1640

The BATTLETECH™ COMPENDIUM

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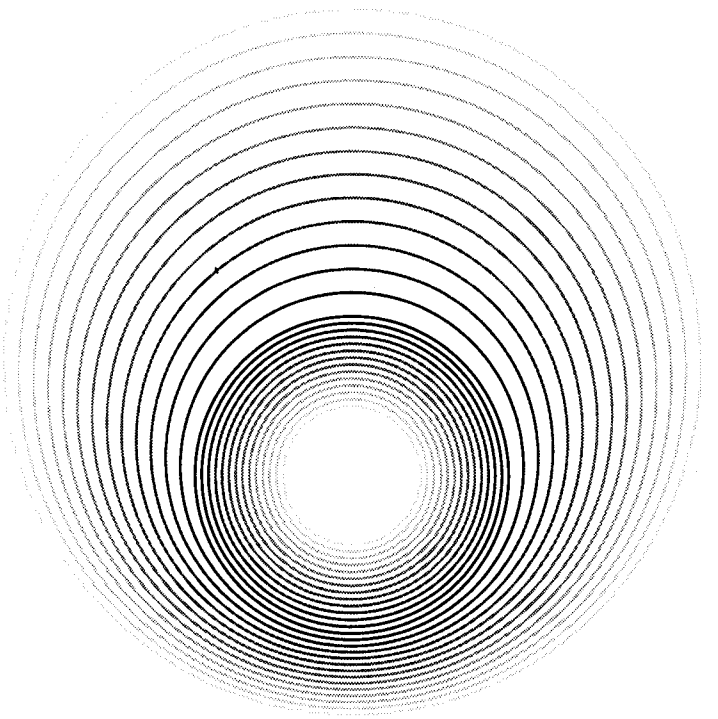

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THE BATTLETECH COMPENDIUM

BATTLETECH COMPENDIUM
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INTRODUCTION

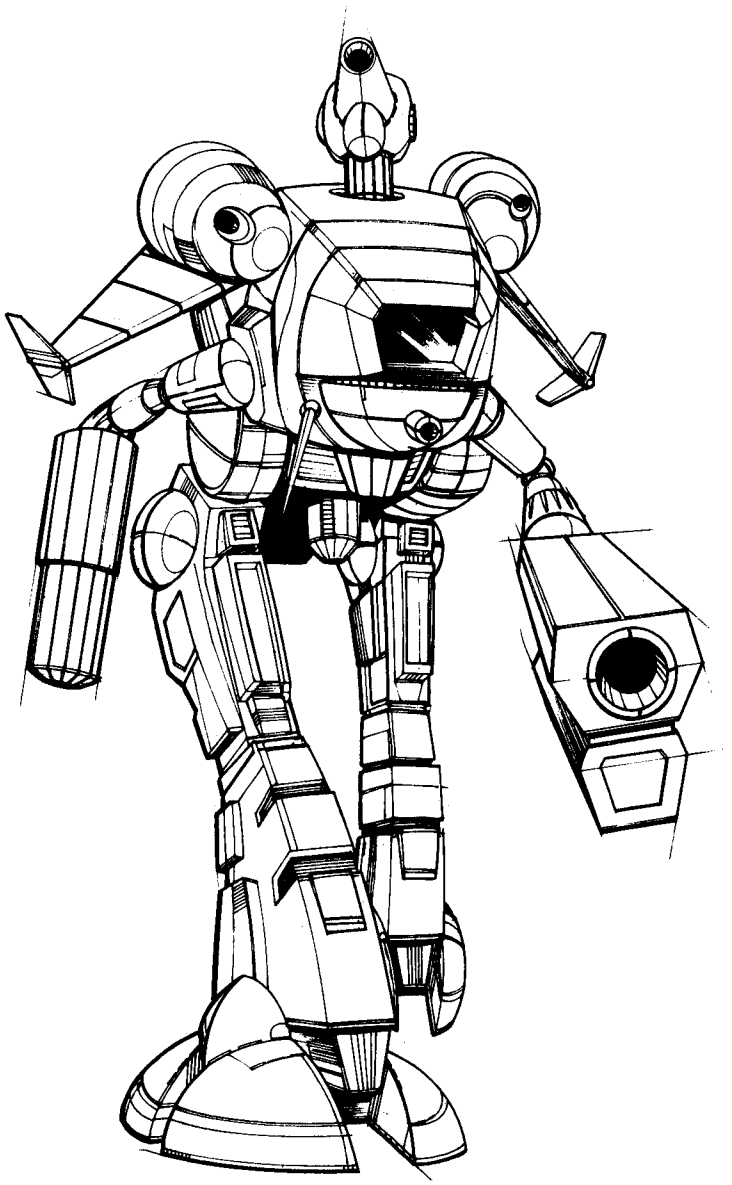
The **BattleTech Compendium** is a single-source rulebook for players of **BattleTech** and **AeroTech**. It includes all of the rules from the **BattleTech**, **CityTech** and **Aerotech** games, as well as those introduced in various **Technical Readouts** and other sourcebooks. This set of rules takes precedence over any previous publication, including the **BattleTech Manual**.

The **Compendium** was written to accomplish three objectives: add optional rules that players have requested over the past few years, integrate the arrival of the Clans into the basic BattleTech rules, and provide clarifications on already-published rules. Most of the changes included in these rules are the result of player letters and telephone calls to **FASA** asking for clarifications and a bit of tidying up in the rules. In general, changes were made only if a significant number of players asked for them.

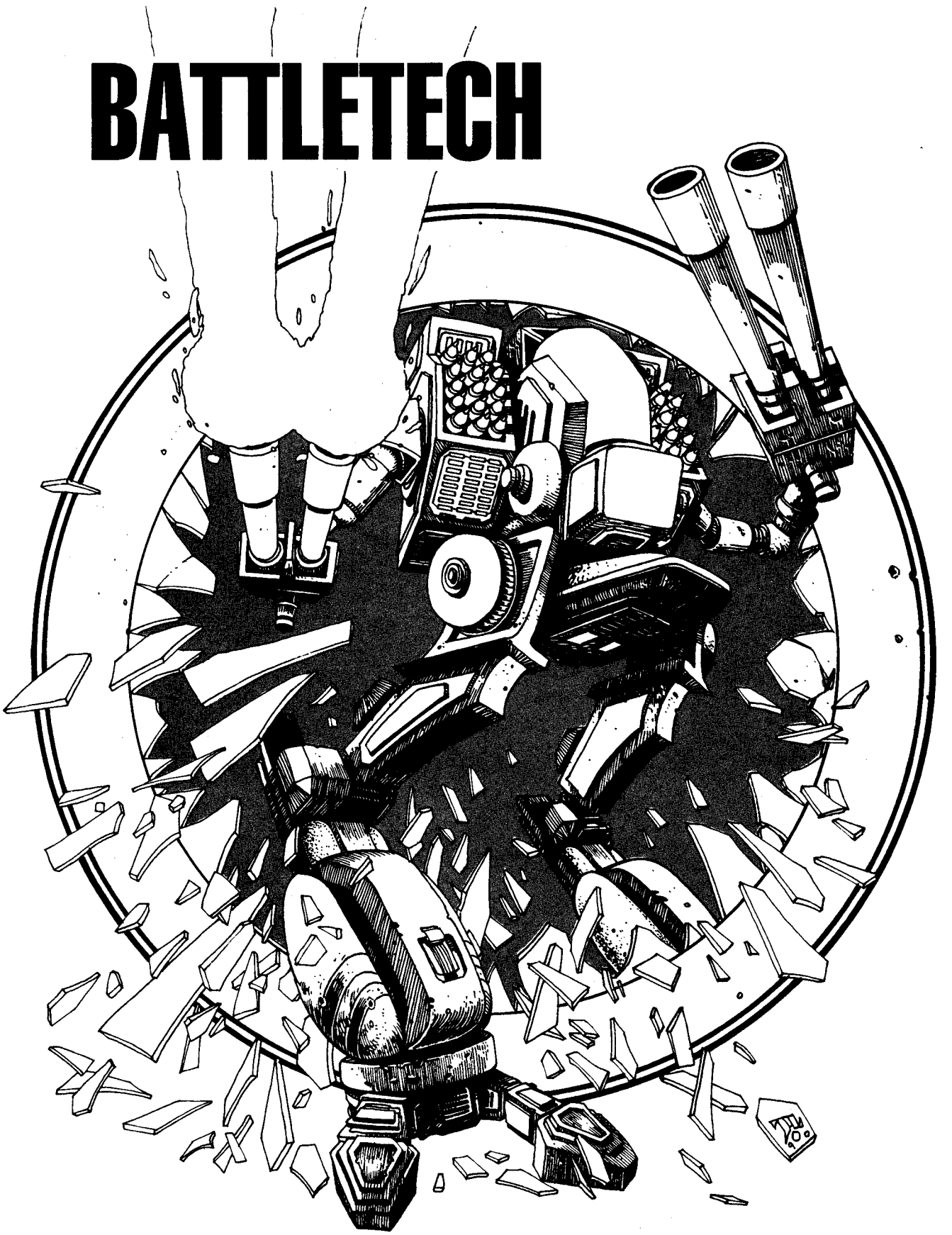
For players who do not wish to totally reread the rules, we've marked the sections which have significant clarifications or changes. If a rules section has this symbol next to it: ★, then we recommend that even experienced players read that section.

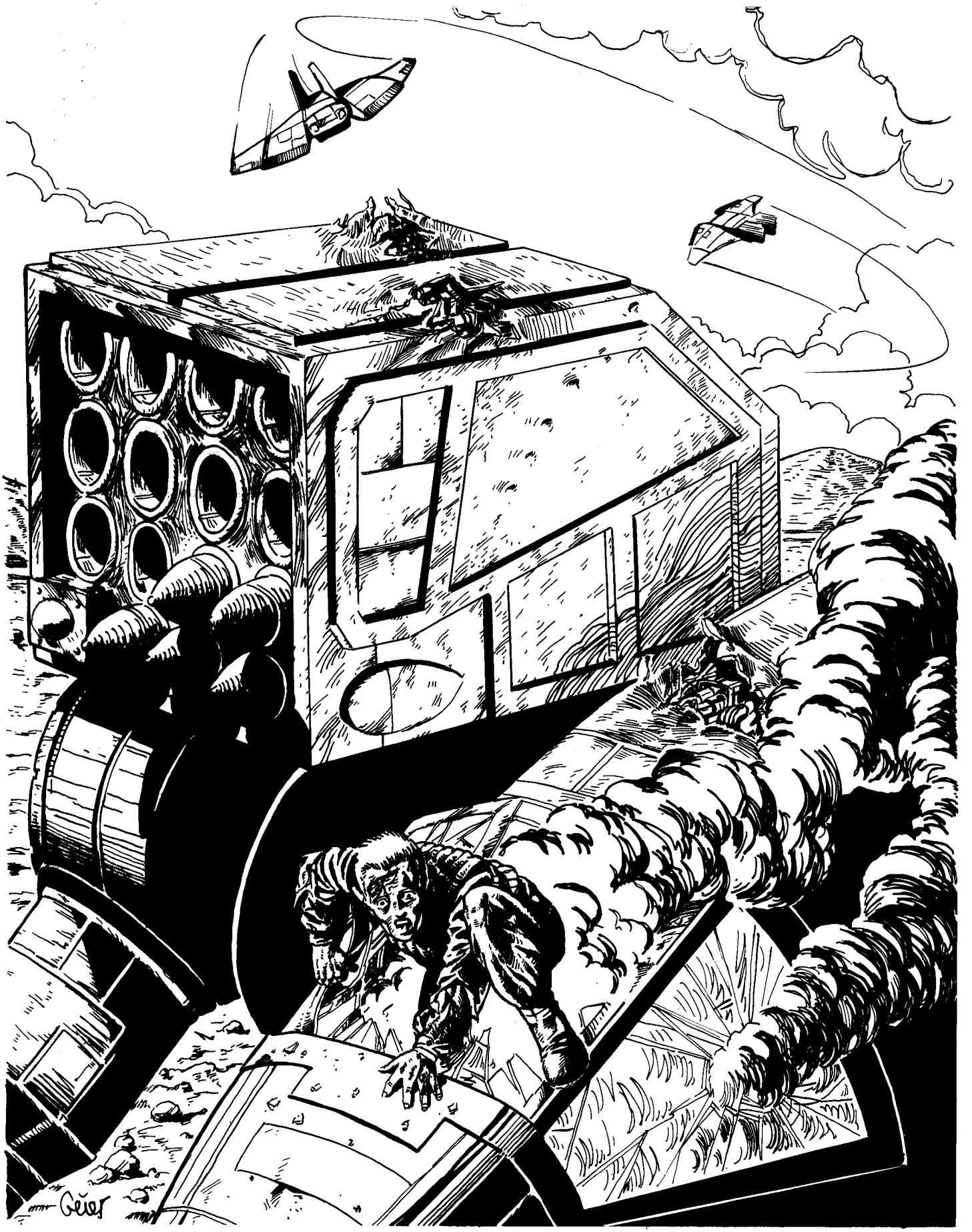
Also included in this work are new optional rules for hostile environments, low gravity and vacuum combat, anti-aircraft flak, four-legged BattleMechs, JumpShip combat, **BattleTech** as a tabletop miniatures game, and more.

We hope this product will help you in your enjoyment of the **BattleTech** game. If you have any questions or comments about **BattleTech**, or any other **FASA** product, please write us, at P.O. Box 6930, Chicago, IL 60680. While we do attempt to respond to all mail, time constraints limit our ability to write detailed answers to general questions. Game questions should be phrased so that we can answer them with yes/no or multi-choice responses, and should be accompanied by a SASE.



