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CREDITS:

"The drop on Mhung'Du was the only hot-zone drop I ever did. Normally Command reckons they're too expensive – much better to land everyone in a nice quiet bit of back-country and then mount an ordinary overland assault. That takes time though, and on Mhung'Du they needed results fast – a Eurie relief force was supposed to be on its way and the brass wanted everything sewn up nice and tight before they got there.

We were in the second wave, the big landers with all the armour and support. The PBI went down in the first wave, in the little interface boats – lots of 'em to make the ground defences have to work at it.

We heard that the Brockford dropped thirty boats, all of Delta battalion, and only six made it dirtside. Typical Command screwup, they told us that most of the defences had been "neutralised" by the Fleet bombardment. All I can say is that a lot of them must have un-neutralised themselves by the time we got there.....

My Great-Great-Grandad used to tell me about the time he was parajet dropped on Rio back in the Americas War. He was in the Royal Marines – five strike groups went in, he and about twenty others were the only ones to come out. That was back in '064; they gave him a pair of cyberlegs to replace the ones that some Geek burned off with a plasma grenade. He always used to say that was the best thing that ever happened to him – reckoned the tin bits reduced the strain on his heart, and the old boy lived till he was 118 and decided he didn't want any more patch-up jobs.

Yeah, sorry, rambling again.... Anyway, we were lucky enough to hit dirt in one piece. B and D Squadrons got down OK too, but Charlie Squadron's lander took too much triple-A about a thousand metres up and just fell apart – don't think anyone got out of it. We grounded about a klick outside the city and got all dozen tanks out in two minutes, just like a drill. We must have done it by the book, 'cause Captain Travis was actually sounding pleased for once when he gave us the Tac briefing – old man Travis was that sort of officer, the by-the-rules-no-matter-how-bloody-stupid-it-is type (hey, you DID say you were going to edit this, didn't you??).

So, next thing we're rolling into the town with no goddam Infantry to support us! Yes, I know everything was a mess by then and there weren't enough of the Pongoes left to go round, but any Tankie will tell you armour can't fight in an Urban Zone without backup from the footsloggers.

The Captain was leading in Able One-One, sitting up there in the turret just like he was on some bloody parade! Never even saw the monofilament across the road that took his head off. From there on

things just went downhill – we were taking incoming and even our AIs couldn't give us any targets to shoot back at. The last thing I remember was this Eurie gook jumping out in front of us with a buzzbomb, then all of a sudden the turret wasn't there any more and I'd got a faceful of splinters and liquid osmium.

Dunno what happened to the gook – guess I probably ran him over. I woke up on the C-Vac on the way back here, with some cute-sounding little QA nurse trying to tell me why I couldn't see. These new eyes are pretty good once you get used to them – hey, I know guys back home that were paying fifteen kay for a pair, and the Army gives me mine for nothing! By the way, anyone ever tell you how good you look on InfraRed...?

(Transcript of interview with Trooper/Driver Daniel M. Kassel, "A" Squadron, 17th/21st New Anglian Lancers. Filed 12/09/2167 at Caledon Base Med/Rehab facility by Margaret Nakagi, ConFed News Service.)

INTRODUCTION:

DIRTSIDE II is a rules system for playing combined-arms ground combat games with miniatures, in a science-fiction setting. The rules themselves are written as a 'generic' system, intended for use within virtually any SF background or setting that the players desire. This book is a development of the original **DIRTSIDE** rules first published several years ago, and during this rewrite we have tried to remain true to the concepts and ideas that made the first edition so well-accepted and liked by many SF gamers. On the other hand, we decided early on that a major revision of the actual mechanisms of play was required to make the game flow faster, and to allow battles with larger sized forces; thus although these rules bear little resemblance to the first **DIRTSIDE** in terms of game mechanics, we hope that we have kept enough of the "flavour" of the original game that this new edition will appeal to 'old hands' and newcomers alike.

Basically, this is a game about armoured warfare – that is, battles using tanks and mechanised Infantry. As such, it is really an extrapolation of present-day warfare into a future setting, which is the way combat is usually presented in most SF films and books. We have tried to recreate the style of battles from the kind of literature listed in the bibliography; books like David Drake's "Hammer's Slammers", Robert Heinlein's classic "Starship Troopers", Gordon Dickson's "Dorsai" series and so on. Thus **DIRTSIDE II** reflects the 'popular' view of SF combat – troopers in powered armour suits, huge hovertanks, lasers and railguns. No-one knows what warfare will REALLY be like in the next fifty years, let alone the next two or three centuries – in all probability it will be as different from today's actions as the Gulf War was from the Boer War. Perhaps tanks and Infantry will survive in some form, perhaps they won't; here we assume they will, because a game terrain full of nicely-painted figures and AFVs is much more fun than an empty battlefield with a couple of robot drones flying over it!

DESIGNERS' NOTES:

When we first embarked on re-writing **DIRTSIDE** for this new version, we had to set a number of basic goals: 1) the system had to be as generic as we could make it, without leaving too many gaping holes that the players would have to fill in themselves; 2) it had to be simple and flowing in play, without the need for endless reference back to charts and tables, and 3) it had to be able to cope with large forces (up to, say, Battalion sized) while still remaining playable in a reasonable space of time. Above all this, the game had to be FUN!

That is what we set out to achieve; we think that we've managed to get pretty close, but we won't know for sure until YOU try it out and tell us what you think!

Looking at point 1), writing a truly generic game is a bit of a minefield for any designer. So often, games claim to be generic but then fall into the trap of tying their own background so tightly into the fabric of the rules that trying to use them in any other setting requires a major hatchet-job. Having already provided a fairly well-developed (though optional) background for our **FULL THRUST** Starship Combat rules, it

was a great temptation to expand on this timeline to the extent that it "took over" **DIRTSIDE II** and made it just another background-specific rulebook with the word "generic" thrown in a few times to confuse people. We sincerely hope that, in the end, we've avoided doing that – as with **FULL THRUST**, the background IS there in the appendices, but it is presented purely as an option for you to use if you wish; the design and points cost systems will enable you to classify and use virtually any equipment that you wish, and combined with the notes on unit organisations should allow almost any desired "future history" to be used as a game setting.

Of course, some compromises have to be made somewhere – a good example being naming the weapon systems. Just because we've called one system a "High Energy Laser" doesn't mean that you can't call it something else entirely if that fits your own background better!

As to goal 2), it was obvious that the mechanisms of the first-edition **DIRTSIDE** were somewhat slow and cumbersome, and something much "slicker" was needed for the rewrite. After a great deal of thought and testing, we came up with a combination of concepts which, although individually not original, have not (to the best of our knowledge) been used together in a single game before.

The end result is the system used here – heavy on the hardware (all the polyhedral dice so beloved of the dungeon-bashers, plus that fancy set of coloured counters that you've been looking at and wondering what the hell it was doing in a miniatures game!) but WITHOUT the need to constantly look up results in myriads of charts and reference sheets; basically the dice and the counter chits take care of all the variables, leaving you free to get on with your tactics. At first sight, some of the mechanisms may seem unusual – probably because they ARE unusual for a game of this sort – but spend a few minutes reading through the rules and examples; we think you'll be as surprised as we (initially) were at just how well and easily they work!

Now to point 3); this really grew naturally from the second goal, in that if you make the system simple and fast-playing then it naturally becomes easier to handle larger forces. The rules function well for forces of up to roughly battalion-level (up to, say, ten to twelve platoon-sized 'units' per side), and will handle more if time, space and players allow. The most practical size of game is probably 'short battalion', which is referred to in the unit organisation notes as a "Combat Group" – the equivalent of, say, a couple of Companies plus extra support elements.

Finally, but certainly the most important: MAKING IT FUN. There is little point in writing what may be technically the best rules system in the known world, if it does not grab players' imaginations and make them actually want to get the toys out on the table. We put a lot of thought into this right from the start, and eventually came up with a set of mechanisms that we liked: the sequence of play ensures that both (or all) players are ACTIVELY involved throughout the turn (no sitting back for half an hour or more while your opponent makes his move and blows away half your forces, without you being able to lift a finger to protect them). In addition, the "opposed rolls" used in much of the fire-combat mechanism actually give you the feeling of being able to "defend" your units against the incoming fire. Most of the basic rules are logical extensions of just a few very simple principles, and thus are easy to pick up and to remember in the heat of battle. Above all, don't forget that ANY rules system is no more than a framework for your own ideas – nothing in this book is cast in tablets of stone, and you should feel free to add, delete and modify as much or as little as you wish (provided, of course, that you agree it with your opponents first).

Read the rules through, then use them as you will – just remember to enjoy it!

USING THIS RULEBOOK:

When writing this rulebook, we have tried to cover all the major topics and rules in sufficient detail that most events occurring in the game will be covered in some form. In order to do this, most of the sections not only give you the RULES to cover certain situations but also contain notes and discussions on WHY the rules work as they do.
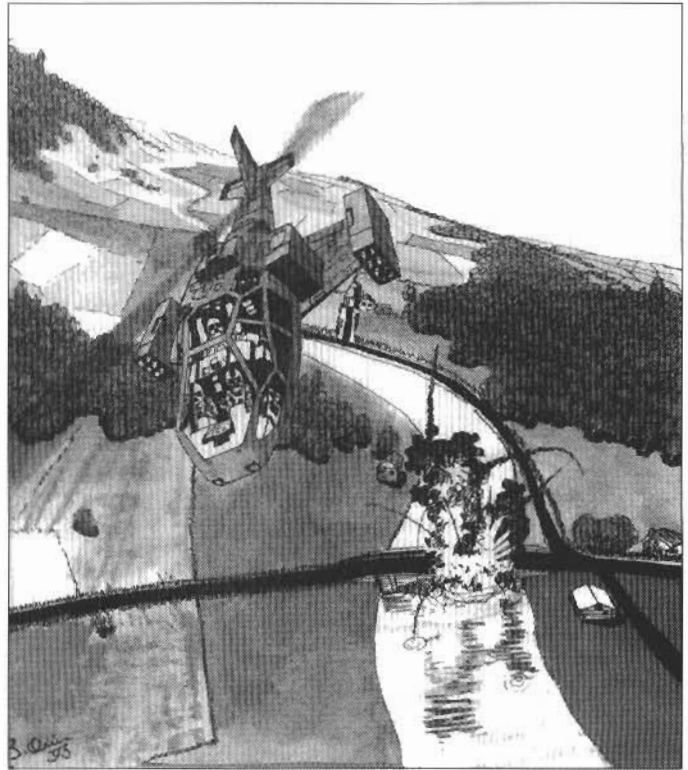
The entire book should be read through once; when this is done and you have grasped the basic principles behind the rules then all you should need are quick reminders of the most important points – these are highlighted in **BOLD** type throughout the rule book for ease of reference.

Once you have played a couple of basic games and got used to the systems the Vehicle Record Cards for your forces should be all you need for play.

DICE TYPES AND CONVENTIONS:

DIRTSIDE II departs from the entirely D6-based system of the original **DIRTSIDE** and makes use of a range of "polyhedral" dice from four-sided through to twelve-sided – thus giving five different dice types, commonly referred to as **D4**, **D6**, **D8**, **D10** and **D12** according to their respective numbers of faces.

