-boosted shells for extra range and power. May be mounted on vehicles, towed or even man-packed. **RAM Mortars are classed as LIGHT ARTILLERY.**

TUBE ARTILLERY: this covers traditional guns and howitzers (usually with rocket-assisted munitions), plus more advanced types such as Mass-Driver Artillery. **RAM Field Guns and Howitzers are classed as MEDIUM ARTILLERY,** while **Mass-Driver types are HEAVY ARTILLERY** (due to their far higher rates of fire, they can deliver more ordnance in a given time).

MULTIPLE ROCKET LAUNCHERS (MRLs): these are launchers for clusters of Artillery Rockets, which may be fired either singly (for Harrassing fire) or ripple-fired in salvo for Effective bombardments. **Smaller MRLs count as MEDIUM ARTILLERY** while **larger types are HEAVY ARTILLERY.**

HEAVY ARTILLERY ROCKETS (HARs): single very large rockets with multiple warheads, each rocket having the effect of a full Artillery bombardment. **They count as HEAVY ARTILLERY.**

LOCATION OF ARTILLERY BATTERIES:

Artillery may either be located ON TABLE or OFF TABLE.

ON TABLE batteries are treated like any other combat Units, except that (like other elements with FIXED MOUNT weapons) they may NOT use the option of moving BEFORE firing; they MAY fire and then move, which represents the "shoot and scoot" tactic used to foil enemy counter-battery fire. In general, the only type of Artillery used on-table will be RAM Mortar batteries attached to the Combat Group - however there is nothing to stop other Artillery types from being employed on-table if desired (or if the scenario requires this).

ALL ARTILLERY, REGARDLESS OF TYPE, IS ASSUMED TO BE SUFFICIENTLY LONG-RANGED THAT IT CAN FIRE ON ANY POINT ON THE TABLE. This includes even Light Artillery (RAM Mortars).
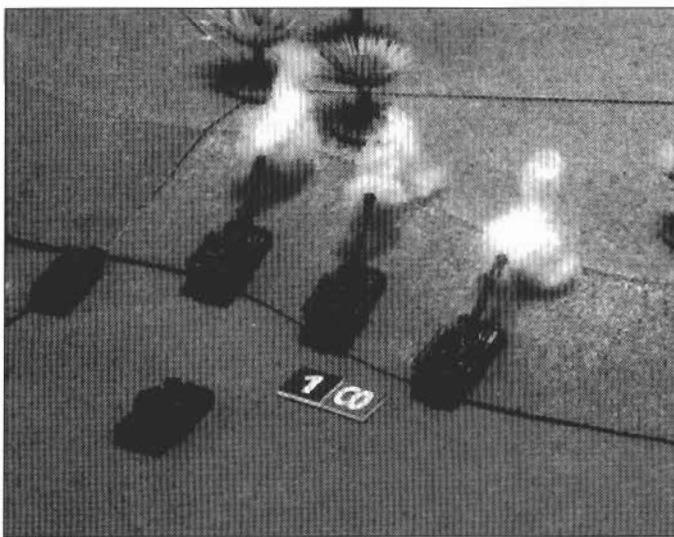
Artillery Battery firing, with ADS vehicle and Counter Battery Radar vehicle in support. [Models by CMD.]

OFF TABLE batteries are assumed to be located some distance behind the player's baseline; the models are placed either just on the table edge, or just off it (whichever is more convenient). Off-Table batteries will be slightly less flexible in their response to calls for fire support, as described in REQUESTING ARTILLERY FIRE. All types of Artillery, including RAM Mortars, may be located off table - they are still assumed to be able to hit anywhere on the table.

Off table Batteries may NOT be engaged by Direct Fire of any kind, but ARE vulnerable to enemy COUNTER-BATTERY fire. Batteries located off-table may still be "moved" to reduce the risk of Counter-Battery attacks on them, but they may NOT move in the same activation that they fire. [To indicate "moving" an off-table battery, simply move the models sideways a few inches - this represents the battery changing its firing positions, and means that it may not then fire until the next activation.]

ARTILLERY MUNITION TYPES:

The following different types of Munitions are generally available for Artillery units to fire (on Effective Fire missions), provided Ammunition markers of the relevant type(s) have been "bought". Certain munitions are NOT available to some kinds of Artillery, and such exceptions are noted where they occur.

HIGH EXPLOSIVE FRAGMENTATION (HEF) ROUNDS:

These are the basic explosive rounds, available to ALL Artillery types; they comprise submunition dispensers which scatter a multitude of small bomblets over the beaten zone, with devastating effect against Infantry targets. Though HEF rounds can have some effect against vehicles (particularly lighter types), they are generally considered an anti-personnel munition.

MULTIPLE ARMOUR KILLER (MAK) ROUNDS:

MAK shells are submunition devices like the HEF rounds, but instead of anti-personnel bomblets they dispense a cloud of kinetic penetrators that are very effective against most vehicles except the most heavily armoured ones. A MAK bombardment has a certain level of effect against Infantry as well as vehicles, but is primarily used as an anti-armour weapon. All types of Artillery may employ MAK rounds.

DISPERSED MINE ROUNDS (DMR):

These shells deliver a large number of mixed antipersonnel and anti-vehicle minelets, thus creating an "instant minefield"; the effects of this are covered in the section on Mines. DMR fire may be employed by all Artillery types EXCEPT Light (RAM Mortar) batteries.

SMOKE ROUNDS:

These are Obscuration shells that create a "smoke" cloud from the point of impact (the "smoke" is chemically-produced and contains various agents that inhibit sensors other than just optical devices). The full effects are described in the rules for Smoke and Obscuration. Smoke rounds may be fired by all Artillery types EXCEPT for HEAVY ARTILLERY ROCKETS (HAR).

NUCLEAR ("NUKE") and BIOCHEM ROUNDS:

These "nasty" munition types are still regarded as Terror Weapons, and though some forces will persist in treating them as just another valid tactical option their use is normally followed by swift diplomatic and moral condemnation! They ARE available, however, so they have been included here for completeness - their game use should be strictly limited, and then only with the full agreement of ALL players involved (and if it can be fully justified by the scenario and background being used). The full effects of these munitions are given in the relevant rules section (P.47). The ONLY Artillery types that may fire Nukes and Biochems are HEAVY ARTILLERY and HEAVY ROCKET ARTILLERY batteries. Each firing of Biochems represents enough rounds to saturate the beaten zone with the bioagents, but each Nuke firing actually represents only ONE shell - that, however, is usually enough!

[NOTE that firing a single Nuke round is counted as the Combat Action for the entire Battery.]

ARTILLERY FIRE MISSIONS:

There are two main types of fire mission that Artillery units may undertake: HARRASSING FIRE and EFFECTIVE FIRE.

HARRASSING FIRE consists of intermittent firing at random intervals, and is designed not to cause casualties but to make the enemy keep their heads down. It is very economical on ammunition, but has a profound psychological effect on the units it is targeted on - they know that the opposition has 'ranged' on them, and that at any moment the sporadic shelling could turn into a terrifying "fire for effect". In game terms, the only effects on units in the beaten zone are i) they receive an UNDER FIRE marker, and ii) they must take a Confidence Test for being under Artillery attack. **No chits are drawn for casualties.**

The advantage of Harrassing fire for the FIRER is that it does NOT consume Artillery Ammunition markers, as the expenditure of rounds is quite low. **Harrassing Fire missions are always assumed to be using OPEN SHEAF beaten-zone patterns,** the overall size of the zone depending on the number of weapons in the firing battery. Since no casualties are possible (in reality of course there is always SOME chance of a kill, but for game terms it is so unlikely as to be ignored) it does not actually matter what type of rounds the Artillery is firing - they are generally assumed to be HEF.

[The battery may continue to fire harrassing missions, even when it has no Ammunition markers of any kind left; it is assumed that each gun has a few odd rounds in reserve for such eventualities.]

NOTE that Harrassing Fire missions may NOT be carried out by HEAVY ARTILLERY ROCKET (HAR) batteries; they may be used by all other battery types however.

EFFECTIVE FIRE is when the old gunners' maxim of "don't tap it, thump it!" comes into play. For an Effective Fire mission, all guns or launchers in the battery will fire continuously at their maximum rate, pouring as much destruction as they can into the beaten zone.

Every time that the battery fires an Effective mission as a Combat Action, it expends one Ammunition marker of the relevant type; if it runs out of a particular kind of marker it may no longer fire that kind as an Effective Fire mission until resupplied.

All elements caught in the beaten zone of an Effective Fire mission must draw chits for the effects, as described under ARTILLERY FIRE EFFECT.

Effective Fire missions may use either an **OPEN** or **CONVERGED SHEAF,** as the firing player wishes.

Effective Fire may be carried out by ANY type of Artillery battery, including HEAVY ARTILLERY ROCKETS.

BEATEN ZONES FOR ARTILLERY FIRE:

The area of ground hit by Artillery fire is termed the "BEATEN ZONE"; all individual elements caught within that zone are potential targets for the effects of the fire.

The actual size and shape of the Beaten Zone for a particular fire mission depends on two factors: the NUMBER of Artillery elements firing, and whether the mission is firing an OPEN SHEAF or a CONVERGED SHEAF, as explained below:

A **CONVERGED SHEAF** mission is where ALL the guns or launchers in the firing Battery target the SAME point-of-impact; this obviously gives a VERY high concentration of fire over a relatively small area, and causes very severe casualties.

An **OPEN SHEAF** firing, on the other hand, is where each gun or launcher adjusts its fire so that the effect of the battery is spread over a much larger Beaten Zone (thus hopefully affecting more individual elements in the zone), but the fire concentration on any one point is obviously less.

For a Converged Sheaf, ONE Impact Marker is placed at the point of aim; the Beaten Zone for the fire mission will be a circle centred on this marker, the diameter of the circle being 4" - thus any element that is within 2" of the Impact marker will be affected by the fire.

For an **OPEN Sheaf** mission, the shape of the Beaten Zone is an elongated ellipsoid (like a rectangle with curved ends); it is actually two 4" diameter circles joined by a straight area, as shown in the diagram. **The area is defined by placing TWO Impact Markers,** one at the centre of each 4" circle; the distance BETWEEN the two markers depends on the number of individual weapons in the firing Battery - it should be 4" for every extra gun/launcher above the first (so for a two-gun battery the markers would be 4' apart, for 3 guns 8", for 4 guns 12" etc.). The 'long' axis of the beaten Zone may be aligned in either of two ways - it may be PARALLEL to the Line of Fire (ie: the direction from the firing battery to the target zone), or may be PERPENDICULAR to it. The Beaten Zone may NOT be set at any OTHER angle to the line of fire.

[Note that the Beaten Zone sizes do NOT vary with the type of Artillery firing (Light, Medium or Heavy); these differences are accounted for in the Damage Effects.]

REQUESTING ARTILLERY FIRE:

Artillery Fire Support from a Battery attached to the Combat Group (whether the battery is on or off-table) may be requested at any time by the following elements:
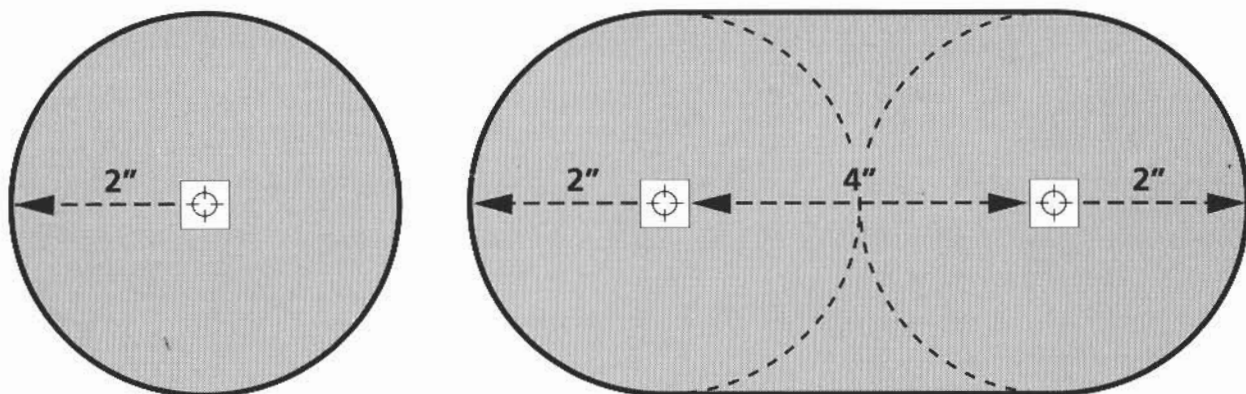
Artillery Fire Beaten Zone examples:
The circular zone is the area covered by a CONVERGED SHEAF mission, while the elongated zone is that for an OPEN SHEAF of TWO weapons firing; if THREE guns fired then the two markers would be 8" apart instead of 4", and for FOUR guns it would be 12". The complete shaded area is the Beaten Zone.

Any **UNIT COMMAND element** (eg: a Platoon or Troop Commander), or a Specialised Observer Team (an Infantry element or vehicle-mounted observer).

To request fire, the observer or commander must be in clear line-of-sight to the intended target point, and within maximum Sensor range (60" under normal conditions). **Requesting the fire counts as the COMBAT ACTION for that ELEMENT,** although other elements of the unit may perform other actions.

When the fire request is made, the activating player immediately rolls a die: the Die Type is determined according to the element observing for the fire - if it a Specialist Observer roll a D12; if a Unit Commander then roll a D10 if his Leadership is 1, a D8 for Leadership 2 or a D6 for leadership 3. **For ON-TABLE Batteries, a score of 4 or greater is required for the call for fire to be successful; for OFF-TABLE Artillery the score needed is 6 or more** (failure indicates the observer has been unable to get the battery to respond, has given it the wrong co-ordinates, the battery is preoccupied with other things etc).

If this die roll is successful, the player immediately places on the table either ONE or TWO "IMPACT" markers (the white counters with the "target reticules") - One to indicate a CONVERGED SHEAF bombardment, or two to mark the zone for an OPEN SHEAF. The marker(s) are placed on the intended target point(s) as described in the section on BEATEN ZONES.

When the marker(s) are placed on the table, the player should also **place an Artillery Ammunition counter FACE-DOWN** near the Impact marker; this commits him to using a particular Munition type, though of course the opposing player will not know what type it is until the fire actually arrives. If the firing player is using just HARRASSING FIRE, for which no Ammunition marker is expended, he should use one of the "DUMMY" markers from the counter-sheet so as not to give his intentions away to his opponent.
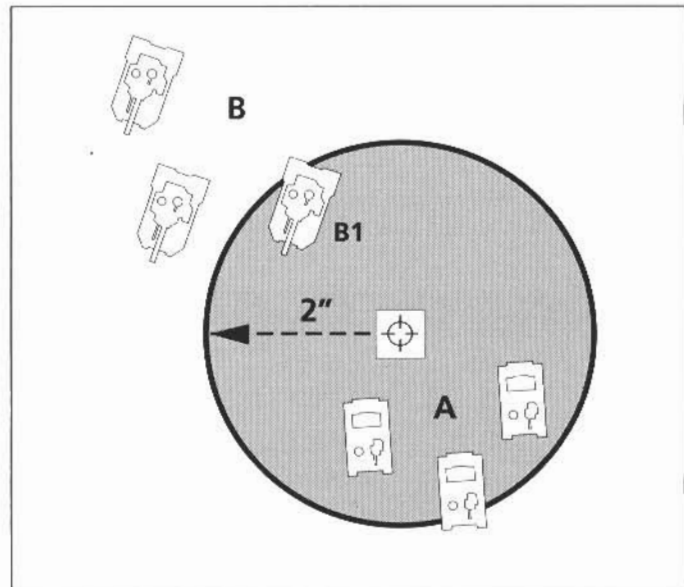
Example of Artillery Fire hits:
All vehicles in unit A are caught within the Beaten Zone (shaded area), so all are subject to attack. Only element B1 of unit B is within the Zone, so B1 is attacked; ALL of unit B is, however, considered to be "Under Fire" and will receive a marker indicating this IF B1 is damaged or destroyed by the fire. Note that if B was an INFANTRY unit, it would receive an UNDER FIRE marker whether casualties were caused or not.