BATTLETECH

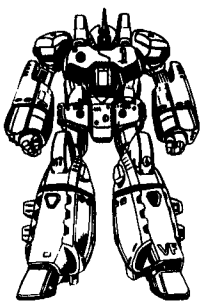




COMPONENTS

BattleTech simulates combat between single BattleMechs, vehicles or infantry units. Below is a description of the various combat units found on the **BattleTech** battlefield, along with a description of the various record sheets and maps needed to play the game. In these rules, unit refers to any combat unit—BattleMech, vehicle, infantry platoon, or BattleArmor point.

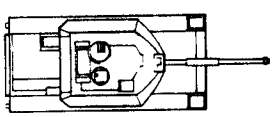
BATTLEMECHS



BattleMechs—the most powerful war machines ever built—dominate the battlefields of the 31st century. These huge, man-shaped vehicles are faster, more maneuverable, better-armored, and more heavily armed than any other combat unit. Equipped with particle projector cannons, lasers, rapid-fire autocannons and missiles, these behemoths pack enough firepower to flatten everything but another 'Mech.

There are two classes of BattleMechs: those used primarily by the Inner Sphere, known simply as 'Mechs, and those used by the Clans—the OmniMechs.

VEHICLES



Most armies need to conserve their BattleMech resources and thus have built more conventional vehicles to serve in low intensity conflicts and as cheaper auxiliaries to BattleMech forces.

GROUND VEHICLES

Tracked

Using continuous caterpillar treads, these vehicles are normally referred to as *tanks*, a term whose meaning has been lost in antiquity. Commonly armed with turret-mounted heavy weapons, some of the heaviest tanks are capable of inflicting a great deal of damage, even on a BattleMech.

Wheeled

Wheeled vehicles are faster than tracked vehicles and can still mount a reasonable amount of weaponry. However, they are much more restricted by terrain than are tanks, and so normally are used in relatively open terrain and in cities as convoy escorts or as fire-support vehicles for dismounted infantry.

Hovercraft

Hovercraft are designed for speed, which protects them better than does their weak armor and light armament. Hovercraft are more expensive and require a higher technological base than tracked or wheeled vehicles. However, their ability to rapidly close with the enemy and just as rapidly break contact makes these units highly valued for reconnaissance and screening missions.

VERTICAL TAKE-OFF AND LANDING (VTOLS)

Fast, deadly, and highly vulnerable to damage, VTOLs have the highest pilot mortality rate of any combat vehicle. The term VTOL is used for a variety of vertical take-off and landing vehicles whose primary mission is to support the battle on the ground. These types include conventional rotary wing craft (helicopters), X-wing "stopped rotors" craft, and tilt rotor aircraft (where the engine mountings rotate in a 90° arc). Because of the high torque, VTOL rotors can not be heavily armored. This results in a vehicle that cannot absorb much combat damage. VTOLs are more often destroyed by rotor hits than in other way.

GROUND NAVAL VESSELS

Large tonnage military naval vessels have given way to the superiority of conventional and AeroSpace fighters. However, small vessels for counter-insurgency work and defense of underwater command posts have been retained.

Surface Naval Vessels

This class of vessel operates only on the surface of bodies of water.

Displacement Hull

These are the cheapest, best protected, and best armed of the naval vessels. Using a conventional rounded hull, these vessels lack the speed necessary to close quickly with an elusive enemy.

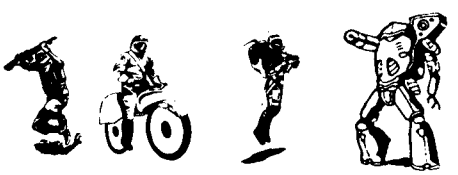
Hydrofoil

Speed and punching power are the hallmarks of hydrofoils. Using wings that lift the hull out of the water, these vessels are frequently assigned to patrol work in guerilla-infested river deltas and along coastlines.

Submarines

Submarines have shrunk in size over the past several centuries, but still reign supreme in the oceans of most worlds. They are the only vehicles that can reasonably hope to defeat an equivalent-weight BattleMech, but only in their home environment, underwater. These expensive and specialized vessels are normally only deployed to protect underwater installations and command centers.

INFANTRY UNITS



There are two forms of infantry. Unarmored infantry are organized into 28- or 21-man *platoons*. Battle-armored infantry form 5-man *points*. When these rules refer to *infantry*, they mean both unarmored infantry platoons and armored infantry points. When just one or the other is intended, the rules will refer to *unarmored infantry* or an *infantry platoon*, on the one hand, or *BattleArmor*, *armored infantry*, or an *infantry point*, on the other.

Foot

With 28 combat troops, these infantry platoons have no organic transportation, are lightly armed, and are totally incapable of standing up to even the lightest BattleMech. Foot infantry are used for population control, city garrisons and counterinsurgency operations. While they are relatively expensive to raise, they are cheap to maintain, and normally any planet is capable of calling up and arming thousands of foot infantry.

Motorized

Equipped with a variety of light vehicles, these 28-man infantry platoons can pack more firepower than their lesser-equipped cousins. But like foot infantry, these troops are normally no match for BattleMechs. In addition to the foot infantry duties listed above, these troops can serve as forward observers or reconnaissance personnel.

Jump

The 21 men in a jump platoon are all equipped with jump packs. While in open, flat terrain, this equipment gives mobility equivalent to motorized troops. In built-up areas, jump-capable troops are more mobile than any others. Using their jump capabilities, these troops can quickly close with enemy units. A close assault of this type can be devastating, both to the defender and the attacker.

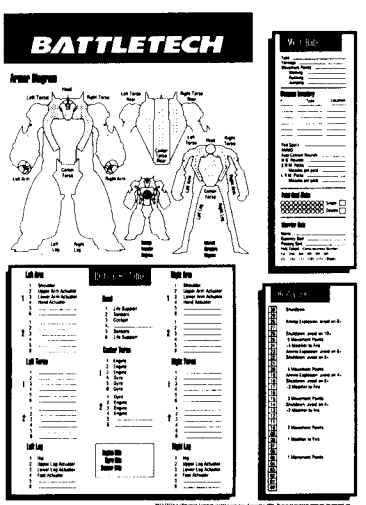
★ BattleArmor ★

Clan infantrymen are known as Elementals, and are organized into 5-man points. Elementals are equipped with individually powered suits of armor, mounting missiles, small lasers, and anti-personnel weapons. Capable of sustaining direct hits from BattleMech-class weaponry, it is not unheard of for a point of BattleArmor to eliminate a 20-ton 'Mech.

RECORD SHEETS

There are several record sheets that can help you play **BattleTech**. Each is described below, and a full-size blank copy of each is available at the back of the **Compendium**.

BATTLEMECH RECORD SHEET



The BattleMech Record Sheet shown in the diagram is used to keep track of the damage done to a BattleMech during combat. This record sheet is used for both regular 'Mechs and OmniMechs. The different sections of the Record Sheet are discussed here.

Armor Diagram

The set of diagrams at the top of the page is the Armor Diagram. It shows the arrangement of armor plating on the BattleMech; each circle (or *box*) represents a point of armor—boxes in excess of that particular BattleMech's plating are filled in prior to play. As armor is destroyed by weapons hits, the boxes are checked off. Diagrams for armor both on the front and back of the BattleMech's torso are included. Also included are the Internal Structure Diagram and the Damage Transfer Diagram.

The Internal Structure Diagram shows the divisions of the BattleMech's internal structure. Like the boxes on the Armor Diagram, these boxes are used to keep track of battle damage to the BattleMech's internal structure. The Damage Transfer Diagram shows where damage will be taken or transferred when a particular part of the BattleMech has been destroyed.

'Mech Data

Located in the upper right corner, this section of the Record Sheet lists all of the BattleMech's important statistics. These include the type of BattleMech it is, its tonnage, movement, and weapons inventory, and its ammunition record chart and heat sink check-off list.

Warrior Data

This small section is just under the 'Mech Data section, and lists the name, skills, and condition of the MechWarrior piloting the BattleMech.

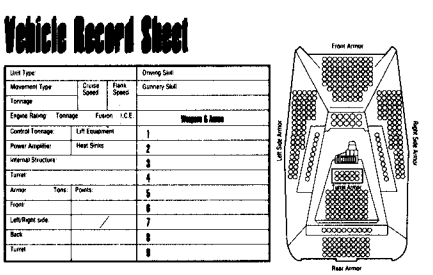
Critical Hit Table

The Critical Hit Table, filling the sheet below the Armor Diagram, shows the physical location of all of the BattleMech's critical equipment, weapons, and ammunition. These tables help determine the location of any critical hit; each slot on these tables represents a particular weapon or other piece of equipment susceptible to destruction. Some equipment—the gyro, for example—occupy so much space in the 'Mech as to require multiple slots on the tables. A critical hit to any one of these slots damages the gyro.

Heat Scale

The Heat Scale, a column of numbered boxes along the lower right edge of the sheet, is used to keep track of the internal heat build-up in each BattleMech. As heat builds up, these boxes are checked off from low to high. When enough heat has built up, the comments beside the boxes tell what effect the heat has on the BattleMech's operation.

VEHICLE RECORD SHEET



The Vehicle Record Sheet shown in the diagram is used to keep track of the damage done to individual vehicles during combat. There is a different record sheet for each type of vehicle—ground, VTOL, and naval—but they all share common features. The different sections of these sheets are described below.

Armor Diagram

The large diagram on the right side of the page is the Armor Diagram. It shows the arrangement of the armor plating and internal structure of the vehicle. As armor is destroyed by weapon hits, the boxes are checked off. When all the boxes in one section are gone, damage is marked off against the adjacent internal structure. The shaded areas of the Armor Diagram show the locations of the vehicle's internal structure.

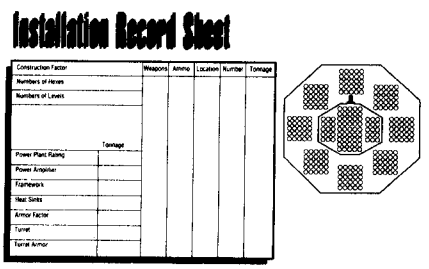
Vehicle Data

On the left side of the Record Sheet, this section lists all of the vehicle's other important statistics. These include its tonnage, movement, weapon inventory, and other components. The pilot's *Piloting* and *Gunnery* Skills are also recorded here.

Elevation/Depth Chart

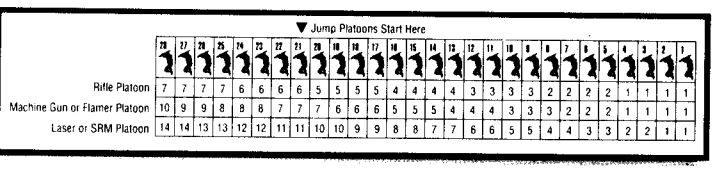
Only VTOLs and submarines use this chart, since only these two types of vehicle may move vertically as well as horizontally. In order to reflect this ability, the player must keep track of the VTOL's elevation or the submarine's depth. It should only be necessary for the player to record the elevation or depth at the end of its movement. Obviously the current elevation of a VTOL may not be less than the level of the terrain under the VTOL, nor may the current depth of a submarine be greater than its water's depth or less than 0.

INSTALLATIONS



Most buildings do not use a record sheet; damage can be recorded directly on the building counter. However, some major installations and gun emplacements have weapons and turrets or are specially designed by a player. The status of a building and its weapons systems is kept on an Installation Record Sheet.

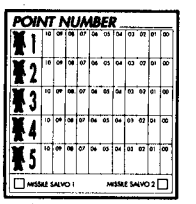
INFANTRY RECORD FORM



Each Infantry Record Form (there are six on the full-size blank sheet) has 4 rows; it is used for all unarmored infantry platoons. The top row is used to record the number of men in the unit. As damage is taken, these boxes are checked off, reflecting the casualties that the platoon has taken. The next three rows show the damage that particular units can do. This damage depends on the number of men in the platoon and the type of weapons the platoon has. Thus, a full-strength rifle platoon does 7 points of damage each time that it hits, while an 11-man laser platoon does 6. Remember that a full-strength jump platoon has only 21 men.

Also included on the record sheet is a **Base To-Hit Numbers** table for each of a platoon's possible weapon types.

★ BATTLEARMOR RECORD FORM ★



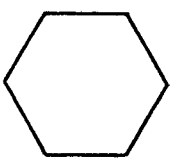
The BattleArmor Record Form represents a point of BattleArmor. The form has five rows, with each row representing a single Elemental. As an Elemental takes damage, the boxes in his row are checked off. Once all of the boxes are checked, that Elemental is out of the battle. Also on the form are two boxes used to keep track of the Short Range Missile salvos that the unit has remaining.

MAPSHEETS

The 22" x 17" **BattleTech Mapsheets** used in this game are divided into six-sided areas called *hexes* (from *hexagon*). These hexes are used to regulate movement and combat, with units moving from hex to hex. Each hex on the mapsheet represents an area of ground 30 meters (roughly 100 feet) across, and each turn represents ten seconds of real time.

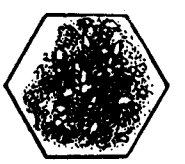
The forests, rivers, hills, buildings, and rough areas on a **BattleTech Mapsheet** represent a typical mixture of the terrain found on the habitable worlds of the Inner Sphere. Shown below are the symbols used for each type of terrain.