While this selection of dice may be unusual at first to some new players, anyone who has had any involvement with the Roleplaying side of gaming should be familiar with them and will almost certainly have access to a full set of such dice; in any case, they are readily (and inexpensively) available from virtually any games shop or mail-order supplier, either individually or as sets.

As a bare minimum you will require one full set of the five dice to play **DIRTSIDE II**; at many times during play, however, it will be necessary for both players to roll dice simultaneously – hence it will be much simpler and quicker if each player involved has his or her own set of dice (when a full set costs about as much as a couple of tanks for your army, it is not that big an outlay). If you can also provide a small "pool" of extra dice for use in certain circumstances then so much the better.

Whenever the rules call for a die roll to be made, the TYPE of die to be used will be specified. When a rule tells you to use "+1 Die Type", this does NOT mean rolling the die and adding 1 to the score – what it means is that you should select the NEXT DIE TYPE UP, eg: if the usual die for that roll would be a D6, then "+1 Die Type" indicates that a D8 is rolled instead. Similarly, if "-1 Die Type" is called for then use the next LOWER die (eg: a D6 drops to a D4).

In very general terms, any factor (weapon accuracy, unit quality etc.) that is of BELOW AVERAGE status will use a D6 as its normal die type; those that rank AVERAGE will use a D8, and those ABOVE AVERAGE a D10. Circumstances that increase the chance of success will RAISE the die type by 1, while adverse circumstances will reduce it by 1.

Although there are certain exceptions to this general principle (these are clearly specified when they occur) once you have got used to the concept of using the different die types then you are well on the way to grasping the basic mechanisms of play.

THE COUNTER SHEETS:

With this book, you will have two sheets of die-cut counters (also referred to in the rules as 'markers', or 'chits'). Carefully punch out all the counters, sort them into types and store them safely – small grip-top plastic bags or a segmented storage tray are the best ways.

The BLACK counters, which are normally referred to as the DAMAGE CHITS, should be placed in a mug, jar or similar opaque container from which they may be easily drawn at random during play; this is the "pot", and all Damage Effects are resolved by drawing one or more of the black chits from it when required. Always remember to replace all chits in the pot immediately after resolving each individual attack or other situation, and stir them about now and then to ensure a fully random drawing!

All the other counters on the sheets are MARKERS for use in play; they are designed to indicate the status and condition of units on the table, and to perform other game functions to effectively remove the need for written record-keeping during the game. Most other rules require some measure of written notes and record sheets to keep track of the condition of your various units – we have tried to eliminate this as far as possible by using the counters and markers, as in our opinion written records not only slow the game down but can also be easily (and perhaps sometimes deliberately!) overlooked in the heat of the battle.

The markers are designed to actually be placed on the table next to the units and elements they affect, thus showing at a glance the exact status of any given unit. While it is true that this allows your opponent to see the condition of your units, it does work both ways, and we feel that this is a small price for the ease of play that the markers allow.

Being aware of the fact that some players may prefer NOT to actually see the markers placed on the table (perhaps for aesthetic reasons), we suggest that if preferred players may use a FORCE STATUS SHEET, which can simply be a sheet of paper with a 'box' ruled on it for each unit in the player's force. The relevant markers for each unit are then placed in the box relating to that unit, rather than on the table itself. This method still dispenses with the need to make any written records, but does also remove the immediate visual link between the markers and the models they affect.

While we would recommend the 'markers on table' method, please feel free to use the Status Sheet method if you are happier with it.

GAME SCALES AND DEFINITIONS:

The game is designed for play with 1:300/1:285 scale miniatures (1:300 being the UK standard, 1:285 the USA, although both scales are so close as to be effectively the same thing); this scale is also known as 6mm. An alternative model scale is 1:200, which will work equally well – very few SF models are made in this scale, but the wealth of "modern" ranges allow good conversion potential. At the extremes, the ultra-tiny 2mm models may be used (just use the Modern/WWII ranges – in 2mm you can hardly tell the difference!!) or you could potentially go as large as 15mm if table space and budget allows!

For the intended 1:300 scale, we recommend using a ground scale of **1" (or 25mm) on the table equals 100 metres.** All distances in the rules are given to this ground scale, so if you wish to use something else then you will have to convert all ranges, movement etc. accordingly. At 1" = 100m, a good-sized game may be fought on a table around 6' x 4', though a lot of the early playtesting was done on tables

as small as 4' x 2' and still worked well with smallish forces. If you have a very large area available, feel free to use 1" = 50m (thus doubling all ranges and moves).

Each individual model represents one real vehicle (an ELEMENT) and each Infantry figure represents one man – Infantry are always based in teams of between two and five figures on a small base, each such team being classed as a single Element.

[As a note to readers unfamiliar with some of the conventions of miniatures gaming, the "groundscale" and "model scale" are two different things; if the groundscale (and thus ranges etc.) were to be the same as the model scale, ie 1:300, then even the lightest weaponry would be able to fire from one end of the table to the other. Thus it is necessary to distort the relationship between model size and terrain to achieve a playable system – this is why a single building can actually represent a group of structures, and a couple of trees can represent a whole wood.]

The other scale that needs some explanation is TIMESCALE. This is the amount of "game time" that a full turn is assumed to last. In **DIRTSIDE II**, the Timescale is fairly loose, and in most cases pretty irrelevant to normal play; most real combat consists of sudden bursts of frantic firefight, separated by long periods of movement, scouting, observation and general inactivity. Thus although a game turn might contain only a few seconds' worth of actual fire combat, the full turn may safely be assumed to occupy several minutes of elapsed time – in fact if it is necessary to determine how long a battle has lasted in game terms (eg: if it is part of a campaign) then treat each full turn as being equivalent to 15 minutes; hence a four-turn game would represent a battle lasting about an hour of campaign time, which could be an important factor if either side is trying to bring reserve forces up to the battlefield.

LINE OF SIGHT AND LINE OF FIRE:

Some rules systems provide lengthy mechanisms, charts and formulae to determine whether lines of sight are blocked by intervening terrain, especially where the observer and the target are themselves at differing height levels. All that we feel is required, however, is a reasonable attitude and a bit of common sense! **If you can stretch the tape-measure in a straight line between the two elements without the tape touching an intervening obstacle, then there is a clear line of sight (and hence line of fire, if within range).** As the relationship between model size and terrain scale is distorted anyway (see notes on scales and definitions), any more detailed method is actually pretty abstract and not all that relevant to play in the majority of cases. If you REALLY want to work it all out mathematically in every case then feel free to do so!

Lines of sight/fire are blocked by raised ground, buildings and woods, unless the observer/firer is on terrain high enough that he may see over the obstacle. Smoke and other obscuration agents will also block sight and firing.

The MAXIMUM distance that any ground-based line of sight or line of fire can be traced is 60"; this is defined as the maximum acquisition range of any sensor system in play (one very good reason for this is that 60", or 6000 metres in the recommended groundscale, is actually not far off being horizon distance on a roughly Earth-sized world, as seen from the turret of an average AFV!).

VTOL craft in low mode (NOE or terrain following) may be hidden by obstructions in the same way as other elements; take the straight line from the height of the actual model on its stand, which in most cases should be a fairly good approximation of the 'real' scale altitude. All airborne Aerospace craft, and VTOLs in high mode, are assumed to actually be flying considerably higher than the model's stand height, and are generally visible from anywhere on the table (unless there is a particular VERY tall terrain feature in the way) – conversely, such aircraft can also SEE anything on the table themselves, and thus potentially attack it.

[As with some other cases in the rules, if you really do have a dispute that is not resolvable by discussion then simply roll a die or flip a coin! If an umpire is available then his decision must be final.]

THE COUNTERS, CHITS AND MARKERS:

The full set of counters (2 sheets) consists of the following:

A) THE DAMAGE CHITS (BLACK counters):

The NUMERICAL damage chits (100 in total – 50 RED, 25 YELLOW, 25 GREEN)
(example of VALUE 2 chit shown – actual values are a mix of 0, 1, 2 and 3)

"BOOM" chits – catastrophic hits. (Quantity 5).

MOBILITY hits – immobilises vehicles. (Quantity 7).

SYSTEMS DOWN – TARGET vehicle affected. (Quantity 5).

SYSTEMS DOWN – FIRING vehicle affected. (Quantity 2).

B) THE COMMAND AND CONFIDENCE MARKERS:

COMMAND MARKERS – Colour indicates Unit Quality, Number indicates Leadership rating. (66 in total – 18 GREEN, 18 ORANGE, 30 BLUE)

CONFIDENCE LEVEL MARKERS – Grey counters, Letters indicate Confidence Level. (74 in total – 18 "CO", 18 "ST", 14 "SH", 12 "BR", 12 "RO")

C) THE PLAY MARKERS:

PANIC markers (Quanitity 7).

"RUINED BUILDING" markers (Quantity 14).

DAMAGED vehicle markers (Quantity 28).

IMMOBILISED vehicle markers (Quantity 14).

"SYSTEMS DOWN" markers (Quantity 14).

LETTERED MARKERS for hidden unit identification etc. (Quantity 24).

"DUMMY" markers (Quantity 18).

OBJECTIVE markers
(14 in total – 7 x "1", 4 x "2", 3 x "3" values).

"DUG-IN" unit markers (Quantity 18).

HIGH MODE markers – for VTOL units (Quantity 10).

UNDER FIRE markers (Quantity 21).

IMPACT POINT markers – for Artillery Fire (Quantity 7).

MINEFIELD (conventional) markers – also used for Artillery Ammunition (Mine rounds). (Quantity 12).

"JUMPING" MINES markers (Quantity 6).

ACTIVE SENSORS markers for AREA DEFENCE SYSTEMS (Quantity 10).

EVASIVE MOVEMENT markers (Quantity 7).

ABANDONED VEHICLE markers (Quantity 14).

GUIDED MISSILE markers – to indicate Missiles in flight (Quantity 11).

D) THE ARTILLERY AMMUNITION MARKERS:

HEF – HIGH EXPLOSIVE FRAGMENTATION rounds (Quantity 14).

MAK – MULTIPLE ARMOUR KILLER rounds (Quantity 10).

SMOKE rounds (Quantity 14).

BIOCHEM rounds (Quantity 7).

NUCLEAR ("NUKE") rounds (Quantity 7).

COMMAND, CONTROL AND COMMUNICATIONS:

One of the primary assumptions we have made in **DIRTSIDE II** is that whatever happens to the rest of Military technology (in terms of weapons, propulsion systems etc), the one field that is certain to advance faster than any other is that of information technology. Computers and electronics already run a lot of the 20th century high-tech battlefield, and as each new generation of processing equipment is developed you can be sure that the Military are going to be among the first people to use it!