ARTILLERY FIRE RESOLUTION:

When an observing element successfully calls for Artillery fire and places the appropriate Impact marker(s) on the desired point of aim, the fire does NOT arrive immediately. The player completes the activation of the "observing" unit, then play switches to his opponent as normal. Once the opposing player has made an activation, the player who called in the Artillery MUST then use his turn to activate the Artillery Battery and resolve the Fire Mission.

[Should the player, for any reason, decide he must try to CANCEL the fire mission then he must make the same test as he had to for requesting the fire; failure to roll a sufficient score means the cancellation does not get through and the fire arrives as planned, while success means the fire is cancelled - however this still counts as the player's activation turn, and the Artillery Battery is treated as if it had activated; its Command Marker is inverted and it can do nothing more that Game Turn.]

Obviously, this sequence gives the opposing player a chance, if he wishes, to activate any unit in danger from the Artillery mission (provided of course that it has not already used its activation that turn) and possibly move it to safety before the fire arrives. This is actually quite justifiable - it is very hard to target Artillery accurately onto a mobile target unit (largely due to the delay between calling for fire and its arrival), and if the threat of the impending attack forces the player to (say) pull a unit back out of position, then the Artillery has done part of its job anyway - by making your opponent react in the way YOU want him to, hopefully to the detriment of his own plans!

[Consider, if you like, that the placing of the Impact marker represents either the laser designation of the target area or the arrival of the first few ranging shots, both of which are detectable by the unit under attack and will give them at least a little warning of the incoming barrage. What they (and the player controlling them) CANNOT know is whether the actual bombardment is going to be Effective or just Harrassing fire, and what munitions are coming over - a few smoke shells, or a tactical Nuke??

ARTILLERY FIRE DAMAGE EFFECTS:

All elements, vehicle and infantry, that are caught within the Beaten Zone of a fire mission are potentially affected by it. With HARRASSING FIRE, there is no effect other than placing UNDER FIRE markers on the units (a UNIT is deemed to be affected if ANY of its elements are caught in the Beaten Zone) and requiring a Confidence Test; Smoke and DMR (Mine) missions also do not have immediate effects other than those specified in the relevant rules, and Nuke/Biochem munitions have special effects that again are described in their particular sections.

The majority of **EFFECTIVE** fire missions will be using HEF or MAK munitions; for these, all elements in the Beaten Zone draw a number of chits as specified below.

Each LIGHT Artillery element firing is worth 1 CHIT per VEHICLE target element, or 2 CHITS per INFANTRY target element.

Each MEDIUM Artillery element causes 2 CHITS to be drawn per VEHICLE or 3 CHITS per INFANTRY element.

Each HEAVY Artillery element is worth 3 CHITS per VEHICLE or 4 CHITS per INFANTRY element.

If the mission is an OPEN SHEAF, then each element in the Beaten Zone is only drawn for ONCE, as each part of the Zone is only being bombarded by ONE Artillery piece. If it is a CONVERGED SHEAF, each element draws chits AS MANY TIMES AS THERE ARE WEAPONS in the firing Battery.

Example: If a Battery of three Light Artillery pieces is firing an OPEN SHEAF, every VEHICLE caught by the fire draws ONE chit for damage effects, and every INFANTRY element draws TWO chits. If the same Battery fired a CONVERGED SHEAF, each VEHICLE in the (smaller) Zone would draw THREE individual chits, and each INFANTRY element THREE PAIRS of chits, to represent it being hit by the concentrated fire of the three guns.

[NOTE that for the Converged Sheaf mission, each target element would draw the chits as 3 individual chits (or pairs), and count results of each draw accordingly - it would NOT draw 3 (or 6) chits at once and total them all up.]

The Damage Chit Validities are as shown in the table on P.29; elements get advantages for being Dug-In, but NOT for just being in Soft Cover. [VEHICLES when Dug-in are IMMUNE to HEF fire, while Infantry dug-in are immune to MAK effects.]

The points required to damage/destroy a vehicle are as per Direct Fire (ie: based on the vehicles's Armour rating), while the points to kill Infantry elements are the same as for Infantry Firefights - ie: 3 for Militia, 4 for Line and 5 for Powered. All "special" damage chits ARE valid if drawn against VEHICLES, but are ignored when drawn for Infantry.

AMMUNITION SUPPLY AND RESUPPLY:

Ammunition markers may be "bought" for each Artillery Battery when organising your forces, using the points costs given in the POINTS VALUE LISTINGS (P.52).

Note that the actual costs per marker are PER ELEMENT in the Battery, so a three-gun Battery will pay 3 x the given points per marker.

A Battery may have up to THREE ammunition markers representing the rounds carried in the Gun vehicles themselves; additional ammunition markers must be carried in units of transport vehicles accompanying the Battery; these transport vehicles need not be represented by models for Off-Table batteries, but for On-Table Artillery then actual models should be used (the transport vehicles will be organised into separate units if on-table, and transferring their ammunition loads to the Battery will count as their Combat Action). The Artillery Battery itself may neither move nor fire in the turn it resupplies with ammunition.

One "load" of cargo for a transport vehicle requires a capacity of 4; this load (in ammunition terms) represents a "one gun share" of one ammo marker - in other words, a three-gun Battery requires 12 capacity points (three "loads") to carry ONE ammo marker for the whole Battery.

For Off-table batteries, simply stack any additional ammunition markers purchased near the Battery. Up to three of these may be "loaded" on board the Gun vehicles at any time, but doing so uses the Activation of the Battery - thus they may neither move nor fire in the turn they resupply with ammunition.

Note that this system for ammunition resupply is somewhat abstract and simplified; in particular it does not take account of the different types of Artillery (Light, Medium or Heavy). If you REALLY want to play a Quartermaster rather than a General, then by all means add some extra detail into the system!

COUNTER-BATTERY FIRE:

Whenever an Artillery Battery fires from a particular location, it is possible that an opposing Artillery unit equipped with COUNTER-BATTERY capability will manage to locate the Battery firing, with enough accuracy that it can return fire on them.

If a Battery is equipped with a Counter-Battery Radar (CBR) vehicle, then that Battery may be Activated at any time (subject to normal rules) to perform a Counter-Battery mission in place of a normal Fire Mission.

Counter-Battery fire may only be attempted against an enemy Artillery unit that has already performed a Fire Mission (of any type) in the current game Turn. It requires no observer or target designation step, as the CBR element with the Battery is directing the fire. The player must roll a die, according to the Quality of the CBR system - D6 for BASIC, D8 for ENHANCED and D10 for SUPERIOR. If he scores 6 or more, the opposing Battery has been located and he may immediately place an Impact marker (or markers) on it, followed by the resolution of whatever type of fire mission he chooses to use - the mission arrives immediately, being resolved as the Battery's activation for that turn.

Counter-Battery fire may be employed against On or Off-table batteries, and in both cases is resolved exactly as for a normal Artillery mission.

Note: if a battery moves directly after firing ("Shoot and Scoot"), then NO Counter-Battery fire may be attempted against it. If, on the other hand, it fires from the SAME position (without moving) for TWO or more activations, then INCREASE by one the Die Type used for the Counter-Battery roll.

ORTILLERY:

"Ortillery" is the term used for ORBITAL ARTILLERY: fire-support from spacecraft, satellites or gun-platforms in orbit. Such fire is accurate enough to be used for bombardment during the battle. However, there IS some potential for error and its use in very close proximity to friendly troops is not recommended!

In most respects, Ortillery fire is treated in just the same way as ordinary Artillery - it is simply another form of off-table Battery (but not, of course, vulnerable to Counter-Battery fire!). The major difference is that, after the placement of the Impact markers on the designated aim point the fire CAN deviate from this intended target.

When the fire mission arrives (ie: the orbiting "Battery" is activated), roll a D12 - using the "clockface" method, this determines which direction the fire will deviate in. Now roll a D6 and a D8 together: if the score on the D6 is higher than (or equal to) the D8, then the fire does not deviate at all - it hits the intended aim point. If the D8 roll is higher than the D6, then the DIFFERENCE between the two rolls is the number of inches the fire deviates; move the Impact marker(s) the required number of inches in the relevant direction before resolving the fire mission.

[If desired, players may use this or a similar "deviation" system for normal Artillery fire as well as for Ortillery - generally, however, we assume that normal Artillery fire is sufficiently accurate not to worry too much about fire deviation.]

Other aspects of Ortillery support may be considered if players wish, that are outside the scope of this book to cover fully - these can include limited availability of Ortillery as the ship/satellite moves round its orbit (perhaps available only on every fourth Game Turn or so?), other types of Orbital fire such as Particle beams or very big Lasers and so on. There are a whole lot of things you can add in if you so desire - hopefully we can cover some of them in future publications.

AEROSPACE CRAFT ORGANISATION:

Unlike VTOLs, which operate as a specialist form of "ground" vehicle and are grouped into normal UNITS of several elements, **AEROSPACE CRAFT (in particular Ground-Attack fighters, the type most commonly used over the battlefield) will often operate as SINGLE CRAFT, or at most in "flights" of two craft.**

Each individual Aircraft is treated as a "unit" in its own right, even if two or more are operating together. The aircraft has a Command Marker (which functions slightly differently from ground unit markers, as explained below), but does NOT require a Confidence Level marker.

The Command Marker given to an Aerospace Craft denotes the "quality" of the pilot and crew by its COLOUR, as for normal units - GREEN for poorly trained or inexperienced "Turkeys", BLUE for the average combat pilot, and ORANGE for the real hotshot Saviour-of-the-Universe Jet Jockeys!

The NUMBER on the Command Marker does not represent Leadership, but more the "nerve" and morale of the pilot (which is NOT the same thing as his training and experience level); it is a measure of how likely he is to, say, break off an attack run if faced with a lot of AA fire - or will he plough on through it and get that target at all costs?

When an Aerospace craft has to take a Reaction test, the number/colour of the Command marker is used exactly as for other units.

AEROSPACE UNIT ACTIVATION SEQUENCE:

A player may ACTIVATE an Aerospace craft (or a group of two or more, operating together) at any point in the Game Turn, in the same way that he would Activate a ground unit. Because Aerospace units are VERY fast-moving in relation to ground vehicles, they do not follow the normal movement rules; instead, their Activation consists of a fast 'pass' across the battlefield, delivery of their ordnance to the target area and then leaving the table in the same pass.

When activating such a unit, follow this sequence:

i) Place the Aerospace Craft at the point at which they are to enter the table, and move them along the desired 'flight path' until they reach the point at which they are to attack their targets; during this movement, they may be fired on by any opposing Air Defence elements which have ACTIVE Air Defence Sensors and are in range of the flight path.

ii) Once over their target, the Aerospace craft may be fired on by any 'local' defensive systems of the unit(s) they are attacking. If they survive this fire, the Aerospace craft may then make their attacks (either DIRECT FIRE of missiles, guns etc., or delivering Area Effect ordnance).

iii) Following their attacks, the craft are moved along their flight path until they exit the table edge (during this movement, they may be fired on by any 'Active' Air Defence elements that did not choose to fire during the crafts' approach to their targets).

[In the case of Aerospace units that wish to LAND on-table, the actual landing takes place instead of the attacks in step (ii); 'local' defensive systems may, if in range, attack the craft as they are landing.

This completes the ACTIVATION of the Aerospace Unit.

AIR VEHICLE WEAPON EFFECTS:

Both VTOLs and Aerospace craft can carry Direct Fire weapons and Guided Missiles; Aerospace craft can also carry Dead Fall Ordnance (DFO) loads. Most Air attacks are resolved using the same mechanisms as ground combat, with the following limitations:

i) **All air vehicles may only fire Direct Fire weapons at targets straight ahead of the aircraft,** ie: actually on the line of flight (except for chin turret mounts on VTOLs, which may fire through a 180° forward arc). Range bands are the same as for ground-fired equivalents.

ii) **Missiles may be fired at targets within the normal FIXED MOUNT fire arc,** ie: a 30° forward arc. Range is the same as for ground-fired missiles. [NOTE that each Guided Missile System fitted to an Air vehicle is a complete Launcher and supply of missiles (as used on ground vehicles), and NOT just a single missile on a pylon - thus each system can launch one missile per activation, and the missile supply is assumed sufficient for the game duration.]

iii) **DFO attacks may be aimed at a target point between 4" and 8" ahead of the aircraft, along the line of flight.** Such attacks have a Beaten Zone 4" in diameter, the same as a Converged Sheaf Artillery attack. One impact point marker is used to indicate the centre of the Zone.

An air vehicle may make ONE attack per activation, so on one pass an Aerospace craft may either use direct fire or missiles against a single element, or make one DFO drop on a single target Zone.

DEADFALL ORDNANCE ATTACK RESOLUTION:

When a DFO attack is delivered by an Aerospace craft, its effect is resolved in basically the same way as an Artillery mission. The Beaten Zone is a 4" diameter circle, so all elements within 2" of the impact marker are potential targets.

When attacking with HEF or MAK ordnance (the usual options), each ORDNANCE LOAD dropped draws TWO chits per target element; thus if an aircraft expends two Loads on one pass, each element in the Zone draws a total of FOUR chits.

The validities of Damage Chits, and their effects, are exactly as for Artillery attacks of the relevant type.

The aircraft expends one Ordnance marker per Load dropped.

[Note that, if required, Aerospace craft may be used to deliver NUKE or BIOCHEM ordnance; in these cases the Zones and effects are exactly as for Artillery-delivered attacks using these munitions.]

AIR DEFENCE:

AIR DEFENCE fire is the method used to attack Aerospace units, and VTOL units in High Mode (VTOLs in Low Mode can be fired on by ordinary ground units using Direct Fire).

AIR DEFENCE consists of "Local" Air Defence weapons (Infantry elements and vehicles carrying Light Anti-Air weapons), and the "Zone" Air Defence cover provided by AREA DEFENCE SYSTEM (ADS) vehicles.

The Air Defence fire described here refers mainly to Aerospace craft (particularly ground-attack missions; VTOLs in High Mode are fired at using basically the same system, but with the following provisions:

i) VTOLs test Reaction to Air Defence fire as complete units, as opposed to the individual tests used for Aerospace craft.

ii) VTOL units that get an "abort" result do not have to leave the table; instead they lose a Confidence Level and have to drop to Low Mode. They are unable to return to High Mode while still within range and sight of any Active ADS vehicle.

[Note that vehicle-mounted Point Defence Systems may NOT engage aircraft - they are purely anti-missile weapons.]

LOCAL Air Defence (LAD) may only be used by a particular unit against air attacks directed at that unit itself (ie: in self-defence); ZONE Air Defence (ZAD) may fire at ANY air vehicle within range and line of sight, regardless of who is being attacked.

All Air Defence fire is made in a similar way to OPPORTUNITY FIRE, ie: it is done during the activation of the attacking Aircraft rather than that of the unit under air attack. Unlike normal Opportunity Fire, Air Defence fire does NOT cause the firing unit to lose its own activation chance; it may also be carried out by a unit that has already been activated that turn.