CLEAR, OPEN GROUND



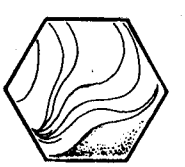
These are fields, meadows, and other grasslands. The ground is firm and may be gently rolling, but its elevation does not change significantly from one side of the hex to the other.

ROUGH GROUND



This is broken terrain, rocky and jumbled. Though it is firm, it is more difficult to cross than open ground. Generally encountered near cliffs and bluffs, rough ground may also be formed as a result of combat.

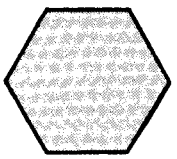
HILLS



This terrain is significantly higher than the surrounding terrain. The light lines show slopes, which are more difficult to cross than open ground because of the changes in elevation. Hills can contain clear, rough, wooded, or paved terrain; they can also contain buildings. Ground hexes which aren't on a hill are at Level 0.

Elevation Levels for each hill are given on the mapsheet. Level 1 is 6 meters high (waist-high to a BattleMech), so that a BattleMech standing behind it may be partially hidden, while a vehicle is totally hidden. Level 2 is about the same height as a BattleMech, or about 12 meters tall. A BattleMech standing behind it is totally hidden. Level 3 is 18 meters tall, and so forth.

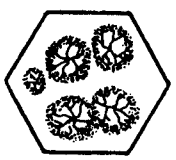
WATER



This terrain is covered by water, in the form of streams, rivers, swamps, ponds, or lakes. There are four levels of water. Depth 0 water is very shallow, no more than ankle-deep on a BattleMech. It is found in easily-crossed terrain such as streams, swamps, or shallow ponds. Depth 1 water is 6 meters deep, or 1 Level below ground level, about waist high on a BattleMech. Depth 1 water is more difficult to cross than shallow water or open ground, and is found in rivers, ponds, and along lakeshores. Depth 2 water is 12 meters deep, enough to barely cover a BattleMech. Depth 2 water is much more difficult to cross than shallow water or open ground. Depth 3 water is 18 meters deep, while Depth 4 water is 24 meters deep.

Even when a shallow stream fills only part of a hex, that entire hex is a Water Hex.

LIGHT WOODS

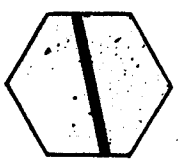


This is terrain covered with sparse trees up to 12 meters in height. A BattleMech has more trouble crossing this terrain than crossing open ground. Unless the wood is relatively large (at least three hexes across), it is possible to see through Light Woods. When Light Woods block the line of sight, they do so for two levels above their terrain.

HEAVY WOODS

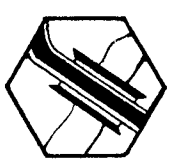
This is terrain that is thickly covered with 12-meter-tall trees. Movement is very difficult through these areas. Most of the time there are Light Woods nearby. Heavy Woods are so dense that seeing through them is nearly impossible. As with Light Woods, when Heavy Woods block the line of sight, they do so for two levels above their terrain.

PAVEMENT AND ROADS



A paved hex is one whose surface is fairly smooth and very hard. This typically includes roads, sidewalks, and landing fields. The pavement may be asphalt, cement, or even cobblestone. Travel along roads negates the slowing effects of other terrain and can increase the speed of ground vehicles. Running BattleMechs and vehicles moving at flank speed may skid on pavement.

BRIDGES



A Water hex may be spanned by a bridge. Units moving along a road may use the bridge and ignore the normal terrain restrictions and movement penalties in the rest of the Water hex. However, the bridge may not be strong enough to support the weight of the crossing unit, in which case it will collapse.

LIGHT BUILDINGS

Light Buildings are generally small wooden or sheet metal structures through which most BattleMechs can walk with little or no trouble. No BattleMech can land on, or climb up, any Light Building as the structure is not strong enough to bear its weight. Light Buildings add their elevation to the level of the underlying terrain when figuring line-of-sight (LOS).

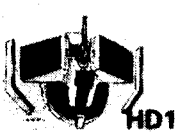
MEDIUM BUILDINGS

Constructed from stone, heavy wood, and metal, Medium Buildings are light industrial structures that are more substantial than Light Buildings. Because they are constructed with heavier materials, they can take more damage than Light Buildings before being reduced to rubble. Forty-ton BattleMechs can land on, or climb up, on some Medium Buildings. Medium Buildings add their elevation to the level of the underlying terrain when figuring line-of-sight (LOS).

HEAVY BUILDINGS

Heavy Buildings are usually part of industrial complexes and are constructed of reinforced concrete. They are built to bear very heavy loads. All but the heaviest BattleMechs can land on, or climb up, the sides of Heavy Buildings. Heavy Buildings add their elevation to the level of the underlying terrain when figuring line-of-sight (LOS).

HARDENED BUILDINGS



Hardened Buildings have been intentionally strengthened for combat. Of all the building classes, these hardened structures can bear the most weight and sustain the most damage before being reduced to rubble. Hardened Buildings add their elevation to the level of the underlying terrain when figuring line-of-sight (LOS).

RUBBLE

Rubble is what is left of buildings when BattleMechs are finished with them. Weapons fire, fire damage, and physical damage inflicted by BattleMechs can reduce any building to rubble. Rubble is more difficult to move through and offers limited protection and cover from weapons fire. Rubble has no elevation level.

DICE

The game uses two six-sided dice, preferably of two different colors. During the game, sometimes only one die is rolled (1D6), and sometimes both are (2D6), either in order or together.

PLAYING THE GAME

To start a game, the players should lay out the **BattleTech Mapsheets** on a table or on the floor either in a way agreeable to all of the players or (if using a FASA scenario pack) according to the **Game Set-Up** of the scenario to be played. This includes laying out a number of buildings of any height or type. Next, the players should fill out Record Sheets for each of their units involved in the battle. BattleMech and vehicle descriptions can be found in any of the **Technical Readouts**, or units may be created by using the **Construction** rules. If OmniMechs are being used, the players may customize their weapons and equipment load. See **Outfitting an OmniMech** for these rules.

MECHWARRIORS

The human soldiers who pilot BattleMechs are called MechWarriors. Their skills play an important role in keeping a BattleMech moving and fighting effectively in combat. A BattleMech will be knocked out of action if its MechWarrior is killed or seriously injured, even though actual damage to the BattleMech is light.

★ MECHWARRIOR SKILLS ★

Two skills are important to a MechWarrior in combat: *Piloting* and *Gunnery*. Average Inner Sphere MechWarriors have a *Piloting* Skill rating of 5 and a *Gunnery* Skill rating of 4. Average Clan MechWarriors have a *Piloting* Skill rating of 4 and a *Gunnery* Skill rating of 3.

Piloting Skill helps determine the outcome when a MechWarrior attempts to avoid falling, or minimize damage when a BattleMech does fall down, as discussed in **Piloting Skill Rolls** (under **Movement**). *Gunnery* Skill helps determine how easy or difficult it is to make a successful shot with the BattleMech's weaponry, as discussed in **Base To-Hit Number** (under **Combat**).

Piloting Skill Rolls

When a Battlemech or vehicle wants to attempt a possibly dangerous maneuver, or when the unit has been shaken and the pilot might lose control of it, a *Piloting* Skill roll is required. The player adds the indicated modifiers to his pilot's *Piloting* Skill level (normally 5 for Inner Sphere pilots and 4 for Clan pilots). The resulting number is the *Piloting* Skill Roll Target Number. Then the player rolls both dice.

If the roll is equal to or greater than the modified *Piloting* Skill level, the action is successful, and no adverse effect occurs. If the roll is less than the modified *Piloting* Skill level, then the indicated effect takes place.

Gunnery Skill Modifier

For every *Gunnery* Skill level above or below 4, the *Gunnery* Skill modifier to the Base To-Hit Number is increased or decreased by 1. The lower the *Gunnery* Skill level, the lower the Modified To-Hit Number (and the likelier that a hit will be made).

★ VARYING SKILL LEVELS ★

As an optional rule, players can roll randomly for the *Piloting* and *Gunnery* Skill of every MechWarrior (and vehicular combatant) at the beginning of the game. Doing this produces an interesting mixture of green and seasoned fighters. Using the table below, the player should roll 1D6 twice to determine the MechWarrior's *Piloting* and *Gunnery* Skills. If the player is using a Clan MechWarrior, 2 should be added to the result of each of the die rolls before consulting the table.

MECHWARRIOR SKILLS (1D6)

Roll	Piloting Skill	Roll	Gunnery Skill
1	6	1	4
2	6	2	4
3	5	3	4
4	5	4	4
5	4	5	3
6	4	6	3
7 – 8	3	7 – 8	2

★ SKILL IMPROVEMENT ★

Players may want to keep any of the MechWarriors that they have created for use in future games or in **BattleTech** campaign games, assuming of course, that the warrior survives the current battle. If they want to do this, they should keep track of the number of enemy BattleMechs killed by each surviving MechWarrior. For every four BattleMechs he kills, the MechWarrior can reduce his *Gunnery* Skill or *Piloting* Skill by 1. *Gunnery* and *Piloting* Skill levels can never be less than 0. (**MechWarrior**, the roleplaying game for the BattleTech universe, has a more advanced system for all skills which can be used in place of these rules.)

★ DAMAGING A MECHWARRIOR ★

There are four ways that damage to a BattleMech can also damage the MechWarrior inside: any head hit, falling, internal ammo explosions, and heat build-up if the BattleMech's life support system is damaged.

Damage From Head Hits

The MechWarrior takes 1 point of damage (1 hit) whenever the BattleMech's head is hit, even if the hit does not penetrate its armor.

Damage from Falling

If his BattleMech falls down, the MechWarrior must roll both dice. If his roll is less than his *Piloting* Skill, he takes 1 point of damage.

Damage From Ammo Explosion

An internal ammunition explosion causes 2 points of damage (2 hits) to the MechWarrior, due to the electric shock he receives through his neurohelmet.

Damage From Excess Heat

When a critical hit has been taken on life support systems, the MechWarrior suffers 1 point of damage every turn that the BattleMech's internal heat is 15 or more on the Heat Scale. Every turn that the heat is 26 or greater causes 2 points of damage to the MechWarrior.

Consciousness Rolls

A MechWarrior can take 5 points of damage (5 hits) without dying, but it is possible that he will be knocked unconscious long before taking that much damage. Every time the MechWarrior is hit, the player must roll two dice and consult the chart below to see if the Mechwarrior remains conscious.

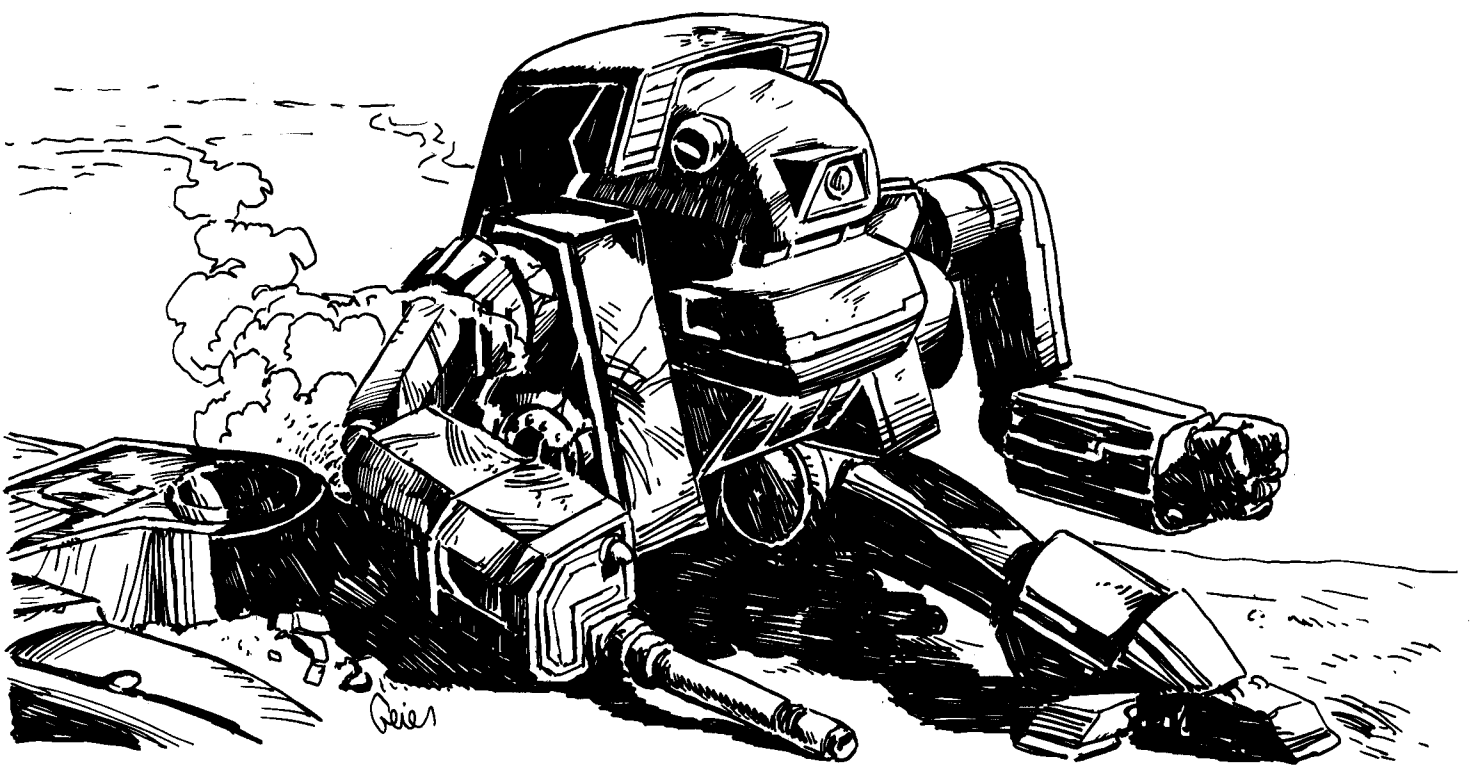
MECHWARRIOR CONSCIOUSNESS (2D6)

Total Damage	Consciousness Number
1	3+
2	5+
3	7+
4	10+
5	11+
6	Dead

If the roll is equal to, or greater than, the Consciousness Number, the MechWarrior remains conscious. If the roll is less than the Consciousness Number, the MechWarrior is knocked unconscious and the BattleMech cannot move or fire; it is considered to be *shut down.* Any *Piloting* Skill rolls that the BattleMech must make automatically fail.