Information-gathering on its own, however, is not enough. In fact, the recent developments in the Gulf have shown that giving a commander access to TOO MUCH information is almost as bad as too little – no human mind can cope with the massive input and sort out the relevant bits from the garbage. What we are assuming for the future setting of this game is that sufficient advances have been made in the field of supercomputers and artificial intelligence that a commander is assisted by a multitude of electronic "aides" that can actually make decisions about which information he NEEDS to know at any particular moment. The command computers will access vast amounts of incoming data from sensors of all kinds (airborne remotes, satellites, cameras on virtually every vehicle and trooper's helmet etc.) and provide the officer with a continually-updated visual or holographic simulation of what is happening on the battlefield; he then makes the tactical decisions for each unit or formation, and these are relayed back down the electronic links to the individual unit commanders and the men on the ground. This effective bypassing of the traditional chain of command (ie: Battalion CO to Company CO, then to Platoon leader and finally to Squad leaders) will mean a much quicker and more fluid response to orders, and will also lead to a more flexible unit organisa-tion – while Companies, Battalions and Regiments will still exist for administrative purposes, in action their constituent units will be intermixed to provide the best force for each particular situation.

To achieve this, of course, we also have to assume a few other things such as relatively unjammable communications links (think tight-beam communicators, Lasers/Masers, phased-neutrino etc.), lots of throw-away drones (when the enemy shoots the first one down, just pop a couple more up...) and so on – but is this really any harder to accept than the technology you see every night on the news reports?

In most Combat Groups (ie: the group of forces under the player's command on the table) there will be a Command unit of several vehicles and/or Infantry teams; this unit (and in particular a specific Command Vehicle or team) acts as a focus for all the data transfers up and down the command links, thus playing a very important part in the battle. The Command Vehicle does NOT, however, necessarily carry the overall force Commander himself – he is much more likely to be safely dug-in in a bunker well back from the battlefront, or even in an orbiting starship in some cases. Hence the loss of the command vehicle (or even the entire command unit) to enemy action, while it is obviously a serious and disruptive blow, is not totally catastrophic; it will cause temporary confusion while communications links are re-established and routed through backup channels, and will have a definite detrimental effect on the overall confidence levels of the force – the troops will be able to continue with the battle, but at somewhat reduced efficiency.

So, we have a situation where a single overall commander is able to direct the flow of his battlefield force almost as the player of the game moves his miniature tanks. The one thing that the technology will NOT be able to overcome (in any civilised human army, anyhow) is the perennial problem of the individual soldier's will to fight. Barring the use of drug-induced mind control over its troops (or totally robotic forces...) no army will be able to guarantee that every trooper is going to do exactly as his officers tell him – to good old Private Funk, it will still seem a much better idea to stay safely hidden in the bottom of his foxhole than to get up and charge the enemy emplacement as his Sergeant is telling him to!

Such natural reactions, and their results on the fighting efficiency of the unit, are covered by the rules concerning unit quality, confidence levels and confidence tests – quick, simple procedures determine whether or not a unit will actually carry out the orders it has been given. Technology has given the Commander easy and efficient ways to tell his troops what to do – but whether they will do it is another matter entirely!

OVERVIEW OF WEAPON SYSTEMS TECHNOLOGY

The various types of weapons used in the rules are mainly extrapola-tions of current trends in armament development, combined with some of the more popular concepts from SF literature and films. In keeping with the generic nature of the rules, players should feel free to add or delete systems as they wish, to conform to whatever background they wish to use. Most of the weapons described are suitable for near to mid-future settings, and are in keeping with the (optional) background supplied in the appendices.

The continued evolution of the high velocity tank guns used in the late 20th century has led to this type of weapon reaching the limit of its potential, though such guns remain in common use – usually with binary liquid propellants and very sophisticated targeting systems. An offshoot of this development has brought an increasing trend for Hyper Velocity weapons, using either reaction-propelled rounds (the Hyper Kinetic Penetrator) or the electromagnetic "Railgun" principle (the Mass Driver Cannon).

Small calibre rapid fire cannons are still in very common usage as defensive and support weapons, particularly on MICVs and scout vehicles. Conventional Autocannons use caseless rounds or liquid propellants, while "Gauss Autocannons" (small calibre Mass Drivers) are a popular and reliable alternative with higher-tech forces.

Energy weapons have developed to the point where a vehicle mounted Laser with enough punch to be an effective tank killer is now practical, given a suitable power source. Lasers are, for obvious reasons, the most accurate weapon system available – basically, once you have acquired the target then you've hit it! Despite this, Lasers still have enough disadvantages in combat use (such as their massive power requirement, relative vulnerability to chaff, smoke or aerosols etc.) that they have failed to replace many of the other weapons except for specialised uses.

There is another system that is normally classed as an "Energy Weapon", though in fact this is not really an accurate designation; this is the Direct Fire Fusion Gun, which fires a "bolt" of particles energised to a plasma state. The weapon is frighteningly effective, particularly at short ranges (before the plasma "bolt" begins to spread and diffuse some of its energy to surrounding air molecules). However, it is also a very complex system using very advanced and costly ammunition – one "round" for the gun is a cartridge containing the fuel slug, laser ignition system and an ultra-fast discharge power cell to "zap" the fuel into plasma and maintain the magnetic containment field that directs the bolt down the barrel of the weapon.

Guided Missile Systems, already highly developed by the close of the 20th century, have been further refined into compact user-friendly packages using very advanced smart guidance systems. Despite great developments is point-defence systems and countermeasures technol-ogy, these high velocity anti-vehicle missiles are still in widespread use in both vehicle and Infantry carried systems.

Finally in the Direct Fire arsenal is the SLAM (Salvo-LAunched Missile) system. SLAM packs fire clusters of small unguided rockets to saturate targets that are in direct line of sight of the firing vehicle, and can be devastatingly effective against both Infantry and armour.

Area Fire weapons (ie: Artillery) still fulfil their traditional roles of mass area bombardment, smoke laying and the like; Multiple Rocket Launcher systems are very much in favour with their capability to deliver a high volume of fire in a short time, though rocket-assisted

conventional Artillery and Mass Driver howitzers can come very close to this with the use of magazine-fed autoloaders. Artillery-delivered tank killers and mine-dispersing rounds are commonly used, and there are always the "nastier" forms of munition (mini-nukes and biochem agents) to use if the situation warrants them.

While most vehicle mounted main weapons are capable of some kind of anti-personnel fire, the most effective way of engaging Infantry from a vehicle is still an automatic weapon such as a conventional Machinegun, Minigun or Automatic Grenade Launcher. Weapons of this type are generally referred to as APSWs (Anti-Personnel Support Weapons).

A secondary form of anti-personnel weapon is the APFC (Anti Personnel Fragmentation Charge), which is a "belt" of shrapnel/flechette charges fixed around the hull of some combat vehicles; these charges are designed to fire outwards to deter enemy Infantry from getting too close to the vehicle.

To redress the balance somewhat, Infantry themselves may be equipped with GMS launchers for anti-vehicle fire, though these are still relatively bulky and only issued to specialist teams; for the "humble Grunt", his anti-armour weaponry is the Infantry Anti-Vehicle Rocket (IAVR) – a small, disposable tube-launched rocket similar in most respects to the LAW (light Antitank Weapon) of the 20th century. IAVRs are compact, cheap and reasonably effective at their short range, giving the ordinary Rifleman at least a chance of taking out an AFV that happens to get too close.

FORCE ORGANISATIONS AND ORDERS OF BATTLE:

A player in DIRTSIDE II takes on the role of the commander of a force generally referred to as a COMBAT GROUP. Combat Groups are ad-hoc formations created for specific missions or duties, and are formed from a selection of smaller "units", as detailed below.

The basic building-block of any force is a platoon-sized formation known throughout the rules as a UNIT. Such units consist of a number of individual ELEMENTS, each element being a single vehicle or team of Infantry (2-5 figures on a single base). units may be referred to as "platoons", "troops", "lances" or any other term that fits the background in use. A typical Armoured Unit would consist of between 3 and 5 tanks, although more or less may be used according to each player's specific organisation and preference; in game terms, a unit with few elements cannot easily absorb losses and remain functional, but an unit of many elements will lack flexibility in use – the choice is up to you. For Mechanised Infantry, a typical unit would have 3-5 APCs or MICVs, each with one or two embarked Infantry elements.

In 20th century terms, a number of platoon-sized units would then be combined into a Company, with several Companies then forming a Battalion or Battlegroup. In **DIRTSIDE II**, the assumptions we have made about the increased efficiency and flexibility of Command, Control and Communications (C-Cubed) mean that the concept of the "Company" has fallen into disuse – if it survives at all in your preferred background then it will be a purely administrative structure with little bearing on combat actions. Instead, commanders will select whatever individual units that they need (or that are available to them) to accomplish a specific mission; these component units are formed into a COMBAT GROUP, which may be of any size up to what would previously have been known as a Battalion – in other words, a player's force may consist of anything from just a couple of platoon-size units up to ten or twelve such units.

[Note: the counter-sheets provided with this rulebook should allow two players to each field forces of roughly 10-12 individual units as a maximum – ie: perhaps 40-50 vehicles or elements per force; games with larger forces are certainly possible, particularly with multiple players, but will require extra counters to be made or purchased. Additional sets of counter sheets are available direct from GZG; please send an SSAE for further information.]

As a very generalised example, a typical COMBAT GROUP for a medium-sized game might be:

1 unit (Troop) of 4 HEAVY BATTLE TANKS

2 units (Troops) each of 4 MEDIUM BATTLE TANKS

3 or 4 units (Platoons) each of 4 APCs or MICVs, each vehicle carrying 1 or 2 teams of Infantry

1 unit (Battery) of 3 ARTILLERY VEHICLES

1 Command unit of a Command Vehicle, an Area-Defence Vehicle and (say) 2 Missile Vehicles

Onto this basic formation could be added any mix of other units and supporting arms, such as a unit of 3 or 4 Transport VTOLs and embarked airmobile Infantry, specialist Engineering elements, Riverine craft etc. etc., to tailor the force to fit the particular mission that is being undertaken.

The whole point of this section is to give you guidelines for organising your forces, without going too much into specifics. To maintain the flexible and generic nature of **DIRTSIDE II** we have deliberately not laid down any hard-and-fast rules on the organisation of your armies, and you should feel free to experiment with as many different force compositions and styles as you wish. Just remember that most options will have their minus points as well as their apparent advantages! The key factor in any force organisation is the UNIT, as this is integral to the functioning of the Game Sequence; outside this, you are free to do virtually what you want (provided, of course, that (i) it is consistent with whatever background you are setting the game in, and (ii) that your opponents are happy with it!).

VEHICLE SIZE CLASSES:

Throughout the rules, vehicle elements are referred to by their SIZE CLASS; this is generally from Class 1 (VERY SMALL) through to Class 5 (VERY LARGE), although rules options are discussed for "Oversize" (ie: larger than class 5) vehicles if desired.

The available Size Classes are listed below, along with some notes as to the kinds of vehicles that fall into each Class:

Class 1 (VERY SMALL):
Very light scout vehicles, 'jeeps', fast attack 'dunebuggies' etc.

Class 2 (SMALL):
Light scout tanks, small APCs, small armoured cars etc.

Class 3 (MEDIUM):
Most Main Battle Tanks, heavier APCs and MICVs, Medium Artillery etc.

Class 4 (LARGE):
Heavy tanks, larger APCs, big Artillery pieces etc.

Class 5 (VERY LARGE):
Superheavy tanks and similar very big combat vehicles.