Local Air Defence fire has a maximum range of 12" - it may engage any air vehicle attacking the unit, provided that the aircraft is within 12" of the LAD element firing (thus an aircraft attacking with long-ranged weapons such as Missiles may well be able to fire from a stand-off position where it is out of reach of the LAD fire, but one making a DFO strike run must be within LAD range to launch).

Zone Air Defence has a 36" range, and this range may be measured to ANY point on the aircraft's flight path across the table (or to the current position of a VTOL unit).

As soon as a player announces that he is making Zone Air Defence fire against an opponent's aircraft, the player with the aircraft must immediately make a Reaction test for the pilot. This test is made in the normal way, and uses a Threat level of +1. If the pilot PASSES the test, he may continue his attack - if he FAILS he must break off the attack run and immediately exit the table. If an aircraft aborts in this way, the Air Defence fire against it is not resolved - the pilot has detected a "lock-on" from an anti-aircraft system and decided it would be healthier elsewhere!

[An aircraft that aborts its attack may, if desired, return to try again during the next game turn.]

If the pilot presses on with the attack, any Air Defence fire against his aircraft must be resolved before he launches his weapons. [Note that each ADS vehicle may only fire on ONE aircraft of a GROUP of craft operating together, but for the Reaction test mentioned above ALL aircraft in the group must test even if just one is being fired on.]

Each Zone Air Defence vehicle resolves its attack SEPARATELY, in the following way:

The ADS player rolls a die, based on the Quality of the ADS: a D6 for BASIC ADS, D8 for ENHANCED and D10 for SUPERIOR.

The Aircraft player rolls a die based on his aircraft's Command marker - a D6 for a GREEN marker, D8 for a BLUE, D10 for ORANGE, modified UP one die type for a grade 1 pilot and DOWN one for a grade 3. (Thus an "ORANGE 1" pilot uses a D12, but a "GREEN 3" uses a D4.)

If the Aircraft is equipped with ECM, it gets a SECONDARY die roll based on the quality of ECM used (BASIC = D6, ENHANCED = D8, SUPERIOR = D10). This functions in the same way as the Secondary die in direct fire, ie: the HIGHER of the two die scores is used.

If the ADS roll EQUALS the Aircraft's roll, then the pilot must ABORT his attack as above, but the aircraft is undamaged - it may return next game turn.

If the ADS roll EXCEEDS the Aircraft's roll, then the Aircraft is hit and possibly damaged: Draw 2 Damage Chits for a Basic ADS, 3 for Enhanced or 4 for Superior; ALL chits are valid except Special damage chits, which are ignored.

If the total of damage points on the chits drawn is LESS THAN the ARMOUR RATING of the aircraft, the craft is undamaged but must still abort for that turn.

If the total damage EQUALS the ARMOUR RATING, the aircraft is DAMAGED and must abort; in this case it is NOT able to make further passes in the game, but must "limp" back to base.

If the total of damage points EXCEEDS the ARMOUR RATING (which, as already noted, actually represents its overall "survivability"), then the aircraft is SHOT DOWN - it crashes and is destroyed.

An aircraft that survives any Zone Air Defence fire and still continues its attack must then run the gauntlet of any LOCAL AIR DEFENCE weapons used by the TARGET UNIT. No Reaction test is needed in this case - simply go straight to the fire resolution below:

The aircraft player makes a roll exactly as for ZAD above (including a Secondary roll for ECM if applicable);

The LAD player makes a roll based on the NUMBER of LAD elements in the unit under attack - for one element with a LAD weapon, he rolls a D6; the Die Type increases by one for every additional LAD weapon fired (eg: a unit firing 3 LAD systems at one attacking aircraft would roll D6 + 2 types = D10).

[Note that if two or more aircraft (operating together) are attacking one unit, the player under attack must decide how to divide his LAD weapons - each may only fire at ONE of the aircraft.]

The results of the rolls are calculated as for ZAD fire effects, except that only TWO Chits are drawn (as for a BASIC ADS) regardless of the actual number of LADs firing. The Chits drawn are compared with the Armour Rating as above, thus causing the attacking aircraft to do one of the following: complete its attack, abort mission, abort with damage or crash.

If the aircraft survives everything that the Air Defences throw at it, proceed to the attack resolution steps.
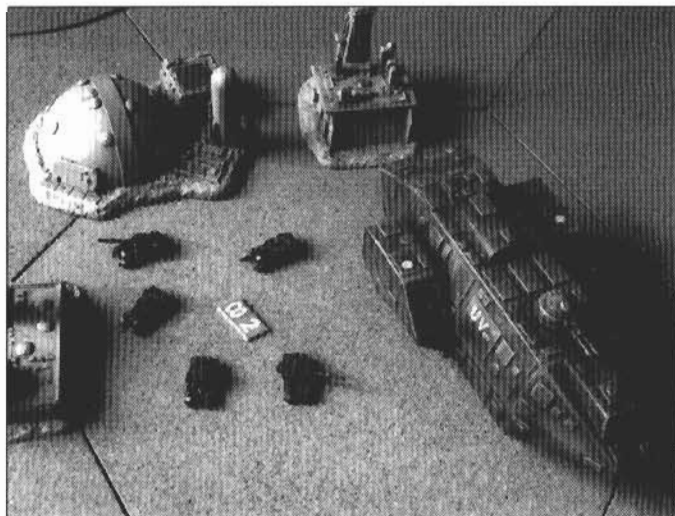
A tank troop deploys from a Heavy Dropship
[Vehicles by CMD, Dropship from GZG, buildings by Snapdragon]
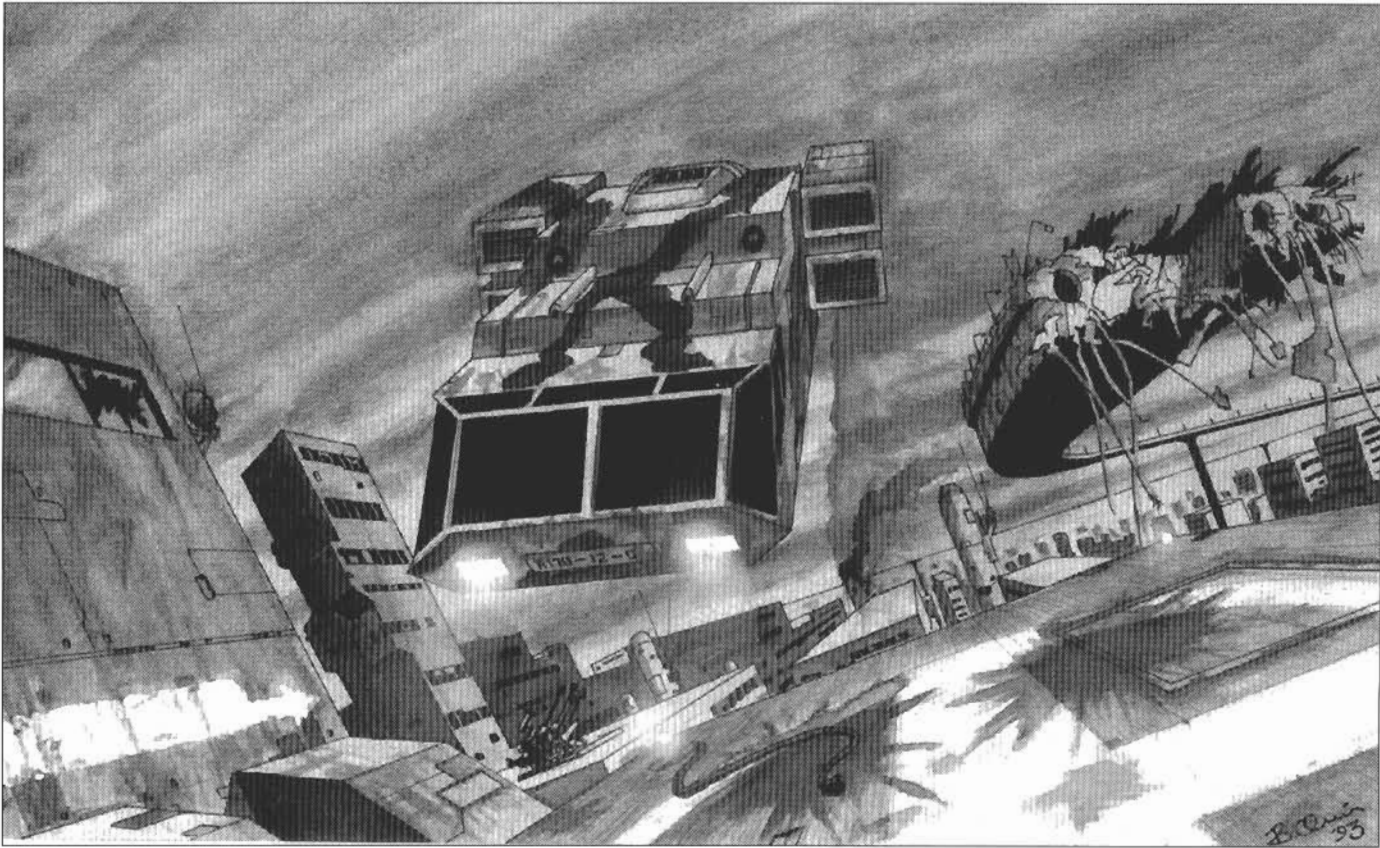
INTERFACE LANDINGS:

Troops and vehicles may be landed from orbit in Interface Craft (Dropships and Assault Landers). It is not really necessary (or worthwhile) to go through a lengthy design procedure for such craft, as they will probably only be used for one turn in the game. Use the following notes for guidance:

i) **DROPSHIPS** are the BIG Interface craft, used to carry Heavy Armour and support vehicles; each Dropship can carry between two and five complete UNITS, depending on the size of the ship and the element types in the units. The units may be unloaded in the activation FOLLOWING the one in which the Dropship lands.

ii) **ASSAULT LANDERS** are smaller craft, carrying from a couple of elements up to one complete unit. These elements may unload in the SAME activation that the lander touches down.

Whether or not the Interface landers are at risk from AA fire on the way down must be determined by the scenario; in most cases the potential cost of losing a whole Dropship full of Armour will mean that such a landing will only be attempted once the defences have been subdued. If, however, an "opposed" landing IS tried, roll a D6 for each Lander coming in - the score for it to be lost should be determined according to the scenario, perhaps 6 if facing light defences or 5,6 if against heavy resistance.

Bringing in ANY NUMBER of Dropships and/or Assault Landers counts as just ONE ACTIVATION for the player; as noted above, elements in Assault Landers may be unloaded and placed on the table immediately, while those in Dropships must be unloaded in following activations - unloading ONE Dropship counts as a full activation turn.

Interface craft may land anywhere on-table, provided they are at least 12" away from the nearest (visible) enemy forces.

When "paying" for Interface transport capability in the Points Cost system, points are paid as a percentage of the cost of each element that is to be Interface-landed, rather than paying costs for the landers themselves.

DROP TROOPS:

Certain specially-equipped elements (known as DROP TROOPS) may be "directly inserted" to the battle area by either parachute/parajet from high-flying transports, or in ballistic entry capsules from an orbiting ship.

If dropped from within atmosphere, Line or Powered Infantry may be used; only Powered troops may drop directly from orbit. Only infantry and Very Light (class 1) vehicles and equipment may be paradropped, and the only type of non-infantry element that may be orbitally dropped is the Infantry Walker (see P.XX).

To simulate the semi-random nature of the drop, take one of the LETTERED MARKERS to represent each UNIT of Drop Troops; now actually "drop" these markers from at least three feet above the table (they should bounce nicely!) - **where they end up is the centre of the drop zone for that unit.** Any markers that bounce off-table represent units either killed by AA fire on the way down, or else missing the drop area completely - either way they are "lost" for the purposes of the game.

The actual models for the units are now put on the table, each Unit being scattered around its drop zone marker so that **no element is LESS than 4" from any other - thus the unit begins out of Unit Integrity,** and its first activation on-table must be to move its elements into integrity distance before it can do anything else.

If a drop zone marker ends up in WOODS, SWAMP or MOUNTAIN terrain, roll a D6 for each element of that unit - on a roll of 5 or 6, it is lost on landing. In URBAN terrain, Infantry elements are lost on rolls of 4+ and vehicle/equipment elements are ALL lost automatically. All elements landing in OPEN WATER are lost completely, except for POWERED INFANTRY and INFANTRY WALKERS who may wade ashore.

When "paying" points costs for Drop Troops and equipment, these are calculated as a percentage of the cost of the equivalent 'normal' element.

SMOKE AND OBSCURATION:

SMOKE effects are produced by Artillery firing Smoke Rounds, by vehicle-mounted Smoke Dischargers or by fires (burning woods or buildings). **The main effect of smoke is to block line of sight and line of fire, and thus inhibit both Direct Fire and target observation for Artillery.** All smoke clouds are assumed to be "hot" smoke, either from a fire or from chemical agents in artificially-produced smoke, and thus are opaque to IR and most other sensors as well as basic optics.

The "smoke" markers on the counter-sheet are intended to act as Ammunition markers for Artillery Smoke Missions; to actually represent the smoke clouds on the table we recommend the small "balls" of cotton wool that can be purchased in mixed bags of various colours. When smoke is required on the table, put out a line of these balls, to the required length in inches; **SMOKE CLOUDS ALWAYS EXTEND DOWNWIND FROM THEIR POINT OF ORIGIN.**

[Wind direction should be determined at the start of the game; simply designate a particular table edge as 12 o'clock, roll a D12 and use "clockface" directions. The wind direction, once determined , will remain the same throughout the game unless dictated otherwise be the scenario.]

Fires in built-up areas and woods are started by either Artillery fire (of any kind), or by any fire of HEL or DFFG weapons at the area.

When smoke is produced by a fire, **the cloud will extend 6" downwind** and will remain in place for the rest of the game unless extinguished (a forest or building fire will burn happily for a LONG time if not seen to!). The only way such a fire may be EXTINGUISHED during the game is by an ENGINEERING UNIT; if such a unit is moved into contact with the burning area, and then spends a FULL ACTIVATION on fire-fighting , the fire is assumed to be out at the end of the unit's activation.

[it is assumed the unit uses high-tech firefighting systems such as fuel-air explosive devices, to "snuff out" the fire. There will be little left standing afterwards, however!]

When smoke is delivered by Artillery, a "smoke" marker is placed as the Ammunition counter (provided the battery has one available). The mission is fired as for a Converged Sheaf, ie: with a single impact marker; **the smoke starts from this marker, and extends downwind for 2" x the number of Artillery elements in the firing battery** (thus a three-gun Battery would produce a 6" long cloud). For the turn in which it is fired, the smoke cloud remains at full strength; in each subsequent turn (during the TURN END PHASE), remove 2" of the smoke from the UPWIND end until all of the cloud is gone.

The final method of smoke-laying is from the small dischargers fitted to all military vehicles. As with the single "free" APSW, ALL vehicles are automatically assumed to have smoke dischargers; they need not be paid for in points, or included in the vehicle Design stage.

For simplicity, the dischargers are assumed to be able to fire as many times as required - the number of times they will be used in most games is probably quite small, and it is not worth keeping ammunition records for them.