During the End Phase of each turn *after* the MechWarrior loses consciousness, the player rolls again. If he rolls the current Consciousness Number or better, the MechWarrior has regained consciousness and does not have to make another Consciousness roll unless he is hit again. Of course, if the MechWarrior takes 6 hits, he is dead and never regains consciousness.

For example, in turn 3, an Archer*'s head is hit by a medium laser. Although the laser does not penetrate the head's protective armor, the* Archer*'s pilot takes 1 damage point. He had already taken 2 damage points and so now has a total of 3 hits. The player consults the MechWarrior Consciousness table and rolls a 6, 1 point less than his pilot needed to remain conscious. The* Archer *will not be able to move or fire during turn 4. In the End Phase of that turn, the player rolls again. If he rolls a 7 or more, the MechWarrior regains consciousness, and his BattleMech will be able to move and fire during turn 5.*



SEQUENCE OF PLAY

BattleTech is played in turns. During each turn, the players follow this sequence:

INITIATIVE PHASE

1. One player from each side rolls both dice for his team's initiative. The team with the higher roll has the initiative throughout the turn. Ties are rerolled.

★ MOVEMENT PHASE ★

2. The team that lost the initiative chooses one unit and moves it first.

3. The team that won the initiative moves one unit. Movement alternates until all units have been moved. If, prior to any pair of movements, one team has twice as many units left to move as the other team, that team moves two units, rather than just one. (If one team has three times as many units, it moves three each time, and so on.) This means that the team that won the initiative moves at least one of its units last. Any unit which has not been destroyed may be "moved," even if its move is to simply stand (or lie) immobile.

★ REACTION PHASE ★

4. The team that won the initiative twists the torso of one of its BattleMechs one hexside either way, or rotates the turret on one of its vehicles, or declares that one of its units will not twist or rotate this turn.

5. The team that lost the initiative twists the torso of one of its BattleMechs one hexside either way, or rotates the turret on one of its vehicles, or declares that one of its units will not twist or rotate this turn. Reaction twists alternate until all BattleMechs and vehicles have reacted or declared that they won't react. As with movements, if, prior to any pair of twists, one team has twice as many units left to twist or rotate as the other team, that team reacts with two units, rather than just one. (If one team has three times as many units, it reacts with three each time, and so on.) Thus, the team that lost the initiative twists last. Any BattleMech or vehicle which has not been destroyed may "react," even if its reaction is to simply stand (or lie) immobile. Infantry may not "react."

★ WEAPON ATTACK PHASE ★

6. The team that lost the initiative chooses a unit that will declare fire first. The player controlling that unit declares any attacks he plans to make using his unit's weaponry.

7. The team that won the initiative chooses a unit that will declare fire next. The player controlling that unit declares any attacks he plans to make using that unit's weaponry. The act of declaring alternates between players until all fire has been declared. If, prior to any pair of declarations, one team has twice as many units left to declare as the other team, that team declares two units, rather than just one. (If one team has three times as many units, it declares three each time, and so on.) Thus, the team that won the initiative declares the last attack.

8. Weapons fire is resolved one unit at a time. As all fire combat is considered simultaneous, the order in which it is resolved does not matter. All weapon attacks by one unit should be resolved before those of the next unit, to more easily keep track of which weapons have fired.

9. Damage from weapons attacks takes effect. Damage is recorded as attacks are resolved, but it does not affect the unit until after *all* weapons attacks have been resolved. At that point, all damage takes effect immediately. Note that damage taken by a unit during the Weapon Attack Phase takes effect before the start of this turn's Physical Attack Phase.

PHYSICAL ATTACK PHASE

10. Repeat Steps 6 through 9 for all physical attacks, with all damage from these attacks taking effect before the Heat Phase.

★ HEAT PHASE ★

11. Players adjust their BattleMech's Heat Scales to reflect any heat built up or lost during the turn. Any temporary or permanent damage caused by excessive internal heat is resolved at this time. Note that vehicles and infantry do not keep track of heat.

END PHASE

12. Players whose MechWarriors lost consciousness in a previous turn now roll to see if consciousness is regained.

13. Players roll to see if any fires now on the mapsheet will spread to other hexes; if so, they spread immediately.

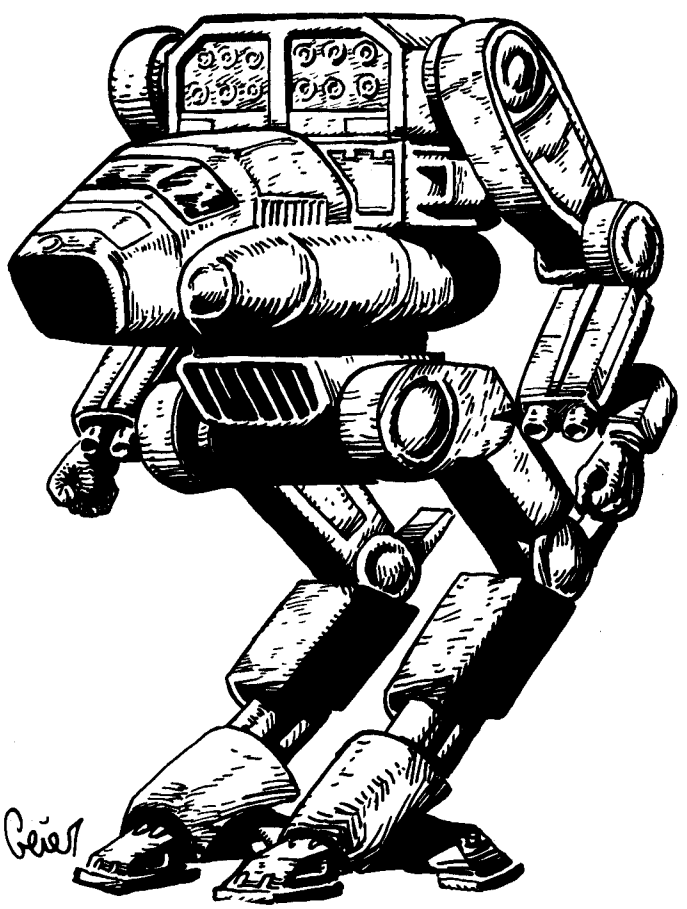
14. Steps 1 through 13 are repeated until only one team's units are left in control of the board. The team with the last surviving unit left on the board is the winner. If the last units from each team are destroyed simultaneously, the game is a draw.

MOVEMENT

BattleTech units change their position and location on the mapsheet by using one of several movements or movement actions. During the Movement Phase of each turn, each player must choose the one *mode* of movement (walking, running, or jumping for BattleMechs; cruising or flank speed for vehicles) that his unit will employ during that turn. A unit may not mix movement modes during the course of a turn. When it is his turn to move the unit, the player must announce what movement mode he is using and how many movement points he has to spend. Within the limits of the rules, how a unit moves is always the player's choice.

★ MOVEMENT COSTS ★

It costs at least 1 *movement point* (MP) for a unit to move one hex. If the terrain of the hex to be entered is not Clear, this cost usually increases, as shown in the *Movement Points* chart. Some terrain is restricted for vehicles and infantry, and some terrain requires a successful *Piloting* Skill roll for a BattleMech to remain standing once it has entered that terrain. Check the appropriate rules sections for these restrictions.

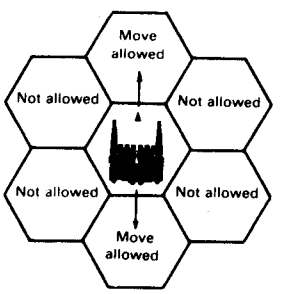


A unit must have sufficient MPs left to pay the cost of entering each new hex. The only exception is that a unit can always move forward one hex, no matter what the terrain cost, so long as that is the only hex the unit enters that turn, the unit has at least 1 MP to spend (i.e., is mobile), and the terrain is one that the unit is not forbidden to enter. A unit which enters a hex by this exception is considered to have run for the purpose of combat modifiers. A fallen BattleMech cannot crawl into another hex, but may change facing in its hex.

It costs a fallen BattleMech 2 MP to attempt to stand up. A fallen BattleMech may only attempt to stand up during the Movement Phase, but may make as many attempts as it wishes as long as it has sufficient MP left. (A BattleMech with only 1 MP at the beginning of its turn may attempt to stand once, by invoking the exception of the previous paragraph.) Once it is standing, any remaining MP may be used for movement out of the hex.

Many vehicles and infantry units are restricted in the type of terrain that they may enter. Check the *Movement Points* chart for a list of these movement restrictions.

While moving, a BattleMech or vehicle can move forward into the hex it is facing or may move backward into the hex directly to its rear. It cannot move into any other hex unless it first changes its facing. To change facing, the unit turns until the hex that it wants to enter is directly to its front or rear. Then the unit may enter the hex. The diagram shows the two hexes into which a BattleMech or vehicle may enter.



Since infantry have no facing, they may enter any of the six surrounding hexes, subject to terrain restrictions.

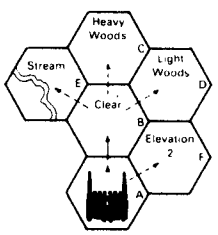
During the course of its movement, a BattleMech or vehicle can move forward and backward and change direction in any manner that the player chooses. A BattleMech may not run backward, nor may a vehicle move at flank speed backward. Units moving backwards may not change elevation levels.

While moving forward, a BattleMech may change elevations or depth by as much as two levels per hex. (If a BattleMech is jumping, this rule does not apply; see **Jumping**.) Ground vehicles and infantry may only change one elevation level per hex.

MOVEMENT POINTS

Terrain Type/ Activity	Cost Per Hex	Prohibited Units
Clear	1 MP	Naval
Road/Paved/Bridge	1 MP[3]	Naval
Rough	2 MP	Wheeled, Naval
Light Woods	2 MP	Wheeled, Hover, Naval
Heavy Woods	3 MP	Ground, Naval
Water		
Depth 0	1 MP	Naval
Depth 1	2 MP[1]	Infantry, Ground[4]
Depth 2+	4 MP[1]	Infantry, Ground[4]
Elevation Change		
(up or down)	+1 MP/level (Mechs,VTOL,Subs)	
	+2 MP/level (Infantry, Ground)	
Rubble	2 MP[1]	Wheeled, Naval
Light Building	2 MP[2]	Naval
Medium Building	3 MP[2]	Naval
Heavy Building	4 MP[2]	Naval
Hardened Building	5 MP[2]	Naval
Other Activities		
Facing Change	1 MP/hexside[5]	
Dropping		
	to the Ground	1 MP
Standing Up	2 MP	

[1] *Piloting* Skill roll required to prevent falling.
[2] *Piloting* Skill roll required to prevent damage; infantry pay only 1 MP to enter or leave any building.
[3] If traveling along road; otherwise cost of underlying terrain.
[4] Hovercraft may enter all water hexes.
[5] No cost for infantry.



In the diagram, the BattleMech in Hex A has 4 MP (walking) or 6 MP (running). The player declares that the BattleMech will walk this turn. It will cost all 4 of the BattleMech's MPs to walk straight ahead into Hex B (1 MP) and then forward again into the Heavy Woods in Hex C (3 MP). It would cost all 4 MPs for the BattleMech to move into Hex B (1 MP), then change its facing (1 MP) and move into the Light Woods in Hex D (2 MP). Similarly, it would cost the BattleMech all 4 MPs to move into Hex E, first forward into hex B (1 MP), then changing the facing one hex (1 MP), and then entering the Depth 1 Water Hex (2 MP). Finally, if the player wanted to move his BattleMech from Hex A directly to Hex F, he would first have to change the facing (1 MP), and then, after climbing two elevation levels (+2 MP), enter the open terrain (1 MP).

MOVEMENT MODES

Prior to movement, a BattleMech or vehicle must select one of the following movement modes.

STANDING STILL

The unit stays in the hex in which it started the turn. It does not move at all, not even to change its facing. Standing still generates no heat, gives no penalty to weapons fire, and the unit may be fired on with no target movement penalties.

There is no movement cost for standing still.

WALKING/CRUISING

If the unit has chosen walking (cruising for vehicles) it may expend MPs up to its *walking* (*cruising*) MP rating. Walking creates 1 point of heat for BattleMechs, which makes it harder for a walking BattleMech to fire its weapons.

A unit that is walking or cruising has a small penalty to its To-Hit number when firing weapons, and as a moving target, a walking unit is less likely to be hit. These combat effects are shown on the appropriate *To-Hit Modifier* charts and explained in **Combat**.

RUNNING/FLANK SPEED

When *running* (*flank speed* for vehicles), a unit can move further in a turn than it can walking. The player may expend up to the running MP rating of the unit each turn. Running units pay the same movement costs as do walking units. However, no unit can move backward while running, nor can it enter Water hexes of Depth 1 or deeper.