The Size Class of a vehicle determines how much (and what kind of) equipment, weapons and cargo it can carry, and also indicates the BASIC SIGNATURE of the vehicle (equal to the Size Class, eg: a MEDIUM vehicle has a Basic Signature of 3) which determines how easy the vehicle is to hit when fired at.

To determine how much CAPACITY a vehicle has for carrying weapons and other systems (and for transporting Infantry etc.), simply multiply the vehicle's Size Class by FIVE; thus a class 4 (LARGE) vehicle would have 4 x 5 = 20 Capacity points available.

WEAPON SIZE CLASSES:

Weapon types are defined by Size Classes in much the same way as vehicle sizes; weapons are generally available in sizes 1 (Smallest) to 5 (Largest), though not every different kind of system will be available in all sizes – for example, an RFAC is available in sizes 1 or 2 only, while an HKP only comes in classes 3 to 5. Full details of the possible sizes for each weapon type are given in the sections describing the weapon systems.

The Size Class of a weapon system determines its effective ranges, the damage it can inflict and how much space the system takes up when mounting it in a vehicle.

DIRECT FIRE WEAPONS SYSTEMS:

Direct Fire weapons are those which require a clear line-of-sight to the target, and are primarily used against "point" targets (ie: single vehicles) rather than against area targets. A number of systems are described below, but players are free to develop their own additional systems if they wish.

1) RAPID-FIRE AUTOCANNONS (RFACs):

These are "conventional" small-calibre shell-firing cannons, differing from their late 20th century counterparts only in their use of caseless rounds or liquid/binary propellants in place of the earlier cased ammunition. Many RFACs are multi-barrel "gatling" types, and most use electric drives for improved reliability and rate of fire. The RFAC still fulfils its traditional role as an anti-personnel or light anti-armour weapon on APCs, MICVs and scout vehicles, or as a secondary weapon on larger AFVs.

The RFAC is available in size classes 1 and 2 only, these very approximately corresponding to 20-25mm and 30-40mm calibres respectively. As their external power requirement is minimal, they may be used on vehicles with any type of Power Plant.

2) HIGH VELOCITY CANNONS (HVCs):

The HVC is the final development of the conventional high velocity tank gun, generally a large-calibre weapon firing superdense saboted rounds; most are fin-stabilised smoothbores, and use liquid propellants. The HVC still provides a relatively cheap option for main armament on tanks and other heavy AFVs; its simplicity and general reliability ensures it a long future in service, particularly with forces that cannot afford to support the more advanced systems.

HVCs are available in size classes 3 to 5; power requirements are small, so the system may be fitted to any vehicle within the usual size restrictions.

3) HYPER-KINETIC PENETRATORS (HKPs):

The HKP is probably the ultimate chemically-propelled anti-armour gun. Unlike the HVC, an HKP system uses a relatively small-calibre (but VERY long) barrel to develop hyper-velocities for its superdense long-rod penetrator rounds. Early models use liquid propellants, while the more advanced types actually use a very small plasma reaction to propel the round. The rate-of-fire of an HKP is not as high as that of a Mass-Driver, but the HKP is somewhat more versatile as it does not require the huge electrical input of the large electromagnetic weapons. Its one major failing is its inability to fire an effective explosive round, thus making it of little use against dispersed targets such as Infantry (a problem also shared by the MDC).

HKPs are available in size classes 3 to 5, and may be fitted to any vehicle subject to size restrictions.

4) MASS-DRIVER CANNONS (MDCs):

MDC is the term applied to all weapons which fire a kinetic-energy projectile by electromagnetic acceleration rather than chemical reaction. They are also commonly know as "Gauss Guns" and "Railguns". In common usage, MDCs of size classes 1 or 2 are referred to as "Gauss Autocannons" while those of sizes 3 to 5 are called Mass Drivers or Railguns. All MDCs are very small calibre weapons with a very high rate of fire, using solid slugs propelled at incredibly high velocities. Like the HKP, their small calibre precludes the use of practical explosive rounds – however their very high rate of fire makes them capable of limited anti-personnel use through sheer machine-gun-like density of fire.

MDCs are available in all size classes (1-5), but owing to their very high power requirements they are only usable on vehicles with suitable power plant systems (see Vehicle Power Plants).

5) HIGH-ENERGY LASERS (HELs):

Combat Lasers project a very short but very high-intensity pulse of coherent light energy, causing damage to the target by the sudden massive overpressure and explosive vaporisation effects as the beam's energy is released at the point of impact. HELs are, of course, extremely accurate (once the firecontrol sensors have acquired the target, a hit is virtually automatic) and their effective range is limited only by that of the acquisition system in use – although some attenuation of the beam occurs due to atmospheric ionisation, over the few kilometres at which the target can be seen and engaged this effect is negligible. Smoke, chaff, specialised aerosols and similar countermeasures are all effective in disrupting incoming Laser fire, but of course they all rely on advanced sensors to tell the victim he has been targeted in time to deploy the countermeasure!

A more passive form of laser defence is Ablative Armour, which "soaks up" much of the beam's energy as the ablative coating boils away without harming the main armour underneath. Ablative coatings are expensive, however, and are not widely used due to the relatively small number of laser-armed opponents that the average army is likely to encounter; the cost of HEL systems, coupled with their relatively poor armour penetration in comparison with other weapons, means that laser-armed vehicles are quite rare sights on the battlefield.

When engaging "hard" (armoured) targets, HELs use a single very high energy pulse; when they need to engage Infantry or other dispersed targets a lower power setting enables the weapon to "sweep" an area with rapid-fire bursts of much lower intensity. Such area fire does, however, have a much shorter effective range as the lower-energy beam is much more susceptible to the effects of atmospheric attenuation.

HELs are available in all size classes (1-5), but as with MDCs their very high power input requirements limit their use to vehicles which have suitable power plants.

6) DIRECT FIRE FUSION GUNS (DFFGs):

The DFFG is one of the most deadly anti-armour weapons available, despite having a relatively short effective range (due to the diffusion and energy loss of the plasma bolt once it leaves the magnetic containment of the weapon barrel). Each round of DFFG ammunition is self-contained, consisting of the hydrogen fuel charge, a flash laser ignition system to heat the fuel to plasma state, and the power supply that holds the plasma in containment until fusion occurs, when the bolt is released down the magnetically screened barrel. At short ranges, the penetrative ability and damage potential of the bolt is extremely high – even the most heavily armoured target is unlikely to withstand a close-range hit from a DFFG. As range increases, the bolt begins to spread and lose energy to the surrounding air, causing some spectacular visual effects but severely lessening its destructive potential at longer ranges. Anti-Infantry potential is good, as the plasma bolt will cause significant explosive and fragmentation effects when it strikes any solid object (including an area of ground).

DFFGs are available in all size classes (1-5), and may be fitted to any vehicle subject to normal size limitations (as the ammunition for a DFFG carries its own power source, the required external input is fairly small).

7) GUIDED MISSILE SYSTEMS (GMS):

The Guided Missiles used in **DIRTSIDE II** are a further refinement of the systems developed in the late 20th century; they are faster than their predecessors (though still much slower than a cannon projectile), and virtually all of them are the "fire and forget" type – operator guidance (either by wire or radio/optical link) is no longer necessary. Advanced semi-intelligent seeker heads have given missiles their own target identification and discrimination capabilities, and many are able to use terrain-following flight to minimise the effects of countermeasures. Nevertheless, the major disadvantage of the GMS is still its susceptibility to the great advances made in countermeasures – both active (point-defence) and passive (jamming). It is relatively simple for a properly equipped vehicle to either confuse or actually shoot down an incoming missile, and this has led to a trend away from using missiles as primary tank-killing weapons. They are, however, still in very widespread use as both vehicle and infantry-carried weapons, the latter type providing dismounted Infantry with sufficient punch to take out armour at reasonable ranges. The GMS is still a cost-effective and usable system, but does not dominate the battlefield as it did in the late 20th – early 21st centuries.

GMSs are available in size classes 1 and 2, which are denoted as GMS/L (Light) and GMS/H (Heavy) respectively. Infantry may only carry GMS/Ls, while vehicles may be equipped with L or H versions subject to normal size restrictions.

[Note that vehicles may be equipped with multiple missile systems if size restrictions permit; in this case each separate "system" represents the ability to fire one missile per turn, so a vehicle with 3 x GMS/L systems could salvo-fire up to 3 separate missiles per turn – but only all at the same target.]

8) SALVO-LAUNCHED MISSILE PACKS (SLAM):

The SLAM system operates in much the same way as the rocket pods often mounted on present-day attack aircraft; the pack contains many small unguided rockets that are fired in clusters, saturating the target with multiple hits. As the range increases, the cluster of projectiles spreads out, lessening the chance of hitting any one target but increasing the area bombarded – thus hits may also be scored on elements close to the one actually targeted. The large number of rockets fired and their high speed will overload the capabilities of point-defence systems, and as they are unguided they cannot be 'spoofed' by ECM or Stealth systems; this makes the SLAM pack a very effective weapon against even high-tech enemies.

SLAM packages are available in size classes 3 to 5, and may be fitted to any vehicle subject to normal size restrictions.
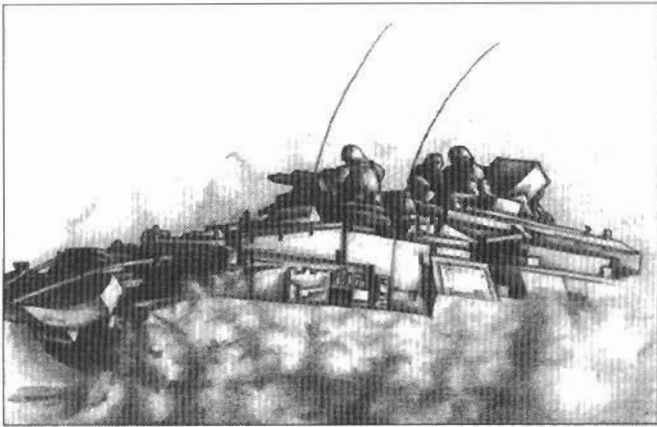
VEHICLE POWER-PLANT SYSTEMS:

There are three basic types of Power unit available for vehicles:

1) CHEMICAL-FUELLED ENGINES (CFEs): These are "conventional" motors/generators, either internal-combustion engines or gas turbine types, driving the vehicle either directly (mechanical transmission) or via an electrical or hydraulic transmission. CFEs are cheap, effective and well proven; they run on oil or alcohol based fuels, or synthetic equivalents.

CFEs are perfectly adequate to power most types of wheeled or tracked vehicles, and for the smaller GEVs; however, they are unable to provide the large surplus of electrical power needed to operate the larger Laser or Railgun weapons systems.

2) HYDROMAGNETIC TURBINES (HMTs): Power generators using an advanced version of the 'fuel cell' principle to provide electricity for both propulsion and weapons fire. Ample power is available for ground vehicles and all but the very largest GEVs, and enough surplus energy to support medium/large HELs and MDCs.

3) FUSION GENERATION PLANTS (FGPs): Small, compact Fusion generators are the most advanced and expensive type of vehicle power system, but they are the only type that can provide the massive amount of energy required for the biggest GEVs, Grav-driven vehicles and the largest power-consuming weapons.