A vehicle may decide to fire its smoke dischargers during any activation, in place of a Combat Action (the vehicle may NOT fire a weapon as well); the effect of this is to place a single "ball" of cotton-wool 'smoke' immediately in front of the firing vehicle; this small cloud lasts until the END of the vehicle's NEXT activation, unless the vehicle drives through it or otherwise moves away from it (in which case the cloud is removed immediately). Smoke from vehicle dischargers is not quite as effective as other smoke types - it inhibits some fire, but does not block everything (you know that the vehicle is there somewhere in the small cloud!). **Such smoke renders completely ineffective all Laser (HEL) and Missile (GMS) fire, and makes all other direct-fire weapons count the range to the obscured vehicle as ONE BAND GREATER than it actually is.**

MINEFIELDS:

Minefields may be laid in three different ways: they may be already set up by DEFENDING forces before the game, they can be laid during the battle by a specialised Automatic Minelayer vehicle, or may be delivered by Artillery firing DMR (Dispersed Mine Rounds).

There are two different types of MINES available - Conventional mines and "Jumping" mines; all mines may attack ground elements (including GEV and Grav vehicles) that pass over them, but JUMPING mines also have the ability to attack LOW-MODE flying craft such as VTOLs - basically the mine detects an overflying craft and fires itself into the air by a small rocket charge, right in the aircraft's path.

Minefield locations are indicated by the relevant type of MINE marker from the counter-sheet; if the minefield is laid during the game (by Artillery or Minelayer) then the counter is placed face-up, but if it is laid before the game it should initially be placed face-down until an element moves into it for the first time in the game (in this case, players may agree that a number of the DUMMY counters may also be used to confuse the attacker about the exact location of the real minefields).

All minefields, however laid or delivered, are assumed to be circular areas 4" in diameter centred on the MINE marker; thus any element moving within 2" of the marker is said to have entered the minefield.

Any element (Infantry, Vehicle or VTOL in the case of Jumping Mines) entering a minefield must immediately draw TWO damage chits. Infantry elements take damage as if under HEF Artillery attack, while vehicles take damage as per direct fire attacks, with RED/YELLOW chits being valid; the mines of course attack the BOTTOM armour, which in all cases is assumed to be ONE LEVEL LOWER than the SIDE armour (ie: TWO levels lower than the basic (front) armour rating). **A vehicle DAMAGED by a Mine attack is actually IMMOBILISED;** all "special" damage chits are valid against vehicles. VTOLs overflying Jumping Mines are attacked as for vehicles, but against their full basic armour rating - VTOL craft EXPECT to be shot at from underneath, so carry some of their thickest armour there!

Elements that spend more than one turn in a minefield must draw chits for EACH activation that they are in the field, unless they do not move at all and take no combat actions either.

LAYING MINES:

Only conventional minefields may be laid by Minelayer vehicles or Artillery; Jumping mines must be carefully emplaced by hand, so may only be laid in advance of the battle by specialist engineers - such a job is outside the timescale of the game.

When an Artillery battery fires a DMR mission, simply place one mine marker at the point the fire impacts; for the sake of simplicity all minefields are assumed to be of the same density, regardless of the method of delivery. Placing one Mine marker constitutes the entire Combat Action of the Artillery battery, irrespective of the number and type of guns/launchers in the battery.

An Artillery-delivered Minefield becomes active immediately; any elements caught in the mined zone are attacked at the start of their next activation, IF they attempt to move or carry out any other action.

A specialised Minelaying vehicle may place a mine marker immediately BEHIND itself as a Combat Action during any activation (this represents the vehicle 'spraying' mines over a circular area from special launching racks). The minefield does NOT become active until the vehicle that laid it has moved more than 2" away from the marker. Laying a single minefield this way exhausts the vehicle's supply of mines (it takes a lot to seed a 400m diameter area), so it cannot lay another field until it has been resupplied with another mine marker in the same way as Artillery ammunition resupply.

CLEARING MINES:

Mine clearance is assumed to use various sophisticated electronic and/or explosive means to disable or destroy the mines over a wide area; thus rather than clearing a narrow path through a mined area the clearance (if successful) will deactivate the entire minefield.

Clearing minefields may be done by Combat Engineer units, either on foot or in a specialised engineering vehicle; in either case the engineering unit must be moved up so that at least one of its elements is within 2" of the mine marker (the element will NOT be attacked by the mines). The unit now rolls a die; the Die Type is determined by the number of elements of the engineer unit that are within 2" of the mine - if only one, use a D6; for every extra element within 2" increase the die type by one. On a roll of 6 or greater, the minefield is deactivated and the marker is removed from the table. If the roll fails, the unit may (if it wishes) remain in place and attempt the clearance again in its next activation. Making a clearance attempt counts as the Combat Action for those elements; if the unit attempts more than one minefield at once, the elements of the unit must of course be divided between the different minefields - each individual engineer element may contribute to only ONE clearance attempt per activation.

The only other way of disposing of a minefield is to hit it with Artillery; **any mine marker that falls within the beaten zone of an EFFECTIVE FIRE Artillery mission (of any type except Smoke, or other Mines) is automatically removed from play.**

ABANDONED VEHICLES (OPTIONAL RULE):

When a vehicle is DAMAGED, IMMOBILISED or suffers a SYSTEMS DOWN result, there is a good chance that the crew will decide that it is no longer worth staying in the vehicle and waiting to get hit again!

The reaction of abandoning a damaged vehicle is not actually linked to either the quality of the crew or their unit leadership - a veteran crew are just as likely to bail out through common sense and experience as a green crew through fear.

If players wish to use this (optional) rule, then **whenever a vehicle receives any kind of damage result that does not totally disable it, roll a D6; a score of 1 - 3 indicates that the crew have decided to bail out,** rendering the vehicle inoperable as a combat element for the rest of the game. When this occurs, mark the vehicle with an ABANDONED VEHICLE counter (the green tank and "running man" graphic).

The major point of using this rule is if a linked Campaign of games are being played, and vehicle recovery is possible after the battle.

BACKUP SYSTEMS:

During the Vehicle Design procedure, it is possible to "buy" BACKUP (or multiple-redundant) SYSTEMS for any vehicle. These function as follows:

At any time that the vehicle receives a SYSTEMS DOWN result (either as target or firer), there is a BETTER chance of 'recovery' from this damage if the vehicle has Backup Systems available. WITHOUT Backups, the normal score needed to remove a Systems Down marker is 6 on a D6 roll; **if the vehicle HAS Backup Systems, then a roll of 3+ on a D6 is enough to get the systems back on-line and remove the marker.**

The Backup Systems CAN be used more than once in a game, should a particular vehicle be unlucky enough to receive two Systems Down results at different times!

ENGINEERING UNITS:

Combat Engineering teams and/or vehicles are organised into units like any other; a typical such unit might have two or three Armoured Engineering Vehicles (AEVs) with digging and recovery equipment, plus perhaps a Minelayer vehicle and/or a Bridgelayer. Engineering units attached to primarily Infantry forces are more likely to use Engineer teams on foot, with transport provided by normal APCs or trucks - though at least one AEV would normally be attached for APC recovery.

Engineering units may perform a variety of tasks before, during or after the battle. The use of Engineers to create defensive positions before the battle, and to recover disabled vehicles afterwards, really comes into the realm of Campaign games - they have little bearing on the actual battle itself.

Where the Engineer units ARE used in the game itself is in areas like bridging obstacles, laying and clearing minefields, fighting fires, demolitions etc. Fire Fighting and Minefield work are covered under the relevant sections (Smoke, P.XX and Mines, P.XX); some other engineering functions are detailed below:

BRIDGING: if a Bridgelayer vehicle is included in an Engineer unit, it may be used to cross any suitable obstacle (streams, smaller rivers, narrower ravines or other gaps). Laying the bridge takes a full Activation of the laying vehicle, as does recovering it after use. While the bridge is in use, it may carry the weight of any vehicle equal or less than the class of the Bridgelayer itself (ie: a class 4 Bridgelayer can carry a bridge that will support up to class 4 vehicles crossing it).

DEMOLITIONS: if any engineering element is moved into contact with a building, fortification, bridge or even a vehicle and spends its Combat Action there, the building or other item may be considered DEMOLISHED (or a vehicle Destroyed) - if a structure, mark it with a RUINED BUILDING marker. Note that dismounted Engineer teams CANNOT carry out Demolitions if the have an UNDER FIRE marker.

COMBAT REPAIRS: if an AEV spends a complete activation in contact with a DAMAGED, IMMOBILISED or SYSTEMS DOWN vehicle, the player may roll a D6: on a roll of 4 or higher, the damage effect marker(s) may be removed and the vehicle is considered REPAIRED and able to function normally again. If such a vehicle has been "left behind" by its own unit due to its damage, it must either rejoin its own unit as quickly as possible, or (if its own unit is destroyed or simply out of reach) can REGROUP with another nearby unit (see P.24). [Note that an ABANDONED vehicle, even if repaired, cannot rejoin the battle as it has no crew!]

CREATING HASTY DEFENCES: an Engineering unit with suitably equipped AEVs can, by using a full activation of the entire unit, create a DUG-IN position that can then be occupied by any other Armour or Infantry unit. This represents the AEVs using Dozer blades, digging charges and such to create "instant" foxholes, trenches and 'tank scrapes' to permit a unit to claim the benefits of being "Dug-In" (see P.20).

FORTIFICATIONS:

Fixed fortifications and weapons emplacements can play a part in an Attack/Defence battle or any similar scenario. In general, such structures should be treated as immobile vehicles, and smaller ones (pillboxes, bunkers etc.) may be designed using the vehicle construction rules.

Larger fortifications may mount any weaponry desired, though of course everything should be "paid for" (at normal costs) if using Points values.

The rules for firing at buildings apply equally to fire at fortifications, though of course defended military structures will have much higher Armour ratings than civilian buildings.

The possibilities for types and styles of fortified buildings are almost endless, and obviously we cannot detail them here - if such structures and installations play a part in your games, you will have to provide your own specifications and any special rules that are required.

BUILDINGS AND URBAN AREAS:

When structures are used on the table, they must be defined as either of two basic types: **ISOLATED BUILDINGS,** or **URBAN AREAS.**

ISOLATED BUILDINGS represent single constructions or small groups of buildings - small farms, military installations (Command or Medical posts etc.), tiny rural villages and the like. Such buildings do not impede movement, though the models used do block line of sight (ie: elements can be "hidden" behind the building models).

Elements that are in direct contact with the building model are deemed to be in SOFT COVER, even if they are not concealed by the building.

Isolated Buildings may be fired at as if normal targets - for direct fire, the firer treats all range bands as if CLOSE (provided it is within overall range limits), and the opposing player uses a D4 for the building's "target die" in all cases. No Secondary Die is ever used. Buildings hit by Artillery draw damage chits as if they were vehicle targets, with the same validities.

Buildings require Armour ratings to resolve damage - these can be decided between the players at the start of the game, but some suggested guidelines are:

Most civilian buildings (farms, dwellings etc.):	**Armour 3**
Industrial Installations, Factories, Warehouses etc:	**Armour 5**
Military installations:	**Armour 6 or 7**

[The reasoning behind the relatively high Armour ratings is not the inherent strength of a structure, but the amount of punishment it can take in relation to a much smaller vehicle element.]

When a building is DESTROYED (ie: draws enough Damage Points to exceed its Armour Rating), mark it with a RUINED BUILDING counter. Special damage chits do not count against buildings EXCEPT for the "BOOM" chits, which destroy any structure.

RUINED buildings no longer block line of sight, although elements in direct contact with the ruins may still claim Cover in them.

URBAN AREAS represent large zones of densely-packed buildings - towns and cities, and big industrial complexes. They are treated as a separate TERRAIN TYPE for movement purposes, as they can severely restrict the mobility of most vehicles.

For Combat purposes, Urban Areas are treated very much like WOODS; units can be defined as being either on the EDGE of an Urban Area, or actually INSIDE the area, with exactly the same limitations on fire effects as for Woods (see P.20).

The major difference between Urban Areas and Woods is that vehicles MAY move inside Urban Areas (albeit only slowly), whereas most vehicle types are prohibited from entering Wooded areas, except to take cover in the wood edge.
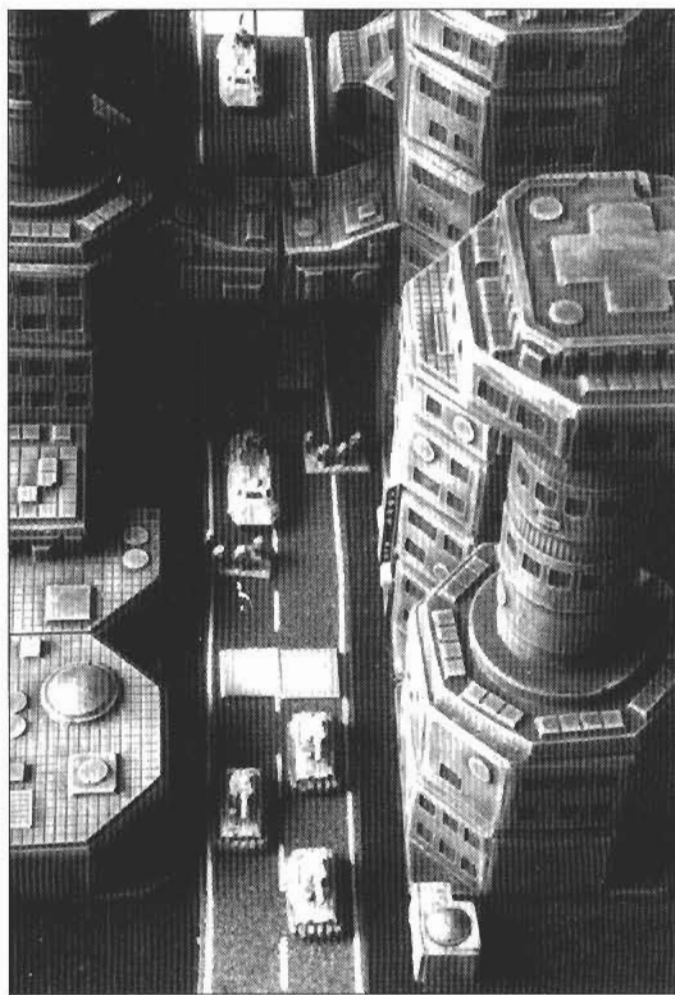
With Infantry deployed, an armoured column slowly advances through an Urban Area
[Vehicles by Scotia and QT, Infantry by Irregular, buildings by GZG]

COMBAT IN URBAN AREAS:

Any combat between units in an Urban Area is treated as a Close Assault action, and is fought out using the Close Assault (and if necessary Combined Close Assault) rules on PP.34/35.

No Direct Fire Combat or Infantry Ranged Firefights are permitted inside Urban Areas; as all vehicles are basically equivalent in Close Assault (regardless of size or weaponry), this makes Urban Areas VERY dangerous places for bigger vehicles - which is just as it should be!

ARTILLERY FIRE AGAINST URBAN AREAS:

As an Urban Area represents a very large number of buildings close together, and the actual model buildings used are only symbolic, when such an area is attacked by Artillery it is treated differently from attacks on Isolated Buildings. Instead of drawing damage chits for the buildings, the following system is used:

Only CONVERGED SHEAF, EFFECTIVE FIRE missions with HEF rounds (or Nukes, if you want to be REALLY silly...) **will have any real effect on Urban Areas;** other fire simply knocks down a building here or there and upsets the local population.

When such an effective mission is fired at an Urban Area, simply place a RUINED BUILDING marker at the point of impact. This indicates that enough of the immediate area has been rubbled to impede movement.

Once the marker is placed, **NO vehicle may move within 2" of the marker;** Infantry may move as normal, and if they wish may occupy the rubbled area and treat it as a DUG-IN position (put a Dug-In marker by the Infantry unit while in the rubble, but remove it if they move - it represents the troops taking advantage of the rubble, not occupying prepared positions).