Running creates more heat for a BattleMech than does walking (2 heat points per turn), which further impedes its weapon fire. Running, or moving at flank speed, also makes weapon accuracy more difficult than when walking, but usually makes the unit a more difficult target, too. These effects are detailed in **Combat**. In addition, a running BattleMech or a ground vehicle moving at flank speed on a paved surface may skid (see **Skidding**).

★JUMPING★

Not all units can jump. Only some BattleMechs and a few other units are Jump-capable. Jump infantry and BattleArmor are also jump-capable and use these rules when jumping. Jump-capable units may move into any hex that is within its jump range. The terrain type in the hex does not matter, nor does the BattleMech's original facing. A jumping BattleMech will land facing whatever direction the player chooses.

A BattleMech cannot be constructed with Jump MP greater than its Walking MP. A jump-capable unit may not jump higher, in levels, than its Jump MP. Jumping creates a great deal of heat. It costs 1 heat point for every hex jumped, with a minimum cost of 3 heat points. That is, even if a BattleMech only jumps one hex, it builds up 3 heat points for that jump. Jumping also makes it harder to fire weapons accurately, and a jumping BattleMech is a more difficult target that a running or walking BattleMech. These effects are detailed in **Combat**.

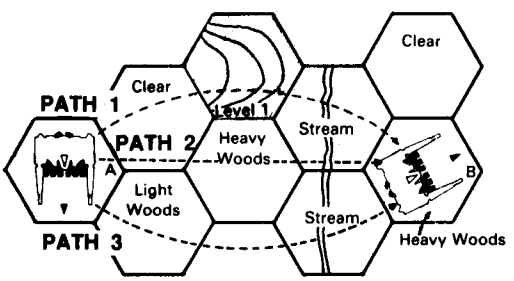
When a unit jumps, it can move one hex in any direction for every Jump MP it has. It can jump over and into any hex, regardless of terrain type or elevation difference (within the elevation restriction cited above). The path traveled by a jumping unit is always the shortest one possible between the starting and ending hexes. If this pathway crosses an elevation higher than the unit's Jump MP, then the unit cannot make the jump. If there is more than one possible path, the player may declare which one his unit is taking.

Jumping, because it requires the firing of the jump jets, may not be combined with any other movement mode. The firing of jump jets, lift-off, and landing require a full Movement Phase. BattleMechs must be standing at the start of the turn in order to jump.

BattleMechs that jump with a destroyed leg or damaged leg actuators must make a *Piloting* Skill roll to avoid falling when they land.

The diagram shows a BattleMech in Hex A with 6 MP (jumping). The BattleMech jumps to Hex B, four hexes away. As the BattleMech is using jump movement, it spends only 1 MP for every hex that it moves, ignoring all terrain costs for the hexes it passes over and for the hex in which it lands. As it lands, the player can face it in any direction that he chooses, at no extra cost. Walking or running, the BattleMech would have had to spend 13 MP to reach Hex B.

There are at least three paths that the BattleMech could have taken to jump into Hex B, as indicated on the diagram. If the hill was seven levels tall, the BattleMech could not have used path 1 (since its jump MP rating is only 6), but 2 and 3 still could have been used.



FACING

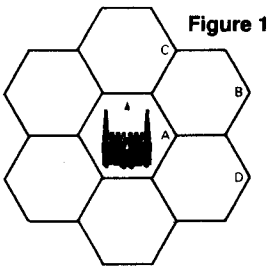
Every hex on the map has six edges, called hexsides. In **BattleTech**, every BattleMech and vehicle must be oriented to face one of those six hexsides. A BattleMech is facing the way its feet are pointing. A vehicle is facing in the direction of its front side. A unit's facing affects both movement and combat, and can only be changed during the Movement Phase.

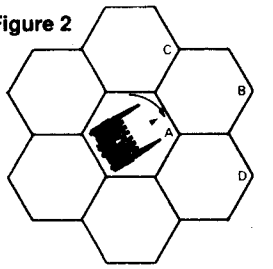
Units with ambiguous facings can be realigned to one of the two possible hexsides by the opposing player.

Infantry units have no facing.

FACING CHANGE

It cost 1 MP for every hexside by which a unit changes its facing. A 180° spin would cost a BattleMech or vehicle 3 MP.





In the diagram above, a player wants to move his BattleMech from Hex A into Hex B. However, the BattleMech is currently facing Hex C, and so cannot legally move to Hex B. If the BattleMech changes its facing, as shown in figure 2, the BattleMech can now legally move into Hex B. This facing change costs 1 MP.

If the player wanted to move the BattleMech into Hex D (without moving backward), the BattleMech would have to make a two-hexside facing change, at a cost of 2 MP.

★ SKIDDING ★

When running on a paved surface or road, there is a chance that a BattleMech or a ground vehicle can slip and lose control. A BattleMech that runs (or a ground vehicle that moves at flank speed) after a facing change must make a *Piloting* Skill roll modified by a factor based on the total number of hexes so far moved in the turn, using the *Skid Piloting Skill Roll Modifiers* chart. If the roll equals or exceeds the unit's modified *Piloting* Skill, then there is no effect. If the roll is less than the modified *Piloting* Skill, the BattleMech will fall, suffering normal falling damage (or the ground vehicle will lose control), and go into a skid.

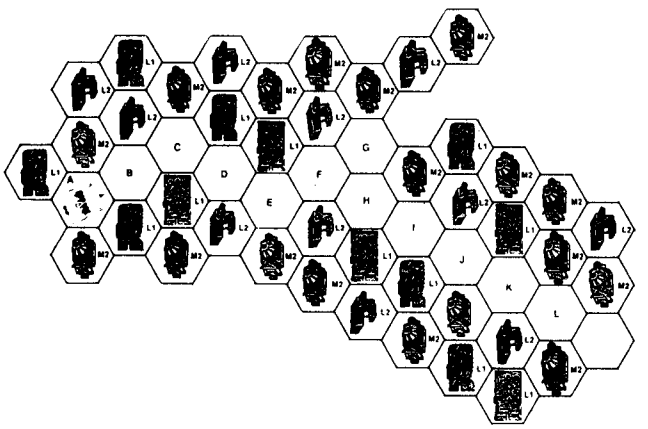
A BattleMech or ground vehicle skids for the number of hexes it has moved, in the direction it was travelling before the facing change that caused it to skid. If an obstacle (any terrain or building that is higher than the terrain that unit currently occupies) is in the way, the unit crashes into it and the normal charge rules take effect (see **Charging**), with the distance the unit moved before the skid being the number used for damage calculations. If the unit skids into a building, charge damage is taken by the building. If the unit skids into an infantry unit, that unit receives damage equal to the unit's tonnage divided by 5, and the unit continues its skid. This is one of the few ways that damage can be inflicted during the Movement Phase.

For every hex that a BattleMech skids, it suffers additional damage equal to one-half its normal falling damage (rounded up, see **Falling**). The *Front* column of the *BattleMech Hit Location* table is used to determine the placement of this damage. Vehicles moving at flank speed suffer the same effect in a skid, except that no damage occurs unless the vehicle hits something. There is a +2 To-Hit Modifier to all weapons fire and physical attacks attempted on the unit during a turn that it skids.

A *Piloting* Skill roll is not required for a facing change during a run on a paved surface or road. The roll is only made for running *after* the facing change into a new hex, as illustrated in the diagram.

SKID PILOTING SKILL ROLL MODIFIERS

Hexes Moved	*Modifier*
0 – 2	–1
3 – 4	0
5 – 7	+1
8 – 10	+2
11+	+4



In this example, the Phoenix Hawk *in Hex A wants to end its turn in Hex G. To do so requires an expenditure of 8 MP, a run for this BattleMech. It runs to Hex C and makes a facing change towards Hex D. No Piloting Skill roll is required. When the BattleMech moves to Hex D, a Piloting Skill roll is required because the BattleMech has run after making a facing change. It has moved three hexes and so there is no roll modifier. Needing a 5 or better, the player rolls a 10 and the BattleMech may continue on.*

The BattleMech continues to more on toward Hex E where it makes another facing change toward Hex F. To move into Hex F requires another Piloting Skill roll. This time the roll is modified by +1, as the BattleMech has moved 5 hexes, making the modified Piloting Skill Target Number a 6 (5+1). The player rolls a 5, a failure, and his BattleMech skids down the F-L hexrow. If there are no obstructions, the skid will be five hexes long. The Phoenix Hawk *suffers 5 points of falling damage (45 tons divided by 10 is 4.5, rounded up to 5) and 3 points of damage per hex of the skid (1/2 falling damage of 5, rounded up) for a total of 20 (5+15). Needless to say, the* Phoenix Hawk *should have jumped.*

★ DROPPING TO THE GROUND ★

In combat, a player may choose to have his BattleMech drop to the ground. Usually, he will do this at the end of movement, to hide or make attacks against it more difficult.

This action creates no additional heat, causes no falling damage, and costs 1 MP. The BattleMech retains the facing it had before dropping, and is automatically face down, as with an unintentional fall.

★ STANDING UP ★

The player may choose to have a BattleMech regain its feet after falling or dropping to the ground. His success in doing so depends on a roll against his *Piloting* Skill. Each attempt creates 1 Heat Point and costs 2 MP. A BattleMech may stand during the same turn that it fell, as long as it still has sufficient MP to make the attempt and it wasn't jumping that turn. Attempts to stand may only take place during the Movement Phase.

A player may chose either the walking or running mode for a BattleMech that begins its turn on the ground. A fallen BattleMech may not jump.

Standing up requires a successful *Piloting* Skill roll. If the attempt is not successful, the BattleMech falls, taking falling damage. Another attempt to stand may be made, as long as there are Movement Points available.

Once the BattleMech has successfully stood up, it may face in any direction (at no cost), regardless of its facing while on the ground.

★ STACKING ★

During the Movement Phase, a unit may move through hexes occupied by other friendly units, but a unit may not move *through* a hex with an enemy unit in it, nor may it end its movement in a hex that would violate the "stacking" limits below. At the end of the Movement Phase:

- only *one* BattleMech (friendly or enemy) can occupy a hex.
- vehicles and infantry are allowed to have up to two friendly units per hex. These units can be in any combination, and one of the units can be a BattleMech. Note that the maximum number of units in a hex is four, two units from each side, but only *one* of the four may be a BattleMech.
- units can be overstacked in the same building if they are on different levels; within a building, apply these stacking limits to each level of the building.

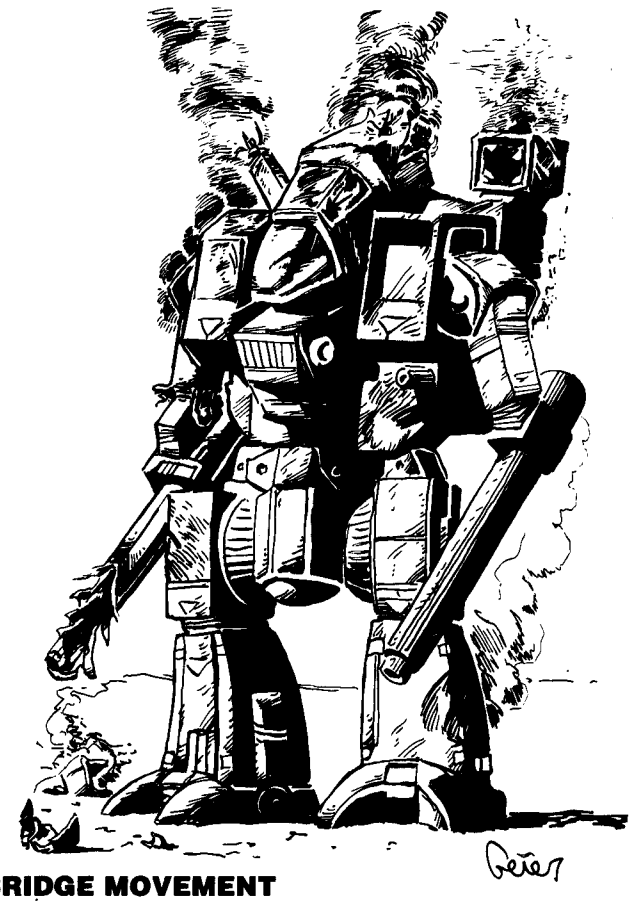
Infantry that are mounted on a vehicle, or BattleArmor riding on a BattleMech, do not count against this stacking limit.

ROAD/PAVEMENT MOVEMENT

All units traveling along roads pay only 1 MP per hex regardless of the hex's underlying terrain. A unit is considered to be traveling along a road if it moves along a road from one hex to the next.

In addition, Hover, Tracked, and Wheeled vehicles may receive a *road bonus* of one additional hex. To gain this bonus, the unit must begin its turn on a Road Hex and continue to travel along the road for its entire Movement Phase.

Units may move through prohibited terrain while traveling along a road, but must begin and end their movement on the road, and remain on that road while traveling through the terrain.



BRIDGE MOVEMENT

Roads that cross a Water Hex use bridges. Bridges are classified as Light, Medium or Heavy, in the same manner as buildings, and have the same range of Construction Factors (CF) as Light, Medium, and Heavy Buildings. Thus, Light Bridges are only usable by infantry units and vehicles that weigh 15 tons or less. The best Medium Bridges can support units up to 40 tons, while the best Heavy Bridges can support units up to 90 tons. Units that exceed these numbers can *not* use road movement across the bridged hex. An overweight unit can declare that it is using the bridge to make it collapse. The unit must take normal falling damage from the collapse of the bridge.