The type of power plant used in a vehicle will affect the MOBILITY TYPE and the WEAPONS FIT that it can have, as follows:

If the vehicle is fitted with a **CFE** power system, it may use any of the following Mobility Types: any WHEELED or TRACKED mobility, SLOW GEV for up to size class 3 (Medium) vehicles only, or FAST GEV for up to size class 2 (Small) vehicles only.

With an **HMT** system, a vehicle may use any WHEELED or TRACKED mobility type, SLOW GEV if it is no larger than size class 4 (Large), and FAST GEV up to size class 3 (Medium) only.

FGP systems may be used to drive ANY mobility type, in any size class of vehicle; FGPs MUST be used in all GRAV, 'WALKER' or 'Oversize' vehicles.

For weaponry, the 'non-power-consuming' weapon types **(RFACs, HVCs, HKPs, DFFGs, SLAMs etc.)** may be fitted to vehicles with any type of power plant subject to normal size restrictions as laid down in the vehicle design rules. The weapons that require external power input **(HELs and MDCs)** are restricted as follows:

A **CFE**-driven vehicle may only be fitted with **HEL or MDC** systems up to TWO SIZE CLASSES LOWER than the vehicle's own size class; thus a Large (class 4) vehicle with a CFE engine could only mount a HEL or MDC of size 2 or smaller.

HMT-powered vehicles may support **HEL or MDC** weapons of up to ONE SIZE CLASS LOWER than the vehicle size (eg: maximum of a class-3 weapon on a size 4 vehicle).

Finally, **FGP** systems may power ANY weapon subject to the normal size limitations.

VEHICLE ARMOUR:

AFV armour is assumed to be various forms of high-tech laminates and composites, superdense semi-collapsed materials, synthetics and aligned-crystal alloys. Such armours give reasonable protection against the very powerful weaponry in use. **During the design procedure, each vehicle type is assigned an ARMOUR VALUE, which is a numerical rating from 0 (very thin, basically a 'soft-skin' vehicle) to a maximum of 7 (ultra-heavy armour used only on "oversize" vehicles).**

NO VEHICLE MAY CARRY AN ARMOUR RATING HIGHER THAN ITS BASIC SIZE CLASS; thus a size 4 vehicle could only be fitted with a MAXIMUM of Armour 4.

[This indicates that Armour 5 is the maximum for any "normal" combat vehicle; Armour ratings 6 and 7 are only possible if you are designing "oversize" vehicles, using the notes on P.15.]

The Armour Rating actually indicates the armour used on the FRONT surfaces of the vehicle; the SIDES, TOP and REAR are assumed to have a value of 1 LESS than the frontal armour.

Eg: a vehicle with an Armour Rating of 5 would have armour 5 on the front, but only armour 4 on sides, top and rear.

Note that there is no Armour Value less than 0; a basically 'unarmoured' truck would have armour 0 all round.

OPEN-TOPPED vehicles count as Armour 0 against all ARTILLERY and SLAM fire, regardless of what other armour they have.

There are two kinds of "special" armour that may also be fitted if desired during the design procedure; these are **ABLATIVE** and **REACTIVE** armours.

ABLATIVE armour is a special coating that vapourises when hit by LASER (HEL) fire, absorbing much of the energy of the beam. It can be added on top of any normal Armour Value, and does not alter the effects of the armour against any weapons except a HEL; when attacked by Laser fire the effects of the Ablative armour are as covered in the Damage Validity chart.

A vehicle fitted with Ablative Armour is denoted by putting an "A" suffix to its basic Armour Value, eg: armour value 3A.

REACTIVE armour consists of explosive blocks or panels on the vehicle hull and turret which explode outwards when hit, disrupting the penetrative power of incoming shaped-charge rounds. As such warheads are generally used only by Guided Missiles and a very few other weapons (most use kinetic-energy penetrators which are basically unaffected by the Reactive armour) the use of Reactive armour has declined somewhat since its introduction in the late 20th century, though it is still in use by some armies. As with Ablative, the effects of reactive armour are factored-in to the Damage Validity details for the weapons that are affected by it. A vehicle so fitted is denoted by an "R" after its basic armour value, eg: 4R.

[Note that due to the physical incompatibility of the two systems, it is not possible to fit Ablative AND Reactive armour to the same vehicle!]

VEHICLE SIGNATURES AND STEALTH LEVELS:

All vehicle elements have a BASIC SIGNATURE which is equal to their SIZE CLASS; this represents how easy they are for enemy sensors and Fire-Controls to spot and lock-on to, and thus in game terms affects the "TARGET" Die Type that is rolled to 'defend' the vehicle when it is fired at (by any Direct Fire systems except Guided Missiles, which are defended against by the vehicle's ECM systems).

It is possible to ALTER (ie: reduce) a vehicle's "effective" signature by fitting it with STEALTH capabilities. STEALTH covers a wide variety of methods, both physical (radar-absorbing paint, heat-emission masking etc.) and electronic, which render the vehicle more difficult for the enemy to see and 'acquire' as a target. Even traditional camouflage paint can be considered as "Stealth" masking against the old Mk.1 Eyeball sensor!

STEALTH capabilities are bought in terms of LEVELS, each level costed according to the size of the vehicle; for every STEALTH LEVEL fitted, the EFFECTIVE SIGNATURE of the vehicle goes DOWN by 1. Thus a class 4 vehicle with TWO levels of Stealth would have a "basic" signature of 4, but an "effective" signature of 2.

SYSTEM QUALITIES AND LEVELS:

SYSTEM QUALITY refers to the level of sophistication and ability of the various Electronics and Sensor packages with which elements are equipped.

The different types of SYSTEMS comprise:

FIRE CONTROL SYSTEMS: The package of sensors and computer modules that assist the Gunner of a vehicle in controlling Direct Fire weaponry.

ELECTRONIC COUNTER MEASURES (ECM): Systems designed to jam the guidance of incoming Missiles.

GUIDANCE SYSTEMS: The sensor and guidance package of a Missile Launcher (GMS), that determines how well the missiles can seek their targets and avoid enemy ECM.

POINT- and AREA-DEFENCE SYSTEMS (PDS and ADS): Sophisticated sensor suites linked to fast-reaction weapons, used for defence against incoming missiles (and in the case of ADS, as an Anti-Air weapon as well).

Each SYSTEM used on an element is rated as one of three QUALITY LEVELS: BASIC, ENHANCED or SUPERIOR.

BASIC systems are exactly what they sound like – the simplest and cheapest form of the System, with relatively limited abilities;

ENHANCED systems are better than Basic, costing more but having a better chance of doing their job successfully;

SUPERIOR are the top-line, state-of-the-art systems – the most complex and expensive, but also the most effective.

For example, a vehicle with a BASIC Fire Control System uses a D6 as its **normal Die Type** for Direct Fire shots; one with an ENHANCED system would use a D8, and a SUPERIOR FireCon would use a D10. The general rule is the better the system, the 'bigger' die type it uses.
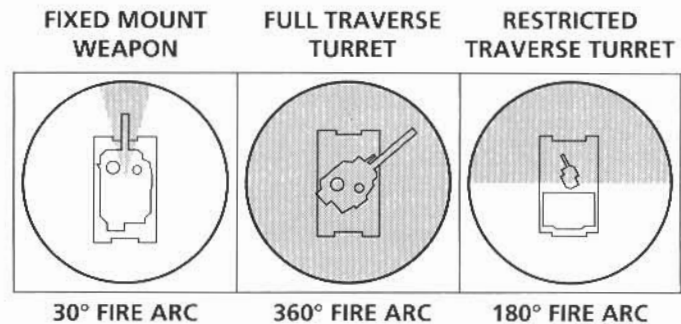
SPECIAL NOTE: each individual vehicle or other element needs only ONE of each system; thus even if it has multiple weapons, one Fire Control system will cover them all. Multiple GMS Launchers, however, DO have multiple guidance systems as these are integral to the Launchers.

ARCS OF FIRE:

Weapons that are mounted in TURRETS have an all-round (360°) Arc of Fire, unless some specific feature of the particular vehicle design makes this impossible (for example, some multi-turreted designs available in model form have obvious limitations to the traverse of some or all turrets) – in such cases a 180° Arc is suggested for restricted-traverse turrets, 90° each side of the turret's normal facing.

FIXED MOUNTS have much more limited Fire Arcs; a vehicle-mounted weapon in a Fixed Mount may only fire through a 30° Arc, ie: 15° either side of the vehicle centre-line. Targets outside this arc may not be engaged without physically turning the vehicle, which counts as MOVEMENT; as **Fixed Mount weapons may ONLY be fired BEFORE moving,** it follows that such weapons may only fire in the direction they are pointing at the end of their previous activation.

OPTION: If preferred, the Fixed Mount fire arc may be the same as the "FRONT" arc used in the 'Angle of Attack' rule on P.32, ie: the arc bounded by lines extended through diagonal corners of the model. This method gives a wider arc for most models, but has the advantage of not requiring an arc of fire template to be made or used – in the end, it is up to you.

FIXED MOUNT WEAPON	FULL TRAVERSE TURRET	RESTRICTED TRAVERSE TURRET
30° FIRE ARC	360° FIRE ARC	180° FIRE ARC

WEAPONS FIT LIMITATIONS:

The size and number of weapons that a vehicle may be fitted with is determined by its Size Class, and by the type of mounts (ie: fixed or turreted) that are chosen for the weapons.

When equipping a vehicle with weapons, select the LARGEST (or "Primary") weapon to be fitted first; if it is to be in a **FIXED MOUNT** (ie: like a Tank Destroyer or Assault Gun), **the amount of CAPACITY that the weapon takes up is equal to TWICE the weapon's SIZE CLASS; if it is to be in a TURRET, it takes up THREE TIMES its SIZE CLASS.** Example: a class 3 weapon (of whatever type) fills 6 points of Capacity if in a Fixed Mount, or 9 points if in a Turret.

[This capacity includes the gun mechanism, crew space, ammunition storage etc; turreted guns take more capacity due to the internal space required in the hull for the turret mechanism and so on.]

Note that this refers to DIRECT FIRE WEAPONS ONLY (including SLAM packs); other weapons such as Guided Missile Systems, Point Defence, etc. all occupy fixed amounts of capacity as listed in the systems table on P.16, regardless of whether they are turret-mounted or not.

When further weapons are added to a vehicle that already has a Turreted main weapon (including adding extra barrels of the same weapon type to make a multiple mount), all the additional weapons only occupy TWICE their class in terms of capacity – the extra bulk of the turret has already been accounted for in the primary weapon. Thus to put (say) a TWIN-MOUNT class 3 gun system in a turret would use up 9 capacity points for the first barrel, but only 6 for the additional one – a total of 15 points capacity for the twin-mount.