If a rubbled area blocks a main highway through an Urban Area, the benefit of the highway is lost - units must leave the road and move at the Urban terrain rates, with vehicle units having to detour all the way round the rubbled area.

[Nuking a town or city will reduce the WHOLE area to an impassable, rubbled ruin - but then you probably guessed that didn't you....?]

NUCLEAR MUNITIONS:

As discussed in the Artillery rules, the use of NUKES is an option that is not to be taken lightly. Whether you allow their use in the game at all is a matter that requires the full agreement of all players, and justification in the scenario being played.

The kind of Nuclear weapons we are talking about here are small, "Battlefield Tactical" types - probably much less devastating that those already in use today - but firing one will still cause MASSIVE havoc across the table.

When a Nuke round is delivered to an impact point, it has a total Beaten Zone **EIGHTEEN INCHES** in diameter. The **INNER ZONE,** within 2" of the impact marker, is completely vaporised - everything within this area is immediately and totally destroyed, regardless of what it is. There is then a **MIDDLE ZONE,** out to 5" from the counter, where all infantry are automatically killed (even Powered troops) and all vehicles must draw FIVE damage chits (ALL chit colours are valid!). Finally there is the **OUTER ZONE,** up to the limit of 9" from the impact point, in which all Infantry AND vehicles must draw THREE chits each, again with ALL colours valid except for Dug-In elements, which count only REDs and YELLOWs.

Immediately after the explosion, ALL units belonging to the player under the Nuclear attack must make a Confidence test at a Threat level of +4 if within direct line of sight of the blast, or at +2 otherwise. **Additionally, all the units of the player who FIRED the Nuke must also test,** at a threat level of +2. The tests are taken at these levels ONLY when the FIRST Nuke is fired in the game, but if any more are then used ALL units on BOTH sides must test again at a threat level of +1.

[EVERYONE on the table will get distinctly uncomfortable when the Nukes start flying - if players use them repeatedly many of the units on both sides will start to suffer severe confidence losses.]

After the damage due to detonation is resolved, the impact marker is removed but the NUKE counter (the Radiation symbol) is left in its place, marking the Ground Zero point of the blast. For the rest of the game, NO element may approach closer than 2" from the marker, as this area is a VERY "hot" crater. In addition, only fully-sealed vehicles and Powered Infantry may approach within 6" of the marker - this area is impassable to all unsuited infantry and non-NBC protected vehicles due to the radiation levels.

BIOCHEM MUNITION EFFECTS:

Biochemical warheads in the game are treated as "non-persistent agents"; that is, they do their (unpleasant) job and then quickly disperse. While they are not quite as disruptive to game balance as Nuclear munitions, they are still only to be used where they can be justified.

Biochem rounds are always fired as an OPEN SHEAF mission, and the agents affect the complete beaten zone. The usefulness of Biochems depends largely on surprise - after they are first used in a battle, the troops will be taking countermeasures (ie: they will have their masks and "Noddy Suits" on, vehicles will be sealed and overpressured etc.). Thus the most effective Biochem strike will be the first one used in that game; in this first attack, all LINE and MILITIA units in the Beaten Zone have THREE chits drawn against them, with ALL colours valid (Dug-In elements get NO bonus against Biochem attacks). Open or non-NBC-protected vehicles are counted as LINE INFANTRY elements for this - it is the CREW that are affected, not the hardware. Powered Infantry and sealed vehicles are NOT affected. Note that the agents are assumed to be "heavy" chemicals that are not significantly affected by wind.

On this first use of Biochem munitions, ALL units of the player being ATTACKED must make Confidence tests at Threat level +3, and ALL of the FIRER'S units must test at +1.

In any subsequent uses of Biochems (by either side) in that game, the effects are reduced to TWO chits per Line, Militia or unprotected vehicle element, with only RED chits valid, and ONLY the units caught in the actual attack need make Confidence tests (at the normal threat level for being under Artillery attack).
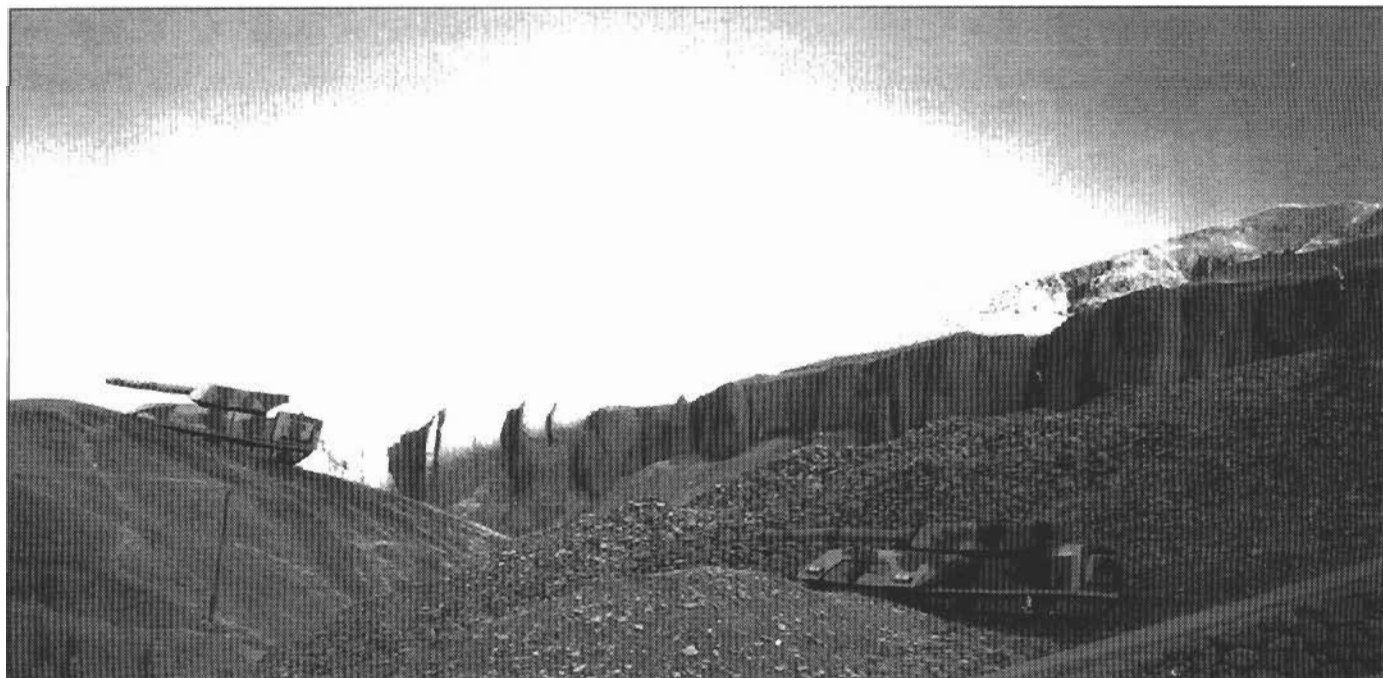
Immediately after the effects of a Biochem strike are resolved, the marker(s) are removed from the table - the agents are assumed to have degraded and/or dispersed, and there are no lasting effects in the zone.

CASEVAC:

CASEVAC ("Casualty Evacuation") operations are provided by specialised units of vehicles or VTOLs. If such a unit is available, the knowledge that casualties can be quickly extracted from the battlefront and returned to Medical facilities (on- or off-table) is a great psychological boost to the troops on the ground.

To avoid over-complicating things, if you wish to include CASEVAC (or C–VAC) into the game the following (rather abstract) system is suggested:

Once any unit has suffered casualties in the battle, it is assumed it will have a number of wounded personnel to be evacuated. These are presumed to be carried with the unit until a CASEVAC element can reach them. **Casevac vehicles or VTOLs operate as single elements,** and can move freely around the battlefield subject to normal movement restrictions for their type; they may NOT attack the enemy - most are unarmed anyway. They do not need Command or Confidence markers, and for convenience are moved in the TURN END PHASE. When a casevac element is moved in contact with a unit that has suffered casualties, it is assumed to collect the wounded; **the unit may immediately make a REACTION test (Threat Level +0) – if it passes this, it GAINS one Confidence Level** (the evacuation of the wounded has had a beneficial effect on the troops' morale).

Each Casevac element may make only ONE such "pickup" before returning to the nearest Aid Station - if such a facility is present on-table then it may drop its wounded there and immediately return to pickup missions; if there are no medical stations provided on-table then the Casevac must leave the table by the baseline and spend one whole turn off-table before returning for another pickup.

[Casevacs CAN be fired on, but a player who does so will be considered a Jolly Poor Sport and will have to buy all the post-game drinks in the bar.....]

WEATHER CONDITIONS (OPTIONAL RULE):

Fighting in adverse weather conditions is obviously more difficult (usually for both sides) than in good weather. If players wish to simulate combat in poor conditions, the suggestions below will give some idea of the limitations that can be imposed - the exact rules used can be varied to suit the scenario and location of the battle (especially if it is set off-Earth, perhaps on some colony world with extremes of climate?).

RAINY conditions cause most terrain types to become one grade worse (eg: POOR becomes DIFFICULT) for wheeled and tracked vehicles, and for all troops on foot. If the rain is deemed heavy enough it will also restrict maximum Sensor range (say to half normal, ie: 30") and make all direct fire treat its range band as if it were one band greater than it actually is. **FALLING SNOW** will have similar effects, but can also (if sufficiently heavy) cut Sensor range down even less - say to 18"? - and make many types of terrain completely impassable to ground vehicles. Heavy rain or snow may also prevent Aerospace craft from flying.

VERY HIGH WINDS (especially on non-terran worlds) may be so strong that only Powered troops and vehicles can stand against it - unsuited Infantry must remain in their vehicles. Such winds may also make Riverine movement and Air missions impossible.

There are many other possibilities for weather effects that can be explored if you wish - dust and sandstorms in desert areas, fog and mist, etc. The best way of dealing with any weather effects is to write them into specific scenarios.

NIGHT FIGHTING can be worked out on a similar basis to adverse weather conditions, but don't forget that most modern forces are very well equipped for Night operations; with the provision of advanced Sensors, image-intensification and the like, night fighting is far less difficult or restricted than it used to be.

EXOTIC ENVIRONMENTS:

Games set on other worlds (and even ones set in certain parts of this planet, eg: Antarctica) may well have terrain and conditions very different from battles in Earth's temperate zones. Icefields, very hot/volcanic areas, high or low gravity, vacuum environments - all can be looked at for variety in game settings.

To go into detail on all such environments would take up half this book, so all we can really give you here are the briefest guidelines to get your own imaginations working - after all, that should be half the fun!

When you start to look at the effects of a given environment, many of the limitations become obvious. For example, GEVs and any conventional aircraft or helicopters can't function on vacuum worlds! Extremes of temperature and/or gravity will mean all Infantry will have to be Power Suited, and hostile/poisonous atmospheres will similarly require all troops and vehicles to be fully sealed at all times.

"Exotic" scenarios can often be used to 'balance' games between otherwise incompatible forces, and in any case they can be an enjoyable change from the basic style of game.

Don't forget the possibilities of native flora and fauna - a few dangerous plants (acting like Biochem agents on any unprotected troops?) and some randomly-roaming wildlife on the battlefield can add all sorts of twists to the game!

ALIEN RACES IN DIRTSIDE II:

Most of the rationale behind the game is based on human-vs.-human conflicts, but the framework of the rules will function equally well for human/alien or even alien/alien games. A full and detailed treatment of the subject of alien races is outside the scope of this book, though hopefully it is something we can explore more deeply in a future supplement. If you wish to include alien forces in your battles, then try to ensure that they use sufficiently different technology and force compositions that they have a different 'feel' to the human armies - for example, have a human force of low to mid-tech vehicles and equipment up against an alien invader with all Grav vehicles and energy weaponry - or even vice-versa!

A more complex question than the technology of the alien forces is their psychology - if they react to combat conditions and stress in exactly the same way as human troops, then they are little more than the traditional Hollywood "man in a rubber suit" type of alien. What is really needed is to give each alien race its own unique variations in terms of confidence, leadership etc. - perhaps they revere their unit leaders like gods, and the death of one will send the rest of the unit into a kill-crazed frenzy? Alternatively, maybe the sight of a retreating enemy unit triggers the same kind of berserker bloodlust and uncontrollable charge? As with the ideas for backgrounds and scenarios, SF literature and films are teeming with things bug-eyed and squirmy that can be developed into suitable game forces. If you come up with any particularly good ones, please send them to the publishers - we may well use them when we come to do the supplement!
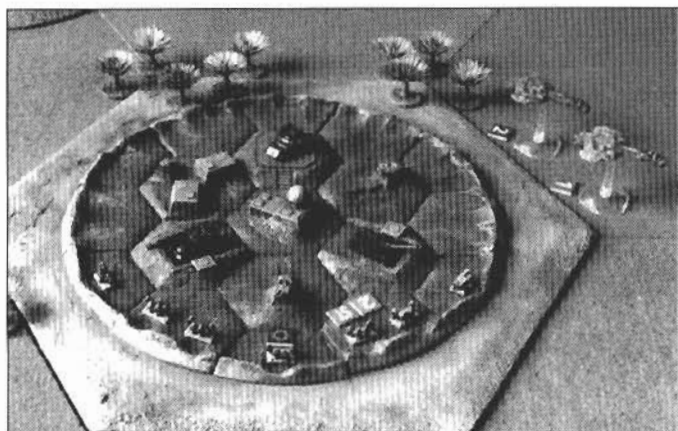
THE SCENARIOS:

Given below are two possible battle scenarios (plus some extra outline ideas for players to develop themselves) to give a bit of variation to the straightforward 'attack/defence' or 'encounter battle' type of game. These are obviously only a few suggestions, and players should always seek to design their own challenging scenarios - there is plenty of inspiration to be had in SF films and literature.

A word about the scenarios presented here: they are deliberately non-specific with regard to the forces (and often the terrain) to be used, as they are intended to be modified as you wish to fit in with the models, background etc. that you are using for the game. In addition, they are NOT necessarily 'balanced' scenarios! The force mixes can be juggled around to suit certain points values if this is important to you or your opponents, but we would suggest that a far more exciting game can often be had using apparently unequal forces - if you feel it strictly necessary for each side to have an equal chance of "winning", then simply alter the objectives and victory conditions to suit the relative strengths and weaknesses of each force.

Aerospace Fighters overfly a defended firebase.
[Models by CMD and Irregular; Firebase from GZG.
Fighters from QT Models (old, and sadly now unavailable).]

SCENARIO 1: BORDER RAID

This scenario represents a typical 'hit and run' raid by a small mobile strike force against a defended border post. The situation is set during an uneasy truce between two neighbouring states, Catatonia and New Harmony, on the 'balkanised' colony world of Segonis III (though the same action could equally well be set on Earth, or any other settled world). Along the disputed border between the two warring states, Catatonia has established a number of small, defended border posts to try and prevent large-scale incursions by New Harmony forces. This move is seen by the government of New Harmony as hostile action, and they decide to mount a series of raids in retaliation.

TERRAIN SET-UP:

One short table edge should be designated as the border; this edge will be the attacking (New Harmony) forces baseline. The main feature of the terrain will be the border post, which should be a grouping of military buildings similar to a small firebase; this should be located in either the Main Battle Area or the Defender's Rear Area, to the agreement of both players. The terrain around the post should be reasonably close and broken; there should be a road or track crossing the table from the 'border' edge to the opposite edge.