For combat purposes, a bridge can be attacked like a building; if its CF is reduced to 0, then the bridge has collapsed.

★ PILOTING SKILL ROLLS ★

Whenever a MechWarrior attempts to move his BattleMech through exceptionally difficult terrain, or his BattleMech receives 20 damage points or more in a single turn, or certain components of his BattleMech are damaged, or certain other events occur in a turn, a *Piloting* Skill roll is made to determine if the MechWarrior has the skill to avoid a fall.

Vehicle pilots make *Piloting* Skill rolls only to avoid skids and to avoid taking damage when entering buildings.

★ MAKING PILOTING SKILL ROLLS ★

The *Piloting Skill Roll Modifiers* chart lists the events that require a player to make a *Piloting* Skill roll for his BattleMech. When one of these events occurs, either during the Movement, Weapon Attack, or Physical Attack Phases of the turn, the player adds the modifiers for the event, along with any additional modifiers listed below, to his MechWarrior's *Piloting* Skill level (normally 5 for Inner Sphere MechWarriors and 4 for Clan Warriors). The resulting number is the Modified *Piloting* Skill level. Then the player rolls both dice.

If the roll is equal to, or greater than, the Modified *Piloting* Skill level, the BattleMech does not fall. If the roll is less than the modified *Piloting* Skill level, the BattleMech falls down. If the BattleMech fell during the Movement Phase and it has at least 2 MP left, it may attempt to regain its feet that turn.

PILOTING SKILL ROLL MODIFIERS

BattleMech's Situation	Modifier
Damage to BattleMech	
BattleMech takes 20+ Damage Points in one turn	+1
BattleMech reactor shuts down	+3[1]
Leg/foot actuator destroyed	+1
Gyro hit	+3
Leg destroyed	Automatic Fall
Physical Attacks On BattleMech	
BattleMech was kicked	0
BattleMech was pushed	0
BattleMech was charged/Death From Above	+2
Unit's Actions	
BattleMech missed kick	0
BattleMech charging	+2
BattleMech Death From Above	+4[2]
BattleMech entering Depth 1 Water Hex	-1
BattleMech entering Depth 2 Water Hex	0
BattleMech entering Depth 3+ Water Hex	+1
BattleMech attempting to stand	0
BattleMech entering rubble	0
Unit entering/leaving Light Building Hex	0[4]
Unit entering/leaving Medium Building Hex	+1[4]
Unit entering/Leaving Heavy Building Hex	+2[4]
Unit entering/Leaving Hardened Building Hex	+5[4]
BattleMech jumping with damaged leg actuators	as per Additional Modifiers
MechWarrior trying to avoid damage when his BattleMech is falling	+1/ level fallen
Additional Modifiers	
Per leg/foot actuator previously destroyed	+1
Per hip also/previously destroyed	+2
Gyro also/previously hit (automatic fall if two previous hits)	+3
Leg previously destroyed	+5[3]

[1] Only during the turn that the reactor shuts down. If the BattleMech must make a *Piloting* Skill roll with a shut down reactor, the BattleMech automatically falls.

[2] Fall is automatic if the Death From Above is unsuccessful.

[3] Do not add modifiers for the destroyed hip and other damaged actuators in the leg.

[4] To avoid damage only. No fall results if Piloting Skill roll fails. See **Buildings**.

Piloting Skill rolls that are made due to movement (entering water, trying to stand up, entering rubble, avoiding falling damage, etc.) are made immediately following the action. Multiple rolls may be required during the BattleMech's movement for that turn. For example, if a BattleMech is moving through three hexes of Depth 1 water, the player must make a *Piloting* Skill roll when the BattleMech enters each of the three Water Hexes.

All *Piloting* Skill rolls caused by fire combat are made at the end of the Weapon Attack Phase of the turn and are made only once per event. Note that all weapon attacks are resolved before any *Piloting* Skill rolls are made. BattleMechs that fall are prone at the start of that turn's Physical Attack Phase.

All *Piloting* Skill rolls that need to be made because of physical attacks are made at the end of the Physical Attack Phase. Physical attack-related *Piloting* Skill rolls are made only once per event. All Physical attacks are resolved before any *Piloting* Skill rolls are made.

A *Piloting* Skill roll is required of a unit for each of the following events:

- Moving into a hex containing one of the terrain types listed above
- Jumping with damaged leg or foot actuators
- 20+ points of attack damage taken in either the Weapons Fire or Physical Attack Phase (but not another roll if 40+ points are taken)
- A physical attack is made against it (except punches)
- Missing a kick, or or attempting a charge or Death From Above
- Its reactor shuts down
- Leg or foot actuator destroyed
- Each gyro is hit
- It falls and its MechWarrior is trying to avoid being hurt

For example, during the Weapon Attack Phase, a BattleMech, with a MechWarrior who has a Piloting *Skill of 5, takes 40 points of damage, and also loses 2 leg actuators. The player makes one* Piloting *Skill roll for taking 20 or more points of damage, and one for losing each leg actuator. The modified* Piloting *Skill Target Number for each of the three rolls is 8 [5 (Piloting Skill) +1 (20+ of damage) +1 (damaged leg actuator) +1 (damaged leg actuator)].*

During the Physical Attack Phase, the same BattleMech is kicked in the leg by two other BattleMechs, loses another actuator, as well as taking 23 more points of damage. Four more Piloting Skill rolls would be made: two for being kicked twice, one for losing a leg actuator, and one for the 23 points of damage [all four at a 9; 7 (already existing modifiers) + 1 (another damaged leg actuator) +1 (20+ of damage)].

FALLING

When a BattleMech falls down, it inflicts damage on itself and possibly on the MechWarrior inside. The amount of damage taken by the BattleMech varies, depending on its weight and how far it falls. Whether or not a MechWarrior is wounded depends on a *Piloting* Skill roll.

★ Determining Location After a Fall ★

To determine the location of a BattleMech after a fall, the players must use their judgement and the following guidelines to create a reasonable outcome. The location after a fall is largely determined by the action that created the fall.

In general, when a fall occurs because of terrain (movement into or out of a deep water, for example), the BattleMech will fall into the lower of the two hexes. If the fall occurs during movement for other reasons, the BattleMech falls in the hex that it most recently entered. If a fall occurs because of weapons fire, a physical attack, or any other reason, the BattleMech falls in the hex that it currently occupies.

If a BattleMech falls into a hex containing another BattleMech, the second BattleMech might also take damage, depending on how the BattleMech fell. If the BattleMech fell from a hex two levels or greater above the landing hex, use the **Accidental Falls From Above** rules. If the BattleMech fell from a hex that was less than two levels higher, use the **Domino Effect** rules. If a BattleMech falls in a hex occupied only by infantry and/or vehicles, the BattleMech hits the ground, missing any non-BattleMech units.

To find the number of levels fallen, subtract the terrain elevation level of the hex into which the BattleMech falls from the terrain elevation level of the hex from which it fell.

★ Facing After a Fall ★

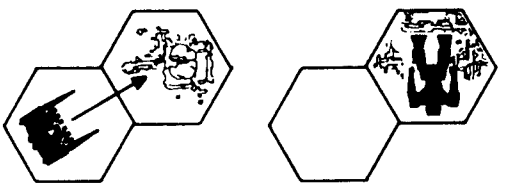
When a BattleMech falls, it takes damage and its facing may change. This facing change is important because it also determines the *BattleMech Hit Location* table used when allocating damage from the fall.

To determine what the facing will be after the fall and what area of the BattleMech takes damage because of the fall, roll one die and find the result on the *Facing After a Fall* table. When determining damage from a fall, use the hit location table indicated.

FACING AFTER A FALL (1D6)

Roll	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Back
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

After a fall, a BattleMech is prone and face down. BattleMechs that fall on their sides or back automatically roll over to lie on their fronts. Rather than standing, a prone BattleMech may spend movement points to change its facing in the normal manner.



For example, the BattleMech in the diagram was entering a rubble hex and failed its Piloting Skill roll. The player rolls on the Facing After a Fall table and the result is 3. The BattleMech is now facing two hexsides to the right (clockwise) of its original facing and the damage from the fall is taken on the Right side of the BattleMech. The BattleMech is now prone in the rubble hex.

Falling Damage to a BattleMech

A BattleMech always takes damage from a fall. The damage taken by a falling BattleMech is equal to 1 point for every 10 tons that the BattleMech weighs (rounding up) times the number of levels plus 1 that the BattleMech fell. If it fell "uphill," the number of elevations it fell is 0. If it fell from land into a Water Hex, treat the Water Hex as a level-0 Hex and cut the resulting damage in half (rounding up).

Divide the damage into 5-point *clusters*: i.e., form as many 5-point groups as possible, gathering any remaining points into one smaller group, and determine a hit location for each cluster. (For example, with 33 points of damage, 5-point clusters result in six 5-point hits and one 3-point hit.) Use the appropriate column of the *BattleMech Hit Locations* table as specified by the *Facing After a Fall* table.

If the fall occurs during the Movement Phase, the damage is resolved at that time. If the fall occurs during either combat phase, the results of the fall are assumed to have occurred simultaneously with all other damage results in that phase.

An Archer *in a Level 1 Hex is trying to get to its feet during the Movement Phase. The Mechwarrior fails his* Piloting *Skill roll and the BattleMech falls down again into the same hex. The BattleMech fell from a Level 1 to Level 1 Hex (the same one) so has fallen 0 levels. The player rolls a 1 on the Facing After a Fall table and finds that the BattleMech landed on its face, so the damage is to be taken on its front side. The* Archer *suffers 7 Damage Points (70 tons divided by 10 is 7; the number of levels fallen plus 1 totals 1; 7 x 1 is 7). These seven points are divided into one cluster of 5 and one of 2, and then their location is found on the Front column of the BattleMech Hit Location table.*

Falling Damage to the MechWarrior

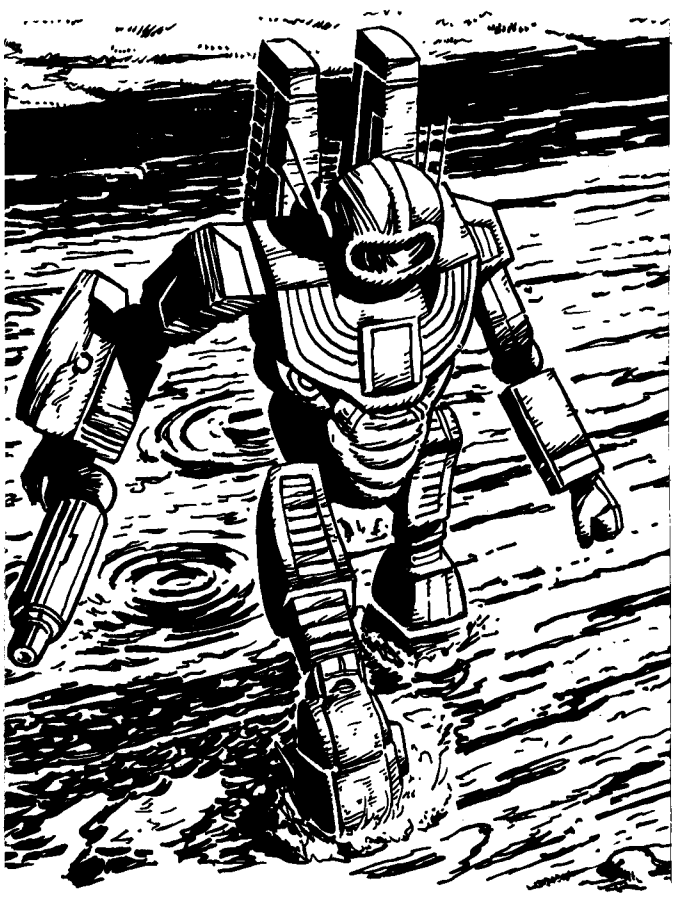
A second *Piloting* Skill roll is made after every fall, adding one to the target number for every level fallen. If the player rolls equal to, or higher than, this modified *Piloting* Skill, then the MechWarrior has successfully avoided taking any damage. If not, then the MechWarrior takes 1 Damage Point.

TORSO AND TURRET TWIST

After all movement has been done, the players can twist the torsos of their BattleMechs or rotate the turrets of any turreted vehicles or buildings. Torso twisting uses reverse initiative, with the team that won the initiative twisting or rotating one unit before the team that lost initiative twists one of their units. This sequence serves to minimize the effects of the initiative roll.

A BattleMech can twist its torso one hex (60°) to the left or the right of the direction that its feet are pointing. This new alignment is not kept during the next turn; for movement purposes, the BattleMech is still considered to be facing in its pre-twist direction. A BattleMech that has had its torso twisted has a modified firing arc, as described in **Combat**.

Vehicles with turrets may align these turrets to any hexside. A vehicle that has had its turret rotated has a modified firing arc, as described in **Combat**.