NO VEHICLE MAY BE FITTED WITH MORE WEAPON SYSTEMS THAN ITS BASIC SIZE CLASS; thus a class-3 vehicle could carry no more than THREE weapons systems. Multiple mounts count every barrel towards this limit, and a Point-defence System counts towards the total as well. The only weapon NOT counted in this total is a single APSW, as below:

**ALL MILITARY VEHICLES ARE FITTED WITH ONE "FREE" APSW, CAPABLE OF ALL-ROUND FIRE; THIS WEAPON DOES NOT COUNT TOWARDS ANY WEAPONS FIT LIMITATIONS, OR TAKE UP ANY CAPACITY.** [This is assumed to be a Machinegun or equivalent, on an external remote mounting. Additional APSWs may be fitted if desired, but any such extras each occupy ONE capacity point and DO count towards total weapons fit limitations.]

NOTE: it is RECOMMENDED that players limit the MAXIMUM SIZE of any single weapon system on a vehicle to ONE CLASS LARGER than the vehicle's own Size Class; thus a class-3 vehicle could not carry any single weapon larger than class 4. This is not an absolute ruling however, and players may (if all agree) experiment with fitting ANY gun size into whatever vehicle will hold it, within the limits of the Capacity points – it IS possible therefore to put a Fixed-Mount class 5 gun on a class 2 hull, but only just; there will not be any capacity left over for any other systems at all.

Examples:

1) A LARGE vehicle (class 4) will have 20 Capacity points. If we wish it to carry a turreted class-4 main gun (of whatever type), that will use 4 x 3 = 12 points of capacity, leaving 8 for other systems. We could then add a second class-4 barrel to make a twin-mount, but that would cost the full 8 points we have left and not leave room for anything else. We therefore decide to add a class 2 secondary weapon (perhaps an MDC/2) which, although mounted on the turret, only uses 4 capacity (the turret has already been accounted for) and leaves us 4 points over to use for defensive and other systems.

2) A MEDIUM (class 3) vehicle has 15 capacity points. If we wish to build a "Tank Destroyer" with a large fixed gun, we could fit a single class-4 weapon in a Fixed Mount at a capacity cost of 8; this leaves us with 7 points over. Deciding that a fully-traversable second-ary weapon would be a good idea, we mount a class-2 gun (maybe an RFAC-2) in a turret, at a cost of 6 capacity points – as we did not fit a turret for the main weapon, the extra capacity MUST be allowed for on the secondary weapon. The ONE point thus left over could be used for an extra APSW (to supplement the one fitted "free"), or for any other capacity-1 item.
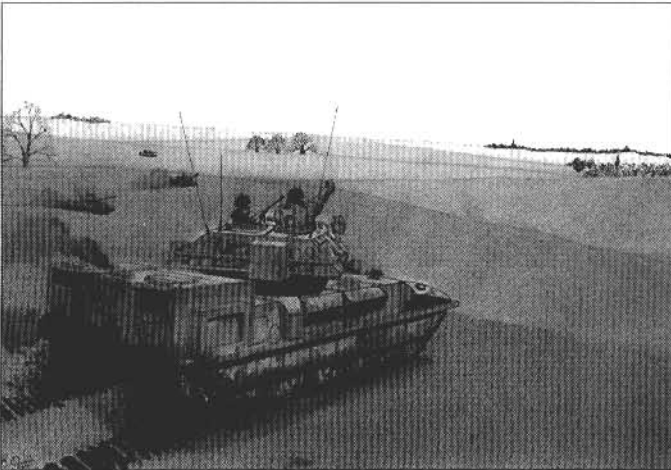
INFANTRY AND CARGO TRANSPORT:

Vehicles that are designed to carry Troops or cargo must have a certain amount of their internal CAPACITY points dedicated to such accommo-dation. The capacity requirements are as follows:

Carrying ONE Infantry element (LINE or MILITIA troops) takes 4 points of capacity;

ONE element of POWERED INFANTRY takes up 8 points of capacity;

one "LOAD" of CARGO takes 4 points of capacity (eg: Artillery Ammunition);

any smaller vehicle takes up 8 x the Size of that vehicle (eg: carrying a SMALL vehicle takes 16 points of capacity).

a Command/Communications centre takes 8 points of capacity.

Example: To build an MICV (Mechanised Infantry Combat Vehicle, which is basically an APC with sufficient armament to hold its own in combat), we could choose a MEDIUM (class-3) hull, giving us 15

capacity points. Assuming we wish it to carry TWO elements of Line Infantry, these will require a total of 8 points of capacity, leaving 7 points over. We can then fit a turreted class-2 weapon (probably an RFAC-2 or MDC-2) at a capacity cost of 6 (with one point spare), or alternatively a class-1 turreted gun at 3 points and a Heavy Missile System at 4 points capacity.

ARTILLERY VEHICLE DESIGN:

Artillery vehicles are designed in the same way as any other ground vehicle, with the following notes and limitations: [REFER TO P.37 FOR DETAILS OF ARTILLERY WEAPON TYPES.]

i) Artillery Weapons have SIZE CLASSES as follows:

LIGHT ARTILLERY weapon (RAM MORTAR) = **class 2.**

MEDIUM ARTILLERY weapon (RAM Guns, smaller MRLs) = **class 4.**

HEAVY ARTILLERY weapon (MD Guns, large MRLs, HARs) = **class 6*.**

* though outside the normal 1-5 class range, class 6 weapons use exactly the same calculations in all cases; they are available ONLY as Artillery – no class 6 Direct Fire weapons are permitted.

ii) The capacity (and points cost) of an Artillery weapon INCLUDES its Fire Control (as Level of FireCon is not relevant to Artillery fire), and the space for ammunition storage. **ALL ARTILLERY WEAPON MOUNTS TAKE UP CAPACITY EQUAL TO 3 x CLASS.**

(Eg: a class 6 (Heavy) Artillery piece would need 3 x 6 = 18 capacity, so could just fit on a class 4 vehicle with a couple of capacity points over for basic defences.)

iii) Artillery Arc-of-Fire is assumed to be the FRONT 180° Arc; mounts are taken as limited traverse, or else the rounds are steerable in flight (eg: Heavy Artillery Rockets).

iv) Artillery weapons are generally only fitted to specialised Artillery vehicles, though it IS possible to mount them on other AFVs in addition to Direct Fire weapons if sufficient capacity is available; such a 'hybrid' vehicle could then act as either a normal combat vehicle OR as an Artillery piece as desired, but would have to follow all the relevant rules for each type.

v) COUNTER-BATTERY RADAR (CBR) takes up 14 capacity points; it is normally mounted on a separate vehicle, but could possibly be carried by an Artillery vehicle itself if sufficient capacity was available.

vi) Although the vast majority of Artillery pieces are Self-Propelled (ie: mounted on vehicle chassis), it IS possible to use TOWED Artillery if desired. **An Artillery weapon on a towed carriage has a Size Class (for Signature purposes) of one LOWER than the class of weapon** (eg: a towed MEDIUM ARTILLERY piece would be a size 3 element), and requires a "tractor" of an equal class or larger to move it around. Limbering/unlimbering a towed piece to prepare for firing or movement takes a full activation.

When costing towed Artillery in points, only the cost of the weapon system itself is paid for – the carriage costs nothing (though the Tractor vehicle must be costed as a normal vehicle); the tractor is assumed to carry all the "ready" ammunition for the gun.

Towed Artillery counts as a softskinned target, ie: Armour rating 0.

INFANTRY FORCES:

There are a number of different types of INFANTRY (or non-vehicular) elements available; the basic types are:

MILITIA INFANTRY: this category covers very lightly-equipped troops, probably with basic and/or obsolescent weaponry. Although we use the term "Militia", this also covers second-line and reserve forces, irregular troops, rebels/guerrillas and so on. Though often poorly equipped, this type of Infantry will NOT necessarily be poor soldiers – in some units, many may be of Regular or even Veteran status – their abilities should be determined in accordance with the 'history' of the unit and the scenario being played.

LINE INFANTRY: the bulk of most first-line Infantry forces; troops equipped with modern weaponry and combat armour, but still relying on "battle taxi" APCs or MICVs for transport. As with the Militia type, the Line Infantry category defines only the level of equipment of the troops, NOT their training or status.

POWERED INFANTRY: the high-tech troopers in full suits of Powered Combat Armour; these suits enable the men to move far faster and further than their 'unpowered' counterparts, protect them much more against enemy fire and allow them to carry far heavier weaponry. The Powered Infantry are the 'shock troops' of the battlefield, able to act independently of transport vehicles if necessary and to fight in the most hostile environments -their psychological effect alone (especially against lighter Infantry types) is of considerable value. In general, most Powered Infantry units will be of Regular or Veteran status rather than Greens – the majority of armies take only seasoned fighters to undergo the extra training necessary to become Powered troopers.

CAVALRY: the idea of using Cavalry (ie: troops on riding animals) in an SF environment is not as strange as it may first sound. Horses or other beasts can be transported to colony worlds as frozen embryos, require minimal maintenance, reproduce themselves and need only organic fuels! Additionally, they can traverse certain types of terrain that are otherwise impassable to all but airborne units. For many small settlements and rural colonies with limited resources and technological base, the use of animals for transport of troops and supplies may well be a very attractive and cost-effective proposition. The use of Cavalry under these rules generally assumes horses or horse-like creatures with single riders, but there is absolutely no reason why you should not experiment with more 'exotic' ideas (Power-Armoured troops riding genetically-modified elephants...?).

It is assumed that in most cases Cavalry units will fight more as Mounted Dragoons, using their animals for transport only and fighting as dismounted Infantry (Militia or Line types) – however if you REALLY want to do a mounted charge into close-assault then feel free to try it!

All Infantry elements represent TEAMS of men on a single base. A given Team may consist of from two to five men; the following are the different types of team available, any of which may be made up from any of the above-mentioned kinds of troops and equipment:

A **RIFLE TEAM** is the 'basic' Infantry element; it consists of four or five troopers equipped with Personal Arms ("rifles") and (usually) IAVRs. Most such teams will also contain a light team-support weapon (an LMG or GPMG equivalent), but this is NOT considered a separate weapon for firepower purposes – its effect is factored into the overall "personal arms" firepower of the team.

An **APSW TEAM** is a two or three-man element carrying an Anti-Personnel Support Weapon (eg: a heavy MG, automatic grenade launcher or equivalent); the weapon team only carry Close-defence personal weapons in addition to the APSW.

An **ASSAULT TEAM** is a four or five man team (like a Rifle Team), but armed with specialised Close-Assault weapons – they may NOT fire in Ranged Firefight combat, but get a bonus over normal teams in Close-Assault combat. [Note Assault teams are available as MILITIA or LINE types only – Powered troops already have the increased combat capabilty.]

A **FIRE DESIGNATION TEAM** is a two or three man team dedicated to observing and designating for Artillery fire support. They carry only close-defence weapons in addition to their designator and sensor equipment.

An **ANTI-ARMOUR TEAM** is two or three men carrying a GMS/L system for anti-tank use; they carry only close-defence weapons in addition.

A **LOCAL AIR DEFENCE TEAM** consists of two or three men with a LAD system (such as a light AA Missile launcher), plus close-defence weapons.

An **ENGINEER TEAM** consists of anything from two to five men with demolitions, mine-clearing and other specialist combat engineering equipment, plus close-defence weapons.