OPPOSING FORCES:

CATATONIA: The defending force should consist of no more than 6 platoon-strength units, most of which will be infantry. They may have one battery of artillery in support, either within the border post firebase itself (a very good reason for attacking it...) or alternatively as an off-table asset. Some tactical aerospace support may be employed if both players agree.

A suitable basic force could be:

2 platoons 'leg' infantry (line or militia)

1 platoon mechanised infantry (line)

1 troop Main Battle Tanks

1 artillery battery

1 command unit

NEW HARMONY: the raiding force should be highly mobile and consist of at least as many units as the defending forces, up to a maximum of twice that number (the relationship between force strengths can be adjusted to take into account quality and tech differences between the forces in use).

Suggested basic forces:

2 troops Main Battle Tanks

1 troop Heavy Battle Tanks

4 platoons mechanised infantry (line) - or substitute 1 Power infantry platoon for 2 line platoons.

1 artillery battery (off-table asset)

1 command unit

OBJECTIVES:

Three objective markers should be drawn and used; one must be placed in the border post itself. Before he is able to declare Game End, the attacking (New Harmony) player must withdraw at least half his own units off his own 'border' baseline.

SCENARIO 2: SPACEPORT DEFENCE

The capture of a major spaceport is a classic prelude to full-scale planetary invasion; the possession of suitable landing facilities is almost essential for the insertion on-world of significantly large forces for an extended campaign. In this scenario, a high-mobility Interface Assault Combat Group is tasked with taking control of the main port facilities on a fairly well-settled colony planet.

TERRAIN SET-UP:

The table for this game represents, of course, the spaceport complex. Like 20th century airports, spaceports are very dispersed affairs by their very nature - so an extensive port area covering several kilometres of groundscale is not unreasonable. The port set-up should occupy most (if not all) of the table, and where possible should include at least a selection of the following features:

An administration building or complex

A communications and flight control centre

At least one passenger terminal, possibly linked to the admin. building

At least one cargo handling facility

Several spacecraft dispersal bays, landing pads or blast pits; bear in mind that larger starships are not usually capable of atmospheric interface operations, so most facilities will cater for interface shuttles and smaller starcraft only. A few 1:300 scale spacecraft models parked in some of the bays will look really effective!

A transit system of some kind (eg: a monorail link) to connect the port to the nearest city, and possibly also linking installations within the port itself (passengers won't fancy a 4-kilometre hike from the terminal to the blast pads!)

Finally, if you have room, include some buildings just outside the port perimeter near the main gates, to represent the 'startown' - all the cheap bars, hotels and other 'places of entertainment' that spring up wherever starship crews are dirtside with money in their pockets....

OPPOSING FORCES:

PORT DEFENCE: The strength of the defending forces rather depends on whether they are expecting an attack; a good idea would be to have only a small force of port security troops on hand at the start of the game, but have a reasonable level of reinforcements on call from the local military base - these can arrive at either a preset or random (die-rolled) time after the start of the battle.

A suitable spaceport security detachment could be:

3 platoons of 'leg' infantry (probably militia); only one team per platoon would carry a GMS/L, and only up to 50% of the teams in total would be equipped with IAVRs.

1 zone air defence troop

1 command unit

The reinforcements could consist of:

2 troops of Main Battle Tanks

2 platoons of mechanised infantry in MICVs

1 troop of missile vehicles

If you prefer to allow random arrival of the reinforcements, roll a D6 at the start of each turn; add one to the die roll for each turn elapsed since the start of the game. On a score of 6 or more, the reinforcements arrive at the table edge nearest the port main entrance gates.

ASSAULT FORCES:

The aim of the attacking force should be to isolate the defenders and take them out piecemeal, before they can concentrate their forces and organise themselves (and certainly before the reinforcements arrive!). A suitable assault group would be:

4 platoons of Powered infantry

2 troops of fast, light AFVs

2 platoons of line infantry in small APCs (probably only 1 team per vehicle)

1 or 2 flights of ground-attack fighters for close support

If suitable models are available, the attacking player may deploy his interface landers in the first move and unload their troops. The Power infantry may, if desired, be designated as Jump Troops who are deployed to the surface individually (like paratroops) - in this case their initial drop locations should be randomised and they will need to regroup (as per Drop Troop Rules on P.43) before commencing offensive operations.

OBJECTIVES:

An agreed number of objective markers should be placed for this scenario, on key areas: eg at least two of the spacecraft dispersal bays or pads, the admin and control centres and the main gate (to delay the arrival of the reinforcements). The whole table area is designated as the Main Battle Area; neither player has a 'rear area', as both forces will be spread around the table.

FURTHER SCENARIO IDEAS:

These are just a few simple outlines that players may wish to develop into full scenarios; they are presented here mainly to get your imagination working!

"HOLD THE BRIDGE": A small force of defenders must defend and hold a vital river crossing point until supporting troops can arrive (or until a retreating unit can cross the table and escape over the bridge). The attackers could be airborne troops dropped into the defenders' rear areas.

"DEFENCE OF HILL 301": A depleted, undersupplied and possibly demoralised combat group must hold a vital strategic hill against an enemy consisting mainly of hordes of infantry (with very little heavy weapon support). Command says help is on its way, but WHEN? (Does this one sound familiar....?)

"CONVOY": A nice simple one; a convoy of supply trucks, escorted by a small armed force, must be moved (safely) from one end of the table to the other. The opposing force must ambush the convoy and either destroy or capture it, depending on what it is carrying.

So, there you go. Get writing!

POSSIBLE BACKGROUNDS:

It is perfectly possible to play **DIRTSIDE II** battles without having to worry about any kind of background setting at all. For example, if one player has a force of mainly hover vehicles with energy weapons, and a

friend has some tracked and wheeled vehicles with long kinetic cannons - and maybe a walker or two - they can simply set up almost any scenario they like and play a one-off game. What they call their forces, and how these two protagonists got into conflict in the first place, is pretty much irrelevant to the enjoyment of this game.

Many players, however, will want to go into things a bit deeper than this. Having a 'believable' background in which to set your games and campaigns adds a lot of interest to the whole process; battles are no longer just one-off encounters, but can begin to play a part in the much larger scheme of political and military events that shape and develop the "future history" of the desired background.

To set about designing you own game background consider the possible types of wars. Just watch the news reports for a few weeks!, read a few books on military history and you'll see that wars come in many shapes and sizes. Here is a list of examples:

CROSS-BORDER RAIDING: eg: Viking attacks on 10th century England.

INTERNAL REBELLION: one side is composed of unorganised militia or rebels, eg: a coup in a 'banana republic'.

CIVIL WAR: both sides are using organised armies (and probably the same equipment), eg: the American Civil War.

GUERRILLA WAR: one side has masses of high technology, while the other has little but manpower and thus relies on traditional guerrilla tactics, eg: the Vietnam War.

POLICE ACTION: a 'big' power moves in on a 'little' power to depose what it sees as an 'unfriendly' government, eg: the US intervention in Grenada.

PUNITIVE ACTIONS: retaliation against cross-border raids and/or terrorism etc, eg: British actions in Afghanistan in the 19th century.

FULL SCALE INVASION: major military action aimed at complete physical takeover of a state or region, eg: German invasion of Poland in 1939, or the Gulf War.

It is a relatively simple matter to translate any of these historical examples into a Science Fiction setting - in fact this has been done by nearly every major SF writer and filmmaker you could name!

Bear in mind also that there may well be more than one political unit (country, state, colony etc) on a single planet, rather than the whole world being run by just one power; a planet is a very big place, and it is pretty certain that once a few habitable ones are discovered then there will be no shortage of different countries and/or groups wanting to stake their claims to bits of each. The term used for a planet which is divided into more than one political unit is a "balkanised" world.

Of course, it may not only be actual states and major powers that field military forces; megacorporations and other commercial concerns will probably be only too ready to resort to military means, whether to protect their own interests, damage those of their rivals or simply keep restive worker populations in check....

Hopefully these ideas will get you on the way to designing a setting for your games that reflects the way YOU like your SF, rather than the way that some games manufacturers tell you it is going to be!

CAMPAIGN GAMES:

CAMPAIGNS, in Wargame terms, are usually played as a series of "linked" games following the course of a much larger Military operation (such as the invasion of a state, or even of a whole planet!). A complete system for Campaign gaming could fill this book, so we are just going to give you a few ideas to start you off in the right direction. There are several good books on "historical" wargames that cover Campaigns in some detail, and these are all excellent reference material - even in a far future setting many of the logistics and other problems that beset Commanders engaged in extended operations will still apply.

To run a successful Campaign game, or any other series of linked battles, you will need to consider factors outside the basic front-line fighting units of your army. Any force needs its Logistics "Tail", and in Mechanised Warfare the number of supply, fuel, maintenance and other backup units often far outweighs the actual "teeth" end of the fighting force.

The provision and use of such logistic support is a vital part of any series of games; a Combat force might win a given battle, but unless it can then be resupplied with fuel and ammunition, have its wounded treated and its crews fed and rested, it will surely lose the next one! In Game terms, if such support is not provided (or simply cannot be got to the troops in time), their Confidence and combat efficiency will suffer VERY greatly in the next and subsequent battles; a force with dry fuel tanks and empty ammo bins (not to mention hungry men) will not stand and fight for very long.

On a more positive note, the use of the Unit Quality and Confidence system in DIRTSIDE II provides the ideal mechanism by which units that perform well in battle can actually INCREASE their abilities between engagements. GREEN units that survive a couple of battles could well be classed as REGULARS (or at least have a chance of rising to such status), and could very well eventually aspire to VETERAN classification. The 'down side' is that if a unit is severely depleted in one battle and receives a load of replacement troops to return it to full combat strength, this influx of "FNGs" could well have the effect of REDUCING the overall Quality of the unit.

In between battles, forces can engage in repair and recovery of damaged vehicles (the force that wins a battle will be able to recover not only their own repairable elements, but perhaps also some of the enemy's) and bring units back up to troop strength provided sufficient resources and replacements are available to them. Reconnaissance may also be carried out to prepare for the next combat.

The ideas above are just the start; we hope to expand on the Campaign Game idea in future publications, but for now this should give you something to be going on with.

FUTURE HISTORY 2000 – 2183AD

The following section is a very condensed version of the Background developed for our **FULL THRUST** Starship Combat rules. It outlines the general political and military situation, and highlights a selection of the wars from the 21st and 22nd centuries that are of particular relevance to the kind of ground actions that **DIRTSIDE II** is designed to recreate.

This background is an option for you to use if you wish; the situation presented here will be further developed in future publications and articles, and extended to cover events after 2183.

THE BACKGROUND:
Over the years of the 21st century, the main political blocs of Earth altered greatly. The Chinese takeover of the former Russian Commonwealth in 2047 and the collapse of the US Government in 2049 (leading to the Second American Civil War of 2050-57) brought about the creation of the two major Superpowers of the new age, the Eurasian Solar Union, (a Chinese/Russian dominated Asia) and the New Anglian Confederation (the reuniting of Britain, Canada and the former USA under the British Crown).

Following the virtual destruction of Israel (by Islamic Nuclear and Biochemical terrorism) in 2027, it was a Jewish-funded organisation (the Gilderstein Foundation) that instigated a visionary research program into the possibilities of Faster Than Light travel - culminating in Mankind's first steps to the Stars in the 2060's.

By the late 21st century, the nations of Earth had started to seriously explore and colonise the nearer star systems. Despite the best efforts of the UN, however, international co-operation was shaky at best - if anything, most powers became even more Nationalistic as the chance to carve out their own niche in space presented itself.

Wars continued at regular intervals, both major and minor engagements occurring on Earth and on the newly-founded Colony Worlds.

The major powers in the 21st and 22nd centuries include:

The NEW ANGLIAN CONFEDERATION (NAC) - Britain, Canada and the USA
The EURASIAN SOLAR UNION (ESU) - China, Russia and most of Central Asia
The NEU SWABIAN LEAGUE (NSL) - Germany, Austria and other Central European States
The FEDERAL STATS EUROPA (FSE) - France, Spain, Italy and others from the failed European Community

Added to these "main players' are many other power groups - the LLAR (League of Latin-American Republics), PAU (Pan African Union), the Indonesian Commonwealth, the Oceanic Union and many more - plus several small states and independent nations, such as The Netherlands, Free Cal-Tex, New Israel (a Colony around Epsilon Indi), Japan (technically "independant", but jealously protected by the NAC) and others.

This situation (detailed fully in the Timeline published in FULL THRUST) is rich in possible conflicts, both on and off Earth, spanning the whole of the 21st and 22nd centuries of Human history. Into this background can be woven almost any type of battle you could wish to play - from Dutch and Japanese mercenaries fighting each other on a Colony World to clashes between rival factions of Islamic fundamentalists!

To illustrate this, here are just a few examples of the many wars that continued to plague mankind:

2050-57: The Second Seccessionist War:
The collapse of the US Economy and assassination of President Amy Koslowski in 2049 precipitate a Second Civil War in the USA; after unsuccessful attempts to gain control, the provisional Military Government calls on British and Canadian support to quell the uprisings throughout the Union. This leads to the formation of the New Anglian Confederation.

2057-72: The War of The Americas:
In the confusion of the end of the 2nd Civil War, the League of Latin American Republics attempts to take control of California, New Mexico and Texas. A prolonged and difficult conflict between LLAR and Anglian forces results in defeat for the League and the loss of not only its foothold in the North but also all of its possessions in Central America.

2110-12: The Papua New Guinea War:
The Indonesian Commonwealth attacks Papua New Guinea, bringing it into conflict with Australia and New Zealand (Papua's major partners in the Oceanic Union). A generally low-intensity war, this is notable for the first widespread use of "Grav" propelled combat vehicles on Earth (mainly fast, light Indonesian "Gunskimmers" used for coastal and riverine actions). To-and-fro thrusts by both protagonsists throughout the islands gradually grind to an indecisive halt, and the Sydney Accord finally ends the war with an Indonesian withdrawal.

2128-32: The Mercenary War:
A very scrappy and inconclusive war, named both for the large numbers of hired foreign troops used by both sides and for the action that started the conflict: an LLAR mercenary unit working for the Indonesians clashes with Anglian forces against the orders of its employers, and in a move to placate the NAC the Indonesians massacre the entire LLAR unit. In retribution the League strikes at Indonesian targets on the Colonies, and a four-year struggle between the two powers ensues. The Mercenary War ends with large reparations being paid to the LLAR, and brings about the signing of the Mercenary Charter by most major powers - formalising the existance, hiring and use of Mercenary forces.

2137-42: The First Solar War:
The Eurasian Solar Union declares war on the New Anglians due to "the hostile actions and intents of the Imperialists in space". Five years of intense warfare spans the settled worlds as the two Superpowers battle each other on planet and in space, ending in 2142 with the Anglians claiming a victory and the ESU retiring to lick its wounds and consider its next move.

2145-57: The Second Solar War:
ESU attempts to regain its possessions lost at the end of the 1st Solar War quickly escalate into another widespread conflict, this time drawing in other major powers such as the FSE, the NSL and the PAU. The war rages throughout the Inner Colonies and the Outworlds, ending this time with a compromise Treaty that leaves neither side happy.

The Timeline ends in **2183**, by which time the **THIRD Solar War** has been grinding inconclusively back and forth for a full eighteen years. At this point, the unexplained disappearance of two United Nations Space Command Survey ships in the Outworld Rim leads to speculation that the battered and war-weary forces of Humanity are about to confront a far deadlier enemy.......