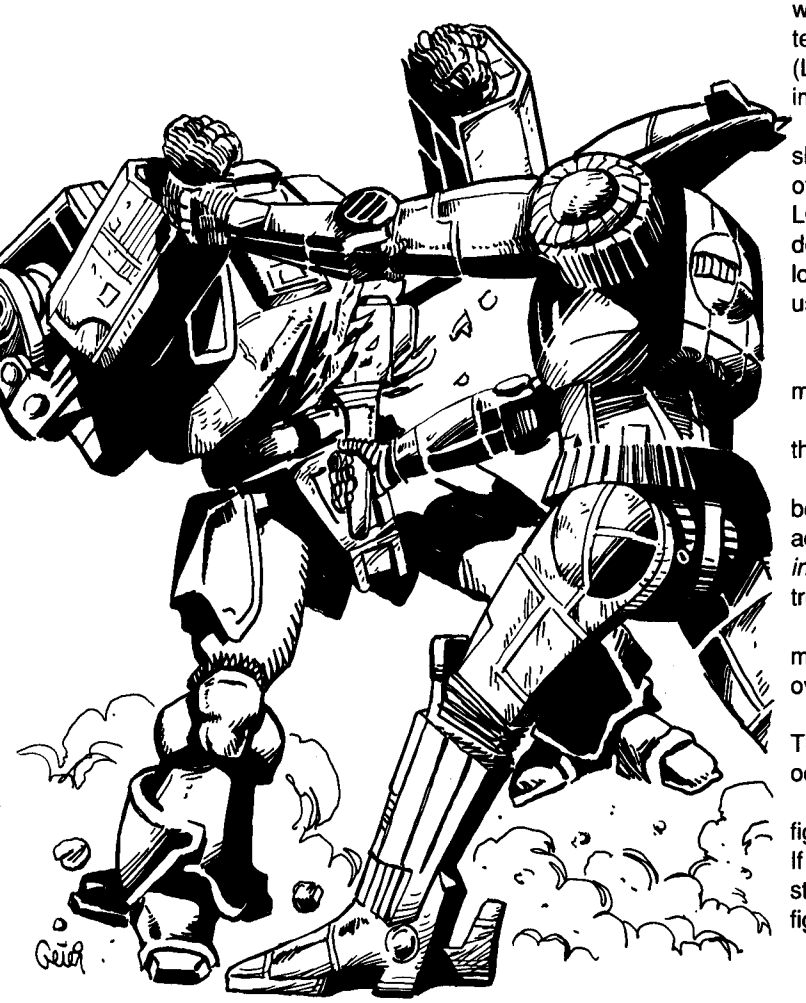
COMBAT

Once the Movement Phase of the turn is completed, units engage in combat. There are two forms of combat: Weapon Attacks and Physical Attacks. Weapon Attacks are attacks using the unit's armaments, such as missiles, lasers and autocannons. In Physical Attacks, the BattleMechs use their own massive weight to inflict damage on targets.

In **BattleTech**, Weapon and Physical Attacks first inflict damage on the outer armor covering every BattleMech and vehicle. When all of a location's armor points are gone, any remaining damage affects the internal structure of the unit in that location. Every attack that penetrates the armor of a unit has a chance to be a critical hit that will knock out a major weapon or motive system or even destroy the unit completely.

Most infantry units have no armor, so successful attacks reduce the number of men in the platoon rather than reducing armor points. BattleArmor units have armor points like vehicles, and it can take multiple hits to destroy them. See **Infantry** for details.

Special combat rules for vehicles, infantry, and artillery are found in their respective sections of this compendium.



★ WEAPONS FIRE ★

During the Weapon Attack Phase, players use the armaments of their units to inflict damage on targets. For one unit to fire at another it must have a clear line-of-sight (LOS) to the target, and the target must be within the range and firing arc of the weapons that player wishes to use. The likelihood of a shot hitting the target is then calculated, based on the range, movement of the target and firer, intervening terrain, and other factors.

In general, a weapon attack cannot be made against a unit in the same hex as the attacker. However, infantry units are allowed to do so.

Players fire each weapon individually, and can fire as many or as few of their weapons at the target as they wish, within the restrictions given below. Unless otherwise stated in the rules, each weapon may only be fired once per turn.

If a weapon hits a target, the damage location is determined and the damage is recorded on the appropriate record sheet.

★ LINE-OF-SIGHT ★

When a player wishes to fire on a unit, he must first discover whether or not his unit is able to see its intended target. Various terrain features can fully or partially block a unit's line-of-sight (LOS) to a target, thus making a shot more difficult or even impossible.

The LOS is checked by laying a straightedge (a ruler or a sheet of paper) from the center of the attacker's hex to the center of the target's hex. Any hex that the straightedge crosses is in the LOS. If the straightedge passes directly between two hexes, the defender chooses which hex it passes through. The players then look for intervening features that are high enough to block LOS, using the following rules:

- All terrain has an elevation. If its level is not marked on the map, it is 0.
- Buildings add their level to the level of the terrain on which they stand.
- All woods are effectively 2 levels tall. Woods can sometimes be fired *through*. If they can't be fired through (see below), they add 2 levels to the level of the terrain on which they stand. Units *in* woods are standing on the underlying terrain, not on top of the trees.
- Airborne craft are at whatever level specified. That level must be at least as high as whatever they're flying over. If flying over woods, they must be higher than the tops of the trees.
- Underwater craft are at whatever level (depth) specified. That level must be between 0 and the depth of the Water hex they occupy.
- Since BattleMechs are so tall, a standing BattleMech is figured to be 1 level higher than the terrain on which it is standing. If standing on level 2 terrain, figure that it is 3 levels high. If standing on top of a level 3 building which is on level 1 terrain, figure that the BattleMech is 5 levels high (1 + 3 + 1).

If the two units (attacker and target) are in adjacent hexes, there is always LOS in both directions.

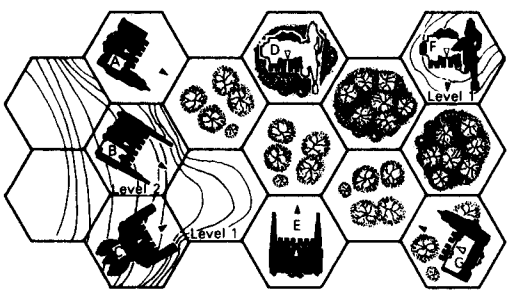
• If any intervening terrain is higher than both units, then LOS is blocked.

• No single hex of woods blocks LOS. However, if the tops of any three wooded hexes (or any two wooded hexes, if one of them is Heavy Woods) *intervene*, LOS is blocked. Woods *in* the target's hex and intervening wooded hexes which are not dense enough to block LOS still make the attack more difficult (see **To-Hit Modifiers**).

• If the hex adjacent to the attacker through which LOS is traced is higher than the attacker, then LOS is blocked. If the hex adjacent to the target through which LOS is traced is higher than the target, then LOS is blocked. (In shorthand: if the adjacent hex is higher than the unit it is adjacent to, LOS is blocked.) Note that since no single woods hex can block LOS, then an adjacent wooded hex cannot block LOS in this way.

• Intervening units never block LOS.

Once the players have discovered blocking terrain they should check the cases below to discover its effect on line-of-sight.



The diagram illustrates some of the principles governing LOS. A BattleMech in Hex A can see BattleMechs in Hexes B, D, E and F. It can see the BattleMech in Hex F because the three woods hexes between them are not higher than both BattleMechs. The BattleMech in Hex F is also visible to the BattleMech in Hex E for the same reason. The BattleMech in Hex A cannot see the BattleMech in Hex G because there are three Light Woods hexes between the two BattleMechs, and it cannot see the BattleMech in Hex C because the level of Hex B (which is adjacent to Hex A) is higher than the BattleMech in Hex A.

The BattleMech in Hex C cannot see the BattleMech in Hex A for the same reason that it can't be seen by that BattleMech. It does, however, have an unblocked line of sight to the BattleMechs in Hexes B, D, E, F and G.

Water Hex Effects on Line-of-Sight

Water Hexes have levels called *depths* that are 0 or below. Treat the depth as a negative number when figuring the elevation differences between two units.

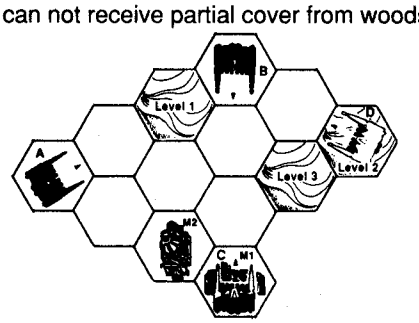
A Depth 1 Water Hex gives a BattleMech standing in it **Partial Cover**. There is a concealment modifier to the To-Hit Number, and only part of the BattleMech is a possible target. A Water Hex of Depth 2 or deeper completely blocks LOS to and from a BattleMech standing in it. See **Underwater Operations** for exceptions.

Hovercraft moving over water and surface naval vessels are at level 0.

Partial Cover

Partial cover makes a BattleMech harder to hit, but any shot that does hit is more likely to hit a critical location. Only a BattleMech can receive a partial cover benefit from terrain. To qualify for partial cover, a BattleMech must be adjacent to a hex that is one level higher than its own hex, and that hex must be between it and the unit that is attacking it. Additionally, the firing unit must be at a level equal to, or less than, the defending unit (i.e. firing downhill negates partial cover.)

This higher elevation can be a hill, building, or combination of both. Partial cover does not block LOS, but provides a +3 To-Hit Modifier. Any damage inflicted on a partially concealed target is determined on the *BattleMech Punch Locations* table; the BattleMech's legs cannot be hit. (See **To-Hit Modifiers** for further explanation.) A partial cover To-Hit Modifier of +2 is given for BattleMechs in Depth 1 water (+3, -1 for being in water). A BattleMech can not receive partial cover from woods.

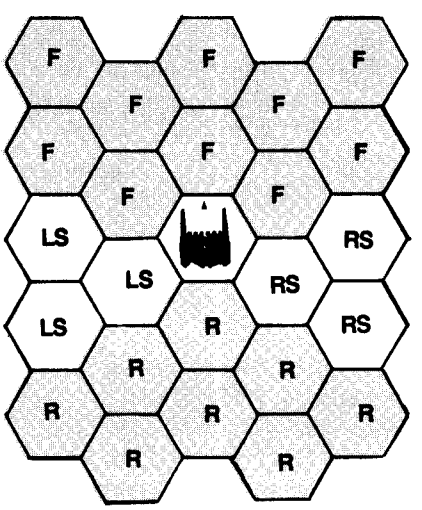


The BattleMechs in hexes B, C, and D have partial cover from the BattleMech in Hex A, as each has one higher level of elevation in the hex adjacent to itself and along the LOS from the BattleMech in Hex A.

FIRING ARCS

Once the player has determined that his unit can see its intended target, he must see which weapons' firing arcs the target is in. Only those weapons that can be brought to bear on the target can fire at it.

The firing arcs of BattleMechs take advantage of the special nature of arm-mounted weapons. There are four basic firing arcs: the front and rear arcs, and the right and left side arcs. The diagram shows all four of these arcs.



For BattleMechs, weapons mounted in the three forward torso locations, the legs, or the head of a BattleMech may only fire into the forward arc. Weapons mounted on the right arm may fire into the forward arc or into the right side arc (abbreviated RS). Weapons mounted on the left arm may fire into the forward arc and into the left side arc (abbreviated LS).

Weapons may also be mounted to the rear of the BattleMech. If a weapon is mounted to the rear (indicated by (R) on the Record Sheet), it follows the rules of the previous paragraph, substituting "rear" for "forward." Weapons mounted in one of the three rear torso locations may only fire into the rear arc. Weapons may also be rear-mounted on the head, arms, and legs.

A BattleMech with leg-mounted weapons may not fire through a hex that would provide that BattleMech with partial cover.

Vehicle weapons mounted in the front may only fire into the forward arc. Weapons mounted on the right side or left side may only fire into the right and left arcs, respectively. Rear-mounted weapons fire into the rear arc.

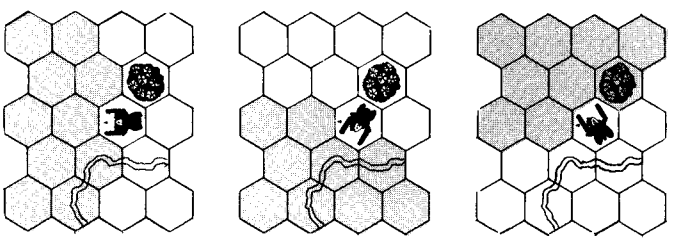
Infantry do not have any firing arc restrictions.

★ROTATING THE FIRING ARCS★

Each BattleMech can rotate its torso one hexside to the left or right, while keeping its feet pointed straight ahead. This means that the BattleMech can move in one direction, but fire in another. A BattleMech's upper-body firing arcs depend on which way its torso is turned, not on which way its feet are pointing (leg-mounted weapon firing arcs always are aligned with the feet).

When the BattleMech's torso rotates, all upper-body firing arcs rotate with it. The accompanying diagram shows this change.

Mechs that are prone may not twist their torsos.



Torso Forward **Torso Twisted Left** **Torso Twisted Right**

Turret-mounted weapons in vehicles can be pointed through any hexside, as per the **Torso and Turret Twist**; their arc is defined by the hexside through which the turret is currently pointing.

FIRING WEAPONS

After a player has determined that a target is within the firing arc of his weapons and that there is a clear LOS, firing can begin. The player counts the range to determine the base To-Hit Number. For each weapon he will fire, the player checks to see if the firing is more difficult or less difficult than normal because of *Gunnery* Skill, terrain, movement, or other factors. These factors will add To-Hit Modifiers to the Base To-Hit Number, resulting in the Modified To-Hit Number. The player then rolls two dice to see if he hits the target. If the result is greater than the Modified To-Hit Number, the weapon has hit its target. The more difficult the shot is because of distance, concealment by terrain, or movement, the higher the To-Hit number will be. If the fired weapon requires ammunition, he also marks off one shot of ammunition. Weapons may be fired only once per turn.

Base To-Hit Number

Once the player decides which weapons are going to fire, he needs to determine the Base To-Hit Number for each shot.

The Base To-Hit Number is determined solely by the range to the target at which the chosen weapon is firing.