Note that RIFLE TEAM Personal Arms and APSWs are the only weapons that can perform ranged fire during an INFANTRY FIREFIGHT; all other teams have only close-defence weapons (machine pistols, SMG equivalents etc.) for personal protection, which may be used in Close Assault combat but NOT in ranged firefights.

RIVERINE CRAFT:

The term RIVERINE CRAFT covers vessels built for coastal, river and other "brown-water" operations, usually in support of land forces. They may be 'conventional' boats, hydrofoils (usually with retractable foils to permit operation in very shallow water), Surface-Effect craft using a "rigid sidewall" (RSW) Air Cushion, and even small submersible craft. Riverine craft will be more likely to be used by lower-tech forces, as the advent of better GEVs and then Grav vehicles will tend to make them redundant for many missions; however a 'boat' of whatever sort is still a low-cost and fairly efficient form of transport in areas with suitable waterways available.

RIVERINE CRAFT DESIGN:

Watercraft are designed and costed using exactly the same procedures as for ground vehicle elements. There are a few different limitations imposed on watercraft design, as follows:

i) **Riverine craft may not carry Armour rating more than TWO LOWER than their size class** – thus a class 4 (LARGE) vessel could only have up to Armour 2. Vessels of size 1 and 2 can only be Armour 0 (softskinned).

ii) **No vessel may mount a WEAPON of a class more than ONE LOWER than their size class** – eg: a class 3 (MEDIUM) watercraft could only mount class 1 or 2 weapons (however, it could still mount up to 3 such weapons – the NUMBER limitation remains as normal). Size 1 vessels MAY mount a single class 1 weapon.

iii) Watercraft require Power Plants as normal, with usual limitations on certain weapon types according to power available. For mobility, any Power Plant type is sufficient for conventional boats and hydrofoils, but RSW Air Cushion craft have the same size/power limits as GEVs.

Some of the larger watercraft types that players may wish to use (eg: Landing Craft and big Fire-Support Monitors) will require the OVER-SIZE VEHICLE rules discussed on P.15.

AIRBORNE VEHICLES:

Flight-capable vehicles are divided into two groups; VTOLs and AEROSPACE CRAFT.

VTOLs are flying combat vehicles that may hover, land/take-off on table, operate at NOE (Nap-Of-Earth, or 'terrain following' height) and so on. The category covers conventional Helicopters, "Jetcopters", some WIG (Wing In Ground-effect) craft and 'pure' vectored-thrust VTOLs which stay airborne through simple brute thrust alone. VTOL craft are the equivalents of 20th century battlefield helicopters, and perform many of the same missions – troop transport and airmobile assault, tank hunting, Casevac of wounded etc.

AEROSPACE CRAFT covers high-speed ground attack fighters (mostly capable of operations in atmosphere and in low-orbit), interceptors and such. Interface landing craft (from little squad-size assault boats up to huge Dropships carrying an Armoured Squadron or more) are also classed as AEROSPACE CRAFT, but for their design and use see INTERFACE LANDINGS on P.43.

AIR VEHICLE DESIGN:

Both VTOL craft and Aerospace craft are designed in basically the same way as ground elements, with the following provisions:

i) **For CAPACITY (to fit weaponry, ordnance and other cargo), VTOL craft and Aerospace craft all have the same as ground elements (ie: 5 x Size Class).**

ii) **For Power Plants, ALL air vehicles must pay the costs for FGPs** (this does not necessarily mean that they use Fusion power, but covers the fact that they need much more powerful and costly engines than ground vehicles). Note also the special costs for air mobility types in the points lists, which are additional to the Power Plant costs.

iii) Direct Fire weaponry on Air vehicles is more limited than on ground elements. **VTOLs may employ small turrets (usually chin-mounts) that may hold APSWs or class 1 weapons only;** other VTOL weapons (and ALL Direct Fire weapons on ground-attack Aerospace craft) must be in fixed mounts, firing forward. **Additionally, NO WEAPON OVER CLASS 3 may be fitted to any Air vehicle.**

iv) For DFO (DEAD-FALL ORDNANCE) on Aerospace craft, one AMMUNITION MARKER (ie: the ability to make one attack on a Beaten Zone) takes up 4 capacity points.

v) **Armour ratings on Air vehicles are limited to MAXIMUMS of Armour 2 for VTOL craft, and Armour 3 for Aerospace craft; additionally, no air vehicle may carry Armour heavier than 1 LOWER than their Size Class.** Thus a size 3 VTOL could only carry Armour 2, but a size 4 or 5 VTOL would ALSO be limited to Armour 2 maximum. [For Air vehicles, the "armour" rating does not simply indicate thickness of armour carried but also the general "survivability" of the airframe.]

AEROSPACE WEAPONS:

Aerospace craft may carry Direct Fire weapons and Guided Missiles which function in the same way as their ground-fired counterparts. They may also carry DEAD-FALL ORDNANCE (DFO), which are Cluster Bombs (or Submunition Dispensers) available in the same types (MAK and HEF) as normal Artillery munitions.

Each aircraft may carry one or more "ORDNANCE LOADS", each such Load representing the Ordnance dropped on one attack pass (though multiple Loads may be dropped simultaneously on the same target point if desired).

To record the Loads carried on each aircraft, use some of the Artillery Ammunition markers, either kept off-table or placed with the aircraft model as desired. **One Ammunition marker represents one Ordnance Load of the relevant type, and is expended when the Load is dropped.**

COMBAT WALKERS:

The Combat Walker is a very specialised type of fighting vehicle: this is the huge "Mecha" so popular in Japanese SF and now well-known to gamers the world over thanks to several systems dedicated entirely to them. While the actual rationale behind building and using them is tenuous to say the least (if you are going to stand thirty metres tall on the modern battlefield, you may as well paint TARGET on yourself in neon letters...), the fact remains that the idea of the "big tin Samurai" striding across the table is great fun!

Walkers are thus included here entirely as an optional rule; if you like them and wish to create that kind of battle, then use them freely – if you hate the things then just leave them out. Be warned, however, that even if you do use them they are NOT the all-powerful kings of the battlefield – they are just another type of AFV, and will get KO'd just as quickly as anything else (or possibly quicker; as they say, "the bigger they are – the easier they are to Nuke from orbit...").

COMBAT WALKER DESIGN:

Walker vehicles come in three basic types: the true **Combat Walker** (effectively a Tank on Legs), **Infantry Walkers** (small Mecha, 3-4 metres tall and used like a very heavy powersuit) and **Transport Walkers** (big multi-legged troops carriers, as used in certain popular SF films...).

All Walker vehicles are designed using the same basic system as any other vehicle; the size class limitations are:

Combat Walkers and Transport Walkers may be class 4 or 5 (VERY big ones may be class 6 or 7 if oversize vehicles are being permitted);

Infantry Walkers are all class 1 vehicles.

When fitting weaponry to Walkers, normal size and capacity limitations apply; the only variation is that **ALL weapon mounts cost as for FIXED MOUNTS (ie: 2 x Class) in terms of capacity,** yet have a special ARC OF FIRE as noted below.

Maximum Armour ratings are as per normal vehicles, ie: equal to Size class.

SIGNATURES of Walkers are ONE HIGHER than normal for their size class, due to their height and overall size – thus a class 4 Walker has a BASIC signature of 5. Stealth systems can reduce this signature if used, and are highly recommended if you want your Mecha to survive very long! [Note that this gives a class 5 Walker a Signature of 6 – if no Stealth is used, refer to section on Oversize vehicles for rules on firing at elements with signatures greater than 5.]

DAMAGE to Walkers is treated the same as for any other vehicle – Mobility hits simply indicate Leg damage, and so on. A Walker with a leg blown off is as immobilised as a tank missing a track.

An example of a typical Combat Walker design might be:

Class 5 (VERY LARGE) vehicle; WALKER mobility; FGP Power; Armour 5.

(Capacity = 25).

Armament: DFFG/4 x 2 (one in each "arm", but counts as twin-mount) [capacity = 16];

SLAM/3 (shoulder-mount) [capacity = 6]; ENHANCED PDS [capacity = 3]; APSW x 1 ("free", no capacity).

Other systems: SUPERIOR FireCon, ENHANCED ECM, Stealth-1 (Basic Signature 6, Effective Signature 5).

WALKER ARCS OF FIRE:

Though Walker weapons are treated as "FIXED MOUNTS" for capacity and design purposes, they actually have much more flexibility than a normal vehicle Fixed Mount due to the much higher mobility and agility of the Mecha design.
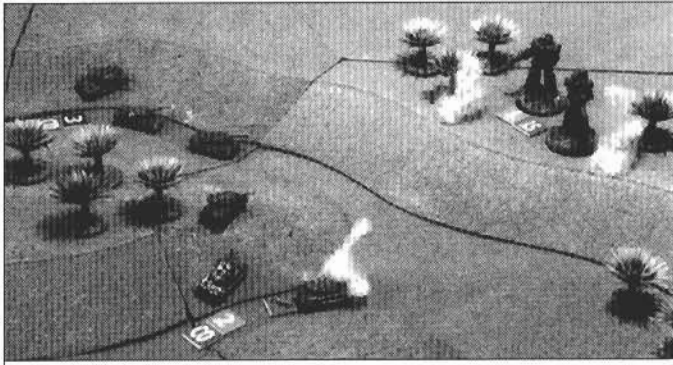
A pair of Combat Walkers exchange fire with Medium Tanks
[Vehicles by CMD and Minifigs/Ral Partha]

All weapons mounted on Walker vehicles may fire through a 180° arc, as in the restricted traverse turret arc shown on P.11.

In addition, **all weapons of the SAME TYPE AND CLASS on a Walker may be counted as a "multiple mount",** even if actually positioned in different "limbs".

Walkers may also fire their weapons either before OR after movement, as Turreted vehicles can – they are not limited in the same way as normal Fixed-Mount vehicles.

"OVERSIZED" VEHICLES:

The basic design and combat systems allow only for vehicles up to **VERY LARGE size (class 5),** as this should cover most models and types that players will wish to use. There is no reason, however, why the limits cannot be expanded to cover **"OVERSIZE" vehicles of classes 6, 7 and even larger.** These represent the REALLY huge vehicles that sometimes crop up in SF literature, virtually "mobile fortresses" bristling with arrays of heavy weaponry.

If you wish to construct and use such Oversize vehicles, use the following rules and notes as guidelines:

i) The Vehicle Design system can be used as it stands for class 6 and 7 vehicles; they will have CAPACITIES of 30 and 35 respectively, and follow the normal rules for weapons fits etc.

ii) **There are no weapon classes larger than 5 available** (Oversize vehicles may just carry more of them), but **Armour ratings of 6 or 7 ARE permissible.**

iii) Oversize vehicles may, if desired, be fitted with more than one FIRE CONTROL system (class 6 may carry 2, class 7 up to 3). Each additional FireCon over the normal one allows the vehicle to fire an extra weapons system (at a different target) in one Combat Action – thus it may engage multiple different targets with different weapons mounts in one activation. Each additional FireCon occupies no Capacity, but costs the normal points value.

iv) Oversize vehicles have signatures of 6 or 7 according to class; as the normal list of signature/die type does not go above signature 5 (= D4), a special rule is required:

When firing at a vehicle with Signature 6, count all shots as being one range band closer than they really are (eg: LONG range is counted as MEDIUM); **for Signature 7 or greater, count ranges as TWO bands closer** – ie: ALL shots are counted as CLOSE range. Size 6 and 7 vehicles always use a D4 as their basic target die type.

v) STEALTH abilities may be purchased for Oversize vehicles at the usual costs, to reduce their effective signatures if desired.

vi) Oversize vehicles may in general use whatever mobility type is desired, but players may if they wish apply some extra limitations on movement – some terrain types may be deemed impassable to class 6 or 7 vehicles due to their sheer weight and bulk. Such limitations must be agreed before the game.