13 APPENDICES

POINTS VALUE SYSTEM:

To COST a vehicle in terms of points value, start with the VEHICLE SIZE POINTS (VSP) = Vehicle Size Class x 5 (ie: the same as the CAPACITY points). Thus a class 1 vehicle has a VSP of 5, class 2 = 10, class 3 = 15, class 4 = 20 and class 5 = 25.

Now add ARMOUR RATING to the vehicle. For every "level" of Armour Rating, the cost is 20% of the VSP, eg: Armour 2 costs 40% of the VSP, Armour 5 costs 100% of the VSP.

ABLATIVE or REACTIVE armour each cost an ADDITIONAL 10% of the VSP per level of Armour; eg: Armour 2R costs 60% of VSP in total.

As the Armour accounts for much of the vehicle's weight, it naturally affects the calculations for Power Plants and Mobility; therefore the TOTAL of the VSP and the Armour Cost now becomes a new constant known as the BASIC VEHICLE POINTS (BVP). Power and Mobility costs are worked out using the BVP.

The desired POWER PLANT type is now added:

CFE: cost = 20% of BVP;
HMT: cost = 40% of BVP;
FGP: cost = 60% of BVP.

(Note these add to running total of costing, but do NOT alter BVP figure)

MOBILITY TYPE is now costed, once again using the BVP:

LOW-MOBILITY WHEELED:	cost = 10% of BVP.
HI-MOBILITY WHEELED:	cost = 30% of BVP.
SLOW TRACKED:	cost = 20% of BVP.
FAST TRACKED:	cost = 40% of BVP.
SLOW GEV:	cost = 40% of BVP.
FAST GEV:	cost = 60% of BVP.
GRAV:	cost = 100% of BVP.
AMPHIBIOUS (extra cost):	cost = additional 20% of BVP.
CONVENTIONAL BOAT:	cost = 10% of BVP.
HYDROFOIL:	cost = 40% of BVP.
RSW AIR CUSHION:	cost = 40% of BVP.
VTOL/HELICOPTER/JETCOPTER:	cost = 500% of BVP.
AEROSPACE CRAFT:	cost = 1000% of BVP.
COMBAT WALKER:	cost = 100% of BVP.
TRANSPORT WALKER:	cost = 80% of BVP.

Now total-up all the figures so far calculated, to give you the points cost of the actual vehicle hull (or airframe), before adding any weapons or other systems.

EXAMPLE:	COST	TOTAL:
To build a medium, well-armoured, tracked hull (eg: for a main battle tank):		
If we take a MEDIUM (class 3) vehicle, VSP = 15	+15	15
Adding Armour 3 costs 60% of VSP = 9	+ 9	24
[The running total of 24 now becomes the BVP]		
Adding an HMT Power-Plant costs 40% of the BVP = 9.6 (rounded to 10)	+ 10	34
Adding FAST TRACKED mobility costs 40% of BVP =9.6 (rounded to 10)	+ 10	44

Total cost of mobile, armoured hull 44 points.

It is now necessary to cost all the other bits you put into the vehicle - weapons, systems, troops etc.

DIRECT-FIRE WEAPONRY:

RFAC systems:	cost = 5 x Class of weapon (eg: RFAC/2 costs 5 x 2 = 10)
HVC systems:	cost = 8 x Class of weapon (eg: HVC/4 costs 8 x 4 = 32)
HKP systems:	cost = 10 x Class of weapon (eg: HKP/3 costs 10 x 3 = 30)
MDC systems:	cost = 10 x Class of weapon (eg: MDC/5 costs 10 x 5 = 50)
HEL systems:	cost = 12 x Class of weapon (eg: HEL/2 costs 12 x 2 = 24)
DFFG systems:	cost = 15 x Class of weapon (eg: DFFG/4 costs 15 x 4 = 60)
SLAM systems:	cost = 12 x Class of weapon (eg: SLAM/3 costs 12 x 3 = 36)
EXTRA APSWs:	cost = 4 each

FIRE CONTROL SYSTEMS:

BASIC:	cost = 2 x Class of largest weapon type on vehicle;
ENHANCED:	cost = 4 x Class of largest weapon;
SUPERIOR:	cost = 6 x Class of largest weapon.

(Eg: For a vehicle mounting a class 4 gun as its largest direct-fire weapon system, the Fire Control would cost 2 x 4 = 8 for Basic, 4 x 4 =16 for Enhanced, or 6 x 4 = 24 for Superior. Each vehicle requires only ONE Fire Control regardless of the number of weapons fitted, but the FireCon cost is always based on the LARGEST single weapon class.)

MISSILE SYSTEMS:

GMS/L: With BASIC Guidance, cost = 20; with ENH = 30; SUP = 40
GMS/H: With BASIC Guidance, cost = 30; with ENH = 45; SUP = 60

DEFENSIVE SYSTEMS:

AREA-DEFENCE SYSTEMS:
cost: BASIC = 200   ENH = 300   SUP = 400
LOCAL AIR DEFENCE (LAD) weapon:
cost: 75
POINT-DEFENCE SYSTEMS (PDS):
cost: BASIC = 30; ENHANCED = 45; SUPERIOR = 60
ELECTRONIC COUNTER-MEASURES (ECM):
cost: NONE = 0; BASIC = 15; ENH = 30; SUP = 45
APFC BELT: 5 x Vehicle Size Class
                         (eg: APFCs on a class 4 vehicle cost 5 x 4 = 20)
STEALTH SYSTEMS: 20 x Vehicle Size Class per LEVEL
                         (eg: to reduce the effective signature of a class 4 vehicle to 3 (= 1 Stealth Level) costs 20 x 4 = 80)

ARTILLERY:

ARTILLERY OBSERVER ELEMENTS:
With Infantry Team: Team cost + 50
In vehicle: Vehicle cost + 50
ARTILLERY WEAPONS:
LIGHT ARTILLERY: system = 50
MEDIUM ARTILLERY: system = 100
HEAVY ARTILLERY: system = 200
ARTILLERY AMMUNITION MARKERS (cost PER MARKER, for BATTERY):
HEF or MAK:
LIGHT ARTILLERY: 20 x No. of weapons in Battery
MEDIUM ARTILLERY: 30 x No. of weapons in Battery
HEAVY ARTILLERY: 40 x No. of weapons in Battery
SMOKE ROUNDS: 10 x No. of weapons in Battery
MINES (DMR):   100 per marker
BIOCHEM ROUNDS: 200 per marker
NUCLEAR ROUNDS: 1000 per marker
COUNTER-BATTERY RADAR:
cost: BASIC = 150,   ENH = 200, SUP = 250
ORTILLERY BATTERIES: AS FOR EQUIVALENT "NORMAL" BATTERY

AIR WEAPONS:

DFO PODS
(HEF or MAK):   30 per LOAD (= per marker)
All other Air Weapon costs as for ground-fired equivalents.

MINES:

PRE-LAID MINEFIELD: CONVENTIONAL = 80, JUMPING = 150
MINELAYER AMMUNITION LOAD:(1 marker):   100
MINELAYER SYSTEMS COST: 100
BACKUP SYSTEMS: + 30% of TOTAL COST OF ALL VEHICLE SYSTEMS
(ie: FIRECON, ECM, STEALTH and GUIDANCE as applicable)
INTERFACE LANDING capability: + 25% of TOTAL POINTS COST of each element transported.
DROP TROOP capability:+ 50% of TOTAL POINTS COST of each element dropped.

CASEVAC ELEMENTS:

WHEELED or TRACKED ambulance vehicle:
(complete):   50
Per GEV or GRAV ambulance (complete):   75
Per VTOL (inc. Helicopters):   100

ON-TABLE MEDICAL POST: STATIC = 100; MOBILE (on vehicle) = 150

COMMAND/CONTROL CENTRE (in vehicle): 100

COMMAND/CONTROL CENTRE (emplaced): 75

ENGINEERING VEHICLE EQUIPMENT:

REPAIR/RECOVERY PACKAGE (for AEV): 75 x CLASS OF VEHICLE

BRIDGE SYSTEM (for Bridgelayer): 50 x CLASS OF BRIDGE
(ie: size capacity)

GENERAL ENGINEERING PACKAGE (for AEV):
Includes Digging capability, Demolitions, Firefighting: 100 (flat rate for any vehicle class)

INFANTRY POINTS COSTS:

BASIC ELEMENT COSTS:

MILITIA troops:	RIFLE TEAM (4-5 men) = 15 points
LINE troops:	RIFLE TEAM (4-5 men) = 20 points
POWER troops:	RIFLE TEAM (4-5 men) = 40 points

ASSAULT TEAM:
(no ranged fire ability, but extra value in Close Assault): no additional cost - same as Rifle Team

SPECIALIST ELEMENTS:
(2-3 men with Close Defence weapons) same cost as Rifle Team, PLUS specialist equipment cost as below:

GMS/L:	Cost as for vehicle-mount GMS/L
APSW:	10 points
Engineering Equipment:	50 points
LAD system:	75 points
Artillery Observer:	50 points

CAVALRY: (riding animals) cost additional 50% of basic element points

SOME TYPICAL VEHICLE EXAMPLES:

While a lot of the fun is designing your own vehicles to fit the models you either have or wish to use, just to get you under way we have provided below a few examples of typical common vehicle types. If you wish, you can of course modify these basic examples to suit your own forces by simply substituting different Mobilities, Weapons and such rather than starting from scratch.

1) MEDIUM BATTLE TANK (Tracked):

MEDIUM vehicle (class 3), FAST TRACKED mobility, HMT power, Armour 3.

1 x HKP/3 in Turret with SUPERIOR FireCon; 1 x RFAC/1 as secondary weapon; ENHANCED PDS; 1 x APSW.

ENHANCED ECM.

Basic/Effective Signature 3 (D8). **POINTS VALUE 172.**

2) LIGHT MICV (GEV):

SMALL vehicle (class 2), FAST GEV mobility, HMT power, Armour 2.

1 x MDC/2 in Turret with ENHANCED FireCon; 1 x APSW.

BASIC ECM, capacity for 1 Infantry Team.

Basic/Effective Signature 2 (D10). **POINTS VALUE 71** (plus cost of Infantry carried).

3) HEAVY HOVER TANK:

LARGE vehicle (class 4), SLOW GEV mobility, FGP power, Armour 4.

1 x MDC/4 in Turret with SUPERIOR FireCon; 1 x GMS/H (ENHANCED guidance); ENHANCED PDS; 1 x APSW.

APFC, ENHANCED ECM, STEALTH-1.

Basic Signature 4, Effective Signature 3 (D8)   **POINTS VALUE 356.**

4) ASSAULT TRANSPORT VTOL:

MEDIUM vehicle (class 3), VTOL mobility, FGP power, Armour 2.

1 x RFAC/1 in Chin Turret with ENHANCED FireCon; 1 x APSW.

ENHANCED ECM, capacity for 2 Infantry Teams.

Basic/Effective Signature 3 (D8)   **POINTS VALUE 178** (plus cost of Infantry carried).

5) MEDIUM WHEELED APC:

MEDIUM vehicle (class 3), HI-MOB. WHEELED mobility (plus AMPHIBIOUS capability), CFE power, Armour 3.

1 x MDC/1 in Turret with ENHANCED FireCon; 1 x APSW.

BASIC ECM, capacity for 2 Infantry Teams.

Basic/Effective Signature 3 (D8)   **POINTS VALUE 70** (plus cost of Infantry carried).

6) MEDIUM ARTILLERY VEHICLE (Tracked):

MEDIUM vehicle (class 3), SLOW TRACKED mobility, CFE power, Armour 3.

1 x RAM Howitzer (Medium Artillery), BASIC PDS, 1 x APSW.

APFC, ENHANCED ECM.

Basic/Effective Signature 3 (D8)   **POINTS VALUE 209** (plus cost of Ammunition).

7) AREA-DEFENCE VEHICLE (Tracked):

MEDIUM vehicle (class 3), SLOW TRACKED mobility, CFE power, Armour 3.

1 x ENHANCED ADS, 1 x APSW.

SUPERIOR ECM, BACKUP SYSTEMS.

Basic/Effective Signature 3 (D8)   **POINTS VALUE 393.**

8) GROUND-ATTACK AEROSPACE FIGHTER:

MEDIUM vehicle (class 3), AEROSPACE mobility, FGP power, Armour 2.

Capacity for 3 external Ordnance Loads (DFO pods); 1 x APSW.

ENHANCED ECM.

Basic/Effective Signature 3 (D8)   **POINTS VALUE 274** (plus cost of Ordnance Loads).

EXAMPLES OF COMPLETE UNITS
(using some of the vehicles given above):

HEAVY ARMOUR TROOP: 4 Heavy Hover Tanks as in (3) above; total points cost for unit = **1424 POINTS.**

MECHANISED INFANTRY PLATOON: 4 Wheeled APCs as in (5) above; three of the APCs each carry two RIFLE TEAMS (organised as one SQUAD of two teams) of LINE INFANTRY, while the fourth APC carries one APSW TEAM and one GMS/L TEAM (with ENHANCED missile system).

Total points cost for unit = 280 for vehicles plus 200 for Infantry (LINE troops) carried, = **480 POINTS for whole unit.**

MEDIUM ARTILLERY BATTERY: 3 Self-Propelled Artillery vehicles as in (6) above, plus one Area Defence vehicle as in (7) above; points cost for unit = 1020 POINTS (plus 210 for typical basic ammunition load of 1 x HEF, 1 x MAK and 1 x SMOKE).

[Additional elements such as a Counter-Battery Radar vehicle and/or extra ammunition transports could be added to this unit if desired.]

TERRAIN AVAILABILITY AND MODELLING:

*As with all miniatures wargames, **DIRTSIDE II** will be most enjoyable* when played on an attractive table-top terrain layout such as that shown in the photographs in this book.

At its simplest, terrain can be formed just by placing a cloth, sheet or blanket of a suitable colour on the table or other playing area and then putting other items (folded cloths, books etc) under the main cloth to form hills and features. Alternatively a cloth or rigid board may be painted in the desired 'ground' colour and hills, ridges etc. represented by contours cut from wood, foam or similar.

The ultimate home-made terrain is of course a fully-sculpted layout that can be fashioned in wood, plaster, expanded polystyrene or a combination of all these; rather than try to go into all the details of how to make something along these lines, we suggest you check out the many good books on landscape modelling that are published for the model railway hobby. Always remember, however, that you are making a layout for playing a game on rather than just a diorama to be looked at; features must be movable (or the whole system based on "geomorphic" boards or modules that can be fitted together in as wide a variety of ways as possible), hills should have stepped 'contours' that models can be placed on rather than having actual slopes, and so on. A good terrain is one that looks attractive, but also aids play rather than hindering it just for the sake of aesthetics.

An alternative to making your own terrain layout is to purchase one of the many good commercial 'modular' or 'integral' systems. Although such terrain does not appear cheap at first glance, when you consider the investment of time and materials costs involved in making your own layout then buying a commercial one becomes a lot more attractive. Most of the available systems are made from high-density polystyrene foam covered in grass (or sand) effect 'flock', which makes them light to transport while being surprisingly durable if looked after.

The terrain we have used in the photos in this rulebook (including the colour photo on the front cover) is the "GAMESCAPE" system made in the USA by GEO-HEX. The system consists of hexagonal terrain tiles about 12" across, which with a wide selection of 'partial' hexes and hill sections will allow virtually any type of ground feature to be recreated - hills, gullies, sunken roads, cliffs and even mountains! Available in grass green or desert yellow, the GAMESCAPE sets are probably the most versatile and variable form of ready-made gaming terrain you can buy. In addition, if you prefer to use a cloth terrain the GEO-HEX range includes some very nice 6' x 4' felt cloths coated in the same green or sand flock as the foam terrain tiles - very compact and easy to store if you haven't got a lot of space available. For further information, customers in the USA and other overseas readers should contact GEO-HEX at the address given below; in the UK, we at Ground Zero Games can provide more details on GAMESCAPE availability.

The other main type of modular foam terrain is the square-block system that will probably be familiar to all of you that have ever been to a Wargames convention or show in the UK. Flock-covered foam blocks are available in either 12" or 24" square, either plain or sculpted with a huge variety of different surface features; packs of assorted-sized hill contours are produced which may be stacked to give variable hill heights. The best and widest range of such modules available in the UK is that produced by TSS (TOTAL SYSTEM SCENIC), who produce not only green and 'desert' tiles but can also make them to order for you in virtually any "Science-Fiction" colours you might want - who says the grass isn't purple on Anthrax IV?? Write to TSS for further details, enclosing a stamped SAE.

Once you have your basic terrain (of whatever sort), you will need a few accessories to dress it up with. Roads and rivers are often already incorporated into the commercial terrains (the GEO-HEX tiles are double-sided in some sets, plain on one side and with a road/track on the other), but as an alternative they can be simply made from suitably coloured cloth, felt or card. For trees and vegetation there are wide ranges of "Earth-type" species available from both wargames and model railway suppliers, but an often-overlooked source of some very 'alien' growths is the local pet shop! Look in the Aquarium section, and you will find a huge selection of plastic plants intended for tropical fish tanks; these are usually in lurid colours, and many of them will pull apart to give you huge numbers of individual pieces that can be made into excellent alien trees and plants. The "trees" shown in the photos were all made from the "foliage" bits pulled off just ONE aquarium plant (actually a plastic 'bonsai tree'), with trunks from small woodscrews and bases from 1p coins - the plant cost £1.50 and gave us over 100 game trees!

Finally, you will probably need some 'man-made' features for your terrain - buildings, bunkers, bridges etc. There is a huge selection of suitable model buildings currently available, most of them being cast in resin. The models shown in the photos throughout the book are from three recommended manufacturers - ourselves at Ground Zero Games (our "MICROTAC" range, which includes the Modular City Block system shown on the back cover colour photo), the Snapdragon Studios range (also available from us at GZG, or direct from Snapdragon themselves) and The Drum (available direct from the address below).

FOR USA CUSTOMERS, both our own GZG Microtac ranges and The Drum's range are available from GEO-HEX, who are producing the GZG items under license as the CAPRICORN SPACE label.

MODEL AVAILABILITY:

In the recommended 1:300/1:285 scale, there is now a vast selection of suitable models of SF vehicles, infantry, air support, Combat Walkers and much more on the market. As **DIRTSIDE II** allows you to classify ANY item or vehicle that you wish to use, you can take miniatures from almost any mix of manufacturers to form your armies. The ranges and makes listed below are just a selection of what is available - check your local games shop and the specialist wargaming press for latest releases.

C.M. DESIGNS: This huge and varied range is available by mail order from ourselves at GZG, and has been described by independent reviewers as being "the best on the market" (yes, this is a totally unashamed plug for the range we sell, but be assured they are VERY good indeed!). The range covers everything from tracked, hover and Grav tanks and AFVs to VTOLs, ground-attack jets and even Riverine craft. In the UK and elsewhere, write to GZG for full details; in the USA and Canada, contact Geo-Hex, who are also producing these models under license.

[The cover photo shows CMD vehicles at almost twice their actual size.]

SCOTIA MICRO-MODELS: a small but growing range of very nicely sculpted models, largely hover and Grav vehicles plus some excellent packs of individual infantry figures - including some superb heavy Power Armoured troopers.

IRREGULAR MINIATURES: a large range of AFVs (mostly GEV/Grav types), VTOLs and some very useful little ready-based teams of infantry (as used in several of the photos in this book). The models are not as sharp or well detailed as some other ranges, but are effective when painted and are certainly VERY reasonably priced.

MINIATURE FIGURINES ("MINIFIGS"): A number of different ranges made under license from US manufacturers, including some very good ground vehicles, aerospace fighters and virtually every kind of Combat Walker you could ever need!

As mentioned, this list is far from exhaustive - there are many other small and large manufacturers around with suitable ranges, plus of course all the conversion potential offered by the various 'moderns' ranges in this scale. A present-day tank chassis fitted with a new turret from one of the SF ranges makes a perfect 2050's battletank!

CONTACT ADDRESSES: [details correct to the best of our knowledge at time of going to press]

GROUND ZERO GAMES: "Fizno", Barking Tye, Needham Market, Suffolk, IP6 8JB. [For full catalogue (including CM Designs and Snapdragon ranges as well as GZG products) please send 75p plus an A5 SSAE, or 5 International Reply Coupons for overseas enquiries.]

CM DESIGNS: Tofte Cottage, Tofte Manor, Sharnbrook, Bedfordshire, MK44 1HH.

SCOTIA MICROMODELS: 32 West Hemming Street, Letham, Angus, Scotland DD8 2PU.

SNAPDRAGON STUDIO: 3 Norleaze, Heywood, Nr. Westbury, Wiltshire BA13 4LQ.

IRREGULAR MINIATURES: 69A Acomb Road, Holgate, York YO2 4EP.

THE DRUM: 107 Watling Street West, Towcester, Northants NN12 7AG.

MINIFIGS: 1-5 Graham Road, Southampton, Hants. SO2 0AX.

TSS: PO Box 51E, Worcester Park, Surrey, KT4 8NQ.

USA/CANADIAN/S.AMERICAN READERS CONTACT:

GEO-HEX: 2126 North Lewis, Portland, Oregon 97227, USA. [Gamescape terrain, GZG, CMD and Drum ranges.]

VERY IMPORTANT! WHEN WRITING TO ANY MANUFACTURER OR STOCKIST, ALWAYS REMEMBER THE COURTESY OF INCLUDING A STAMPED SELF-ADDRESSED ENVELOPE (or International Reply Coupons, available from your Post Office, if an overseas enquiry) FOR A REPLY.

BIBLIOGRAPHY:

The books listed below are merely a small sample of the vast quantity of "Combat SF" available. They are included here because all of them have relevance to the kind of battles and forces that **DIRTSIDE II** seeks to portray.

John Dalmas – THE REGIMENT

Gordon Dickson – The DORSAI series – (TACTICS OF MISTAKE, SOLDIER ASK NOT, DORSAI and others); COMBAT SF.

David Drake – The HAMMERS SLAMMERS series: (HAMMERS SLAMMERS, COUNTING THE COST, AT ANY PRICE, ROLLING HOT, THE WARRIOR); SPACE INFANTRY (ED.); THE MILITARY DIMENSION; CROSS THE STARS.

Roland Green - PEACE COMPANY

Joe Haldeman – THE FOREVER WAR; SUPERTANKS (ED.); BODY ARMOR 2000 (ED.).

Robert Heinlein – STARSHIP TROOPERS.

William Keith and Andrew Keith – THE FIFTH FOREIGN LEGION series - (MARCH OR DIE, HONOR AND FIDELITY, COHORT OF THE DAMNED).

David Langford – WAR IN 2080 (Non-Fiction).

Keith Laumer – BOLO (and THE COMPLEAT BOLO).

Ralph Peters – THE WAR IN 2020.

Jerry Pournelle – THE MERCENARY.

GLOSSARY OF TERMS:

ADS	Area Defence System
APC	Armoured Personnel Carrier
APFC	Anti-Personnel Fragmentation Charges
APL	Assistant Platoon Leader
APSW	Anti-Personnel Support Weapon
BMF	Base Movement Factor
BR	Broken (Confidence Level)
BVP	Basic Vehicle Points
Casevac	Casualty Evacuation (aka Medevac)
CBR	Counter Battery Radar
CFE	Chemical Fuelled Engine
CL	Confidence Level
CO	Confident (Confidence Level)
DFFG	Direct-Fire Fusion Gun
DFO	Dead Fall Ordnance (aircraft weaponry)
DMR	Dispersed Mine Round (artillery round)
ECM	Electronic Counter Measures
FGP	Fusion Generation Plant
FireCon	Fire Control
FNG	F***ing New Guy
HEF	High Explosive Fragmentation (artillery round)
GEV	Ground Effect Vehicle (hover vehicle)
GMS	Guided Missile System
Grav	Anti-Gravity drive system (also Mag-Rep)
HAR	Heavy Artillery Rocket
HBT	Heavy Battle Tank
HEL	High-Energy Laser
HKP	Hyper-Kinetic Penetrator
HMT	Hydromagnetic Turbine
HVC	High Velocity Cannon
IAVR	Infantry Anti-Vehicle Rocket (aka "Buzzbomb")
ICV	Infantry Combat Vehicle (also MICV)
LAD	Local Air Defence
Mag-Rep	Magnetic Repulsion drive - similar to Grav
MAK	Multiple Armour Killer (artillery round)
MBT	Main (or Medium) Battle Tank
MDC	Mass Driver Cannon
MICV	Mechanised Infantry Combat Vehicle
MRL	Multiple Rocket Launcher
NOE	Nap Of Earth
PDS	Point Defence System
RAM	Rocket Assisted Munitions
RFAC	Rapid-Fire AutoCannon
RO	Routed (Confidence Level)
RSW	Rigid Side Wall (air cushion watercraft)
SH	Shaken (Confidence Level)
SLAM	Salvo LAunched Missiles
ST	Steady (Confidence Level)
VSP	Vehicle Size Points
VTOL	Vertical Take Off and Landing
ZAD	Zone Air Defence

THE RECORD CARDS:

The use of a RECORD CARD for every different TYPE of vehicle (or Aircraft, boat etc.) in your forces is one of the keys to making DIRTSIDE II fast and easy to play.

Each Record Card carries virtually all the data necessary to use that particular type of AFV in the game, INCLUDING all the ranges, Die Types and even Damage Validities for its weapons. This means that while the game is in progress, each player simply keeps the cards in front of him for those vehicles he is using - the vast majority of situations that occur in the game can then be handled simply by looking at the relevant card rather than having to flick through the rulebook or hunt through tables on a Reference Sheet.

Players should try to build up a "library" of cards for the vehicles they design; the cards are sized to fit in an ordinary Index Card box. Once this is done, for any battle simply take out the relevant cards for the different types of vehicles in each player's force (an average game force probably will not have more than around half-a-dozen different TYPES of vehicles involved per side).

[The Record card has been designed to be as general as possible, while still having space for all the important bits of information for most "normal" vehicle types. As the design system in DIRTSIDE II is so open and the range of models available is so vast, there may well be a few times where the data spaces on the card have to be modified or relabelled to cope with a particularly unusual vehicle.]

A full page of blank Record Cards is provided for you to photocopy (permission is granted to do this for personal use only); most modern photocopiers should be able to reproduce them directly onto thin card rather than paper, which is of course much better. We suggest that you get a few copied up onto different colours of card, to colour-code either the general types of vehicles or the different forces you have.

[PACKS OF PRINTED AND TRIMMED RECORD CARDS WILL SOON BE AVAILABLE FROM GZG - contact us for details and prices.]

DIRTSIDE II		NAME	DEIMOS/SD		TYPE	HEAVY GEV TANK

SIZE CLASS	LARGE	BASIC SIGNATURE	4	STEALTH LEVEL	1	EFFECTIVE TARGET DIE	D 8
MOBILITY TYPE	SLOW GEV			BASIC MOVE	12	POINTS VALUE	356
FIRECON	SUP.	ECM	ENH. D 8	ARMOUR	FRONT 4	SIDE	3

TYPE/CLASS	MOUNT	UPTO	CLOSE RANGE DIE	CLOSE RANGE VALID HITS	UPTO	MEDIUM RANGE DIE	MEDIUM RANGE VALID HITS	UPTO	LONG RANGE DIE	LONG RANGE VALID HITS
MDC/4	TU	30"	D12	ALL	42"	D10	R/4	54"	D 8	RED
GMS/H (ENH)	TU	48"	D 8	R/4		D			D	
PDS (ENH)	TU		D 8			D			D	
			D			D			D	
			D			D			D	

OTHER EQUIPMENT AND NOTES	APFC, 1 APSW

RECORD CARD EXAMPLE:

Filling out the Record cards should be self-explanatory in most areas once you know the rules of play, but to give you an example the card below is completed for the same "DEIMOS" Heavy Hover Tank that we used in the DESIGN example on P.16.

Note that wherever a "D" is printed on the card, this is a prompt to insert the DIE TYPE used for that particular system, range etc.

The Weapon Data lines have all the necessary spaces for Type, Mount (eg: Turret or Fixed), ranges, normal Die Types and Chit validities for direct-fire weapons; in the case of weapons that do not need all this information simply use the spaces for what IS relevant (as for the GMS/H in the example, which just needs one "maximum" range band rather than separate Close, Medium and Long ranges).

Anything not specifically covered on the card (such as Infantry carried, in the case of an APC or MICV, and a reminder about the "free" APSW fitted to ALL vehicles) should be entered in the "Other Equipment and Notes" box at the bottom of the card.

DIRTSIDE II — NAME / TYPE

SIZE
CLASS
MOBILITY TYPE
FIRECON

BASIC SIGNATURE
ECM [D]

STEALTH LEVEL
BASIC MOVE
ARMOUR FRONT

EFFECTIVE TARGET DIE [D]
POINTS VALUE
SIDE

TYPE/CLASS	MOUNT	UPTO	CLOSE RANGE DIE	VALID HITS	UPTO	MEDIUM RANGE DIE	VALID HITS	UPTO	LONG RANGE DIE	VALID HITS
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	

OTHER EQUIPMENT AND NOTES

DIRTSIDE II — NAME / TYPE

SIZE
CLASS
MOBILITY TYPE
FIRECON

BASIC SIGNATURE
ECM [D]

STEALTH LEVEL
BASIC MOVE
ARMOUR FRONT

EFFECTIVE TARGET DIE [D]
POINTS VALUE
SIDE

TYPE/CLASS	MOUNT	UPTO	CLOSE RANGE DIE	VALID HITS	UPTO	MEDIUM RANGE DIE	VALID HITS	UPTO	LONG RANGE DIE	VALID HITS
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	

OTHER EQUIPMENT AND NOTES

DIRTSIDE II — NAME / TYPE

SIZE
CLASS
MOBILITY TYPE
FIRECON

BASIC SIGNATURE
ECM [D]

STEALTH LEVEL
BASIC MOVE
ARMOUR FRONT

EFFECTIVE TARGET DIE [D]
POINTS VALUE
SIDE

TYPE/CLASS	MOUNT	UPTO	CLOSE RANGE DIE	VALID HITS	UPTO	MEDIUM RANGE DIE	VALID HITS	UPTO	LONG RANGE DIE	VALID HITS
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	

OTHER EQUIPMENT AND NOTES

DIRTSIDE II — NAME / TYPE

SIZE
CLASS
MOBILITY TYPE
FIRECON

BASIC SIGNATURE
ECM [D]

STEALTH LEVEL
BASIC MOVE
ARMOUR FRONT

EFFECTIVE TARGET DIE [D]
POINTS VALUE
SIDE

TYPE/CLASS	MOUNT	UPTO	CLOSE RANGE DIE	VALID HITS	UPTO	MEDIUM RANGE DIE	VALID HITS	UPTO	LONG RANGE DIE	VALID HITS
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	
			D			D			D	

OTHER EQUIPMENT AND NOTES