"MODULAR" OVERSIZE VEHICLES:

In addition to the Oversize classes 6 and 7 described above, the following notes will allow players to design EVEN BIGGER vehicles if they wish! This is specifically to cover such machines as the giant **"CYBERTANKS"** of military SF (eg: Keith Laumer's BOLO series and the like) – huge mobile arsenals grinding forward on massive treads, invulnerable to all but the biggest weaponry and directed by their own onboard Artificial Intelligence.

The way to construct such vehicles for use in DIRTSIDE II is to treat each one not as a single vehicle, but as a series of "MODULES" linked together. Each Module is constructed and costed separately under the normal design rules, and may be of any size from class 1 to class 7 (oversize).

To give an example, the classic type of Cybertank that most players will be familiar with might consist of SIX modules – a front hull module of (say) class 5, a rear hull module of class 5, and four "tread" modules (one at each corner), each of size 4.

Each Module will be designed according to the usual rules, with a few limitations:

i) **The only permissible Mobility Type is Tracked (Fast or Slow as desired)** – no other form of propulsion is practical for something this size! The total size of all the Tread modules is counted when determining mobility cost – so the example above would have the mobility costs of a "class 16" vehicle (4 x class 4 modules).

ii) The Multiple FireCon rule suggested for class 6/7 vehicles may also be used for Modular designs; up to a maximum of FOUR systems may be fitted to the entire vehicle.

iii) Weapons and systems may only be fitted to the Main Hull modules (front and rear in the example above); the "tread" modules may not carry weapons. The TOTAL capacity of the main modules may be treated as one figure for the purpose of weapons fit, thus the example vehicle would have a capacity of 50; the weapons may be distributed as desired between the main modules, regardless of individual module capacities.

iv) **NO Stealth abilities are available for Modular vehicles** (they are too damned big to hide, even electronically); all Oversize Modular vehicles always use a D4 as their target die.

v) **The Armour rating on any module may not exceed 7; the "tread" modules may carry Armour up to ONE LEVEL HIGHER than their size class, and the Main modules up to TWO LEVELS higher.** (Thus the example vehicle could have Armour 7 on its main modules, and Armour 5 on its Tread modules.)

FIRING AT MODULAR VEHICLES:

When attacking Modular Oversize vehicles, **ALL shots are counted as CLOSE range due to the huge size of the target;** in addition, the target vehicle NEVER gets to roll a Secondary die, whatever the circumstances – just its basic D4 in all cases.

If a modular vehicle is caught in an Artillery Beaten Zone, draw chits separately for EACH module of the vehicle.

When hit by Direct Fire at MEDIUM or LONG ranges (this is the TRUE range, not the "always Close" range used to determine hits), the particular MODULE that is hit should be resolved at random (for the typical 6-module vehicle described above, roll a D6 to see which module is hit). If the shot is actually at CLOSE range, then the firing player may CHOOSE which module is hit by the shot.

It will be necessary to make up a simple "control card" for each modular vehicle, with a box on it for each module – damage markers affecting each module are placed on this card as required. Markers that affect the entire vehicle may be placed on-table as normal.

Destruction of one tread module will reduce the vehicle to half movement; loss of two or more will immobilise it. The catastrophic destruction ("BOOM") of any module will completely disable the vehicle.

[Note that the ideas and rules above are merely suggestions – space precludes a fuller discussion of the possibilities of Oversize vehicles, but players are free to modify the rules as they wish to fit whatever vehicle types they want to create.]

CLASSIFYING VEHICLE MODELS:

We have already mentioned that **DIRTSIDE II** allows you to take virtually ANY miniature, from any manufacturer, and define its capabilities for use in the game. **There are two basic sections to this procedure – the DESIGN stage and the COSTING stage.** The former consists of deciding what equipment and capabilities you wish the vehicle to have, and working through a simple procedure, i) to determine that what you want will actually fit in that vehicle size, and ii) to set the statistics that the vehicle will use in the game. The latter (Costing) stage is to determine the POINTS COST of the vehicle or element, and is actually OPTIONAL. It is not strictly necessary to know how much an element "costs", if you prefer a force organisation that is based around certain unit sizes and types of vehicle; the Points Value only really becomes important if you and your opponent need a relative measure of the 'value' of your forces, for instance if you are playing a "competitive" game and desire exact force balancing.

If you wish to use the Costing procedure, it may of course be worked out at the same time as the vehicle is "designed".

Full points cost lists are included in the appendices, on P.52.

The first part of **DESIGNING** a vehicle is to choose the model you are using, and have a good look at it. In most cases it will be obvious from the model what basic mobility type it will have (does it have tracks, wheels, a hover-skirt etc?); the exact mobility type chosen will also depend on the model's size and desired function – a small tracked tank intended for recce use would probably be given FAST TRACKED mobility, while a very big, lumbering "monster" tank would likely be SLOW TRACKED (though there is no real reason why you could not make the latter vehicle FAST, you would just pay more for it if you are costing it out).

This brings up the question of **SIZE CLASS** for the vehicle; this should be decided by a combination of what you want the vehicle to do or carry, and a common-sense appraisal of the size of the actual model. We are deliberately NOT going to lay down dimensions and formulae for exactly what constitutes, say, a VERY SMALL, MEDIUM or VERY LARGE vehicle – manufacturers' model ranges (even in nominally the same scale) differ so widely in their sizing that to do so would be pointless. Let us just say that if your opponent puts out a half-inch long scout car on the table and tries to tell you it is a Class 5 (VERY LARGE) tank, you should gently point out the error of his ways.....

Having decided the **SIZE** and **MOBILITY** of your vehicle, you now need to choose exactly what weapons, equipment and systems it will carry. Once again, apply common sense when looking at the model itself: if it has a long-barrelled gun and a multi-tube launcher on the turret, you might give it (say) an MDC or HKP main gun and a SLAM pack as a secondary weapon. The actual Class of weapons will be determined from the limitations imposed by the vehicle Size Class chosen. When fitting systems such as Fire Control, ECM and so on, bear in mind the use the vehicle will be put to (eg: don't put Superior ECM on a cargo truck that is never meant to be fired at!) and also consider the technology level of the overall force you are building.

The best way to explain the Design system is to give you a working example; consider the tank shown in the photo on the front cover of this rulebook (the big one within the targeting reticule). The actual model is a **DEIMOS/SO Heavy Tank** from **CM DESIGNS** (catalogue no. FWT-12).

The hull of the model measures about 35mm long by 20mm wide; looking at it in relation to other items in the CMD range (and other 1:300 SF miniatures in general) the DEIMOS could most reasonably be classed as a LARGE (Class 4) vehicle. For MOBILITY, the model could pass equally well for a GEV (hover) or GRAV tank; say we are designing vehicles for a medium-tech army, so decide on SLOW GEV as a reasonable Mobility Type.

Adding the POWER PLANT type next, for a SLOW GEV of size 4 we need at least a Hydromagnetic Turbine (HMT) – a chemical-fuelled engine will simply not have enough power to lift the tank. If the background allows for it to be available, a better choice for this sort of vehicle would be a Fusion plant (FGP) as this would allow for MDC or HEL weaponry to be used; assuming it is available, we decide to go for the FGP to allow more freedom in weapons fit.

Now we can ARMOUR the vehicle; as it is a Battle Tank, it makes sense to go for the heaviest allowable, which is the same as the vehicle size class – thus we fit ARMOUR RATING 4. The extra cost of Ablative or Reactive armour is not deemed worthwhile at this point.

Then comes the fun bit – putting the guns on! Obviously the model has a TURRET, with a single main gun mounted in it. We have 20 capacity points to play with (size 4 vehicle, times 5), so we could go for a class -5 weapon in the turret, using up 15 of the capacity; however there is also a boxy bit on the turret side that looks as if it should hold a GMS, and an obvious point-defence system on the turret roof. After deliberation, we decide to fit a class-4 Mass Driver (MDC-4) as the Main Gun (occupying 4 x 3 = 12 points capacity), a GMS/H taking a further 4 points, and an ENHANCED Point-Defence System (PDS) that uses 3 capacity points. The final 1 capacity point is spent on an APFC system round the hull.

[There are obviously a lot of other options we could have chosen even for this particular model, but the ones we have gone for give you a fairly well-balanced offensive/defensive capability for such a vehicle.]

Finally, we must decide on the levels of SYSTEMS to be added: FIRECONTROL for the gun, GUIDANCE for the Missile system, ECM and STEALTH abilities for protection. Not wanting to go over the top, and bearing in mind that we will have to "pay" for everything when we do the actual points costing, a reasonable level would be SUPERIOR FireControl, ENHANCED Guidance and ECM, and ONE level of STEALTH (to reduce the effective Signature from 4 to 3).

So, we have the specifications for our **DEIMOS** tank:

LARGE vehicle (class 4), SLOW GEV Mobility, FGP Power Plant, Armour 4.

Turret Mounted Armament: 1 x MDC-4 with SUPERIOR FireCon; 1 x GMS/H with ENHANCED Guidance; ENHANCED PDS; 1 x APSW.

Other systems: APFC, ENHANCED ECM, STEALTH-1 (Basic Signature 4, Effective Signature 3).

Using the points costs on P.52, the DEIMOS has a value of **356** points.

CAPACITY REQUIREMENTS FOR VEHICLE WEAPONS AND SYSTEMS:

ALL DIRECT FIRE WEAPONS:	**Class x 2 if in FIXED MOUNT** (or secondary to a turret-mount Primary weapon)
	Class x 3 if PRIMARY TURRET-MOUNT WEAPON.
GUIDED MISSILE SYSTEMS:	**GMS/L = 2; GMS/H = 4**
POINT DEFENCE SYSTEM (PDS):	**BASIC = 2; ENHANCED = 3; SUPERIOR = 4**
AREA DEFENCE SYSTEM (ADS):	**BASIC = 10; ENHANCED = 15; SUPERIOR = 20**
LOCAL AIR DEFENCE (LAD) SYSTEM: **2**	
ANTI-PERSONNEL SUPPORT WEAPON (APSW): **1** (initial "free" APSW = 0)	
ANTI-PERSONNEL FRAGMENTATION CHARGES (APFC): **1**	
INFANTRY TEAM TRANSPORT: **Line/Militia = 4; Powered = 8**	
CARGO LOAD TRANSPORT: **4 per load**	
SMALLER VEHICLE TRANSPORT: **8 x Size Class of carried vehicle**	
COMMAND/COMMUNICATIONS SYSTEMS: **8**	
ARTILLERY WEAPONS: **Class x 3**	
COUNTER BATTERY RADAR: **14**	