Range is the distance between the attacking unit and its target. Begin at the hex next to the attacker along the line-of-sight, following the shortest path to the target, and count the target's hex.

The ranges for all weapons are listed in the *Weapons and Equipment* tables. A weapon's maximum range is divided into three equal parts to determine its short, medium, and long ranges. Consult the *Weapons and Equipment* table for the weapon being fired. (If the firing unit is infantry, use the *Base To-Hit Numbers of Standard Infantry Weapons* chart, in **Infantry**.) Find the current range in the row of numbers for the weapon, and determine if this range is short, medium, long, or out of range. Find the Base To-Hit Number on the following chart, determined by whether the range is short, medium, or long. This Base To-Hit Number may be modified by terrain and movement.

BASE TO-HIT NUMBERS

Range	Base To-Hit Number
Short	4
Medium	6
Long	8

Weapons have no chance to hit if the target is at a distance that is greater than long range (but may be fired anyway, just to get rid of ammunition).

To-Hit Modifiers

Gunnery Skill Modifier

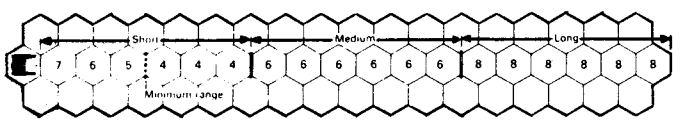
For every *Gunnery* Skill level above or below 4, the Base To-Hit Number is increased or decreased (respectively) by 1.

Minimum Range Modifier

Some weapons, like particle beam projectors, autocannons, and long-range missiles (LRMs), are designed for firing at long ranges. When these weapons are fired at very close targets, they lose considerable effectiveness. This minimum effective range is listed in the appropriate *Weapons and Equipment* table. The number given is the range at which the weapon becomes less effective than normal, and the minimum range modifier to the To-Hit Number reflects this.

The minimum effective range given in the Weapons Table is the hex at which the To-Hit Number is modified by +1. For every hex closer, the modifier is increased by 1 so that it is harder to hit with some weapons at very close ranges than at maximum range.

A particle projector cannon (PPC) has a minimum effective range of three hexes. If a Warhammer *is firing at a* Crusader *three hexes away, it has a Minimum Range Modifier of +1. If it is fired at a target only two hexes away, the modifier is +2. If the target is one hex away, the modifier is +3. This is shown in the diagram.*



If the Warhammer *in our previous example allows its target to get only two hexes away, its To-Hit Number will be modified because the target is within its minimum effective range. The Base To-Hit Number is 4 because the target is at short range, and the Minimum Range Modifier is +2. This makes the Modified To-Hit Number a 6, the same as if the target were at medium range!*

★ *Movement Modifiers* ★

In **BattleTech**, the To-Hit Number is modified by the movement of the attacking BattleMech and its target's movement, using the values found in the *Modifiers To Weapons Fire* chart. The jump modifier is added to the number-of-hexes-moved modifier if the target has jumped.

The target movement modifiers are based solely on the hexes traversed, not on the number of movement points spent. If the target used both backward and forward movement in the turn, the number of hexes moved for combat purposes is only counted from the hex that the unit last reversed its movement. For example, if the target has moved backward three hexes and then forward two hexes, the target movement modifier would be based only on the final two hexes of movement, resulting in a target movement modifier of zero.

During the Movement Phase, the attacking Warhammer *from the previous example walked (+1 modifier), and its target moved a total of 4 hexes (+1 modifier). As a result, the combined movement modifier is +2. This modifier is added to the Base To-Hit Number. This means that the* Warhammer *can fire his PPC at the* Crusader, *which is 2 hexes away, with a Modified To-Hit Number of 8 (4 + 2 + 2).*

Terrain Modifiers

Terrain can also affect the probability of a successful shot. It is not impossible to shoot through Light and Heavy Woods, but successful shots become more difficult the more woods hexes there are between an attacker and its target. Water generally makes a BattleMech harder to hit. Partial cover also modifies the To-Hit Number. Buildings have no effect on the To-Hit Number, but they do affect the damage results. These effects are covered in more detail in **Buildings**. All other cases are covered in the following descriptions:

Light Woods. The terrain modifier is +1 per hex of Light Woods between the attacker and its target. (Of course, if the treetops are below the LOS between the units, this modifier doesn't apply.) There is an additional terrain modifier of +1 if the target occupies a Light Woods hex. As many as two Light Woods hexes may be fired through, as long as the To-Hit Number stays below 13.

Heavy Woods. The terrain modifier is +2 for one hex of Heavy Woods between the attacker and its target. (Again, if the treetops are below the LOS between the units, this modifier doesn't apply, and if there is more than one Heavy Woods hex between the attacker and its target, line-of-sight is blocked.) There is an additional terrain modifier of +2 if the target occupies a Heavy Woods hex.

Water. There is a terrain modifier of +1 if the *attacker* is in a Water Hex of Depth 1, and of -1 if the *target* is in a Water Hex of Depth 1. Since a BattleMech also receives partial cover for being in a Depth 1 Water Hex, it would have a total terrain modifier of +2 (-1 + 3).

Water of Depth 0 has no effect on the To-Hit Number.

Combat cannot occur between a BattleMech that is in a depth 2 (or greater) Water Hex, and other units. See **Underwater Operations** optional rules for exceptions.

Hovercraft and naval vessels ignore these modifiers. They are considered to be at Depth 0 no matter what the actual depth of their Water Hex is.

Partial Cover. There is a terrain modifier of +3 if the target BattleMech is partially concealed, as discussed in **Line-of-Sight**. Remember that a BattleMech in a Depth 1 Water Hex receives a total terrain modifier of +2, −1 for being in water and +3 for being partially concealed. When a BattleMech receives the partial cover modifier, all damage is resolved on the *BattleMech Punch Locations* table.

★ *Multiple Targets* ★

A player may have his BattleMech or vehicle engage more than one target in a turn. He may allocate the different weapons systems on board to fire at different targets. Infantry may only engage one target per turn.

For a BattleMech or vehicle to fire at more than one target, the multiple targets must fall in the unit's front firing arc. One of the targets is designated as the primary target. All other targets are considered secondary targets and have a +1 modifier added to their To-Hit Numbers. This modifier is not cumulative—the modifier for the third and subsequent targets is still only +1. DropShips ignore this multiple target modifier.

This multiple targets modifier doesn't apply to physical attacks in any way.

Prone BattleMechs and Weapons Fire

Prone BattleMechs may fire weapons, and they might make better targets. The following are the weapon attack rules for prone BattleMechs:

★ Firing When Down ★

A BattleMech that has fallen or that has dropped to the ground may fire its arm weapons, as long as neither of its arms have been destroyed. One arm is used to support the BattleMech as it fires, and so its weapons on that arm cannot fire. The other arm is able to fire all of the weapons mounted in it, and the BattleMech can fire any other weapons mounted in its head or torso. The To-Hit Modifier is +2.

★ Firing at Prone Targets ★

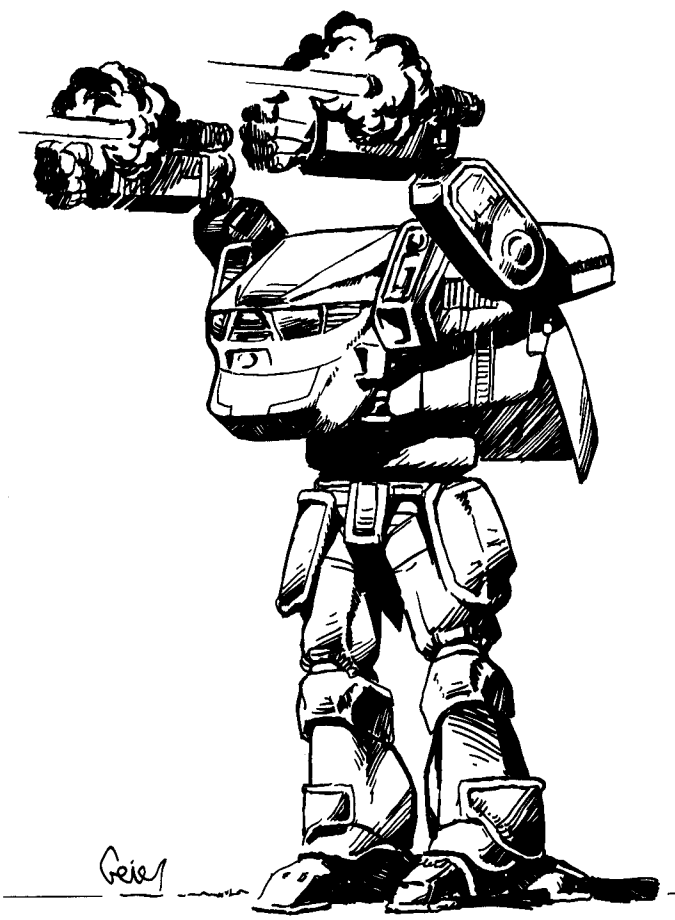
A BattleMech that has fallen, or is prone, is an easier target when adjacent, and a more difficult target at longer ranges. Any attack made against a prone BattleMech from an adjacent hex, either with weapons fire or physically, has a -2 To-Hit Modifier. All other attacks have a +1 To-Hit Modifier.

Use the *BattleMech Hit Locations* table in the normal manner for determining the location that is hit. Note that the facing of a prone BattleMech is determined in **Facing After a Fall**.

The only physical attacks allowed against a prone BattleMech is a kick or Death From Above. Any damage from a successful attack of either sort is determined on the regular *BattleMech Hit Locations* table, not the *BattleMech Kick Locations* table.

★ Firing at Immobile Targets ★

Sometimes a unit will want to fire at an immobile target, such as a building, a woods hex, or a unit that is shut down or whose crew is unconscious. These targets have a -4 modifier to the Base To-Hit Number.



★ Heat and Damage Modifiers to Firing BattleMech ★

BattleMech's can have their Base To-Hit Number modified by combat damage and by heat build-up. These effects are discussed in **Critical Hits on BattleMechs** and **Heat Build-Up** and are summarized on the *Critical Hit Effects* chart and the *Heat Scale*. Note that some BattleMechs are designed without certain arm actuators. These BattleMechs do not receive the +1 modifier for that actuator being destroyed.

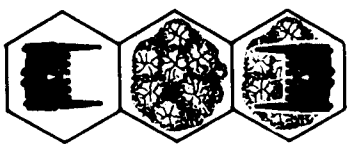
MODIFIERS TO WEAPONS FIRE

Attacker:	
Gunnery Skill	+1 per *Gunnery* Skill level over 4 -1 per *Gunnery* Skill level less than 4
Movement Modifiers	
Stationary	None
Walked	+1
Ran	+2
Jumped	+3
BattleMech Damage	
Sensor Hit	+2
Shoulder	+4 for weapons in arm
Arm Actuator	+1 for weapons in arm
Heat	
8 – 12	+1
13 – 16	+2
17 – 23	+3
24+	+4
Prone	+2
Range and Terrain:	
Minimum Range	+1 at minimum range, additional +1 per hex less than minimum range
Light Woods	+1 per intervening hex; +1 if target *in* Light Woods
Heavy Woods	+2 per intervening hex; +2 if target *in* Heavy Woods
Water	
Depth 1	-1 to hit a BattleMech in Water Hex; use *BattleMech Punch Locations* table +1 to hit for firing BattleMech in Water Hex
Depth 2	BattleMechs cannot fire into or out of depth 2+ water
Target:	
Partial Cover	+3 (use *BattleMech Punch Locations* table)
Prone	-2 (from adjacent hex); +1 (from all others)
Secondary Target	+1
Immobile	-4
Movement Modifiers	
Moved 0 – 2 Hexes	None
Moved 3 – 4 Hexes	+1
Moved 5 – 6 Hexes	+2
Moved 7 – 9 Hexes	+3
Moved 10+ Hexes	+4
Jumped	+1

Modified To-Hit Number

The Modified To-Hit Number is equal to the Base To-Hit Number plus all modifiers for *Gunnery* Skill, minimum range, movement, concealment, and the other factors discussed above. If the resulting number is greater than 12, the shot is an automatic miss. If a player finds that its intended shot would result in an automatic miss, he can avoid wasting the ammunition and building up heat. The weapon can be used to attack another target.

A Warhammer *wants to fire its particle beam projector cannon at a* Crusader *two hexes away (+2 minimum range modifier), with two hexes of Heavy Woods giving the* Crusader *cover (one between them and one where the* Crusader *is; +4 terrain modifier). The* Warhammer *walked (+1 movement modifier), and the* Crusader *jumped (+1 movement modifier) four hexes (+1 movement modifier). This makes the Modified To-Hit Number 13 (4 + 2 + 4 + 1 + 1 + 1 = 13), which makes the shot an automatic miss.*



TO-HIT ROLL

The To-Hit roll is made with two dice. If the number rolled is equal to or greater than the Modified To-Hit Number, the shot is successful.

★ Missile Hits ★

When a missile launcher attack is made, the damage done by a hit depends on how many of the fired missiles actually reached the target.

The Modified To-Hit Number is calculated and the To-Hit roll made, just as with other weapons, but the combat procedure has one extra step. If a missile launcher attack hits its target, the attacking player must then roll the dice and consult the *Missile Hits* table to find out how many missiles hit.

First, find the number of missiles fired on the top row of the table. Cross reference this number with the die roll. The number showing at this intersection is the number of missiles that actually hit the target. Note that some advanced Clan and Inner Sphere weapon systems modify the roll. Also, anti-missile systems might reduce the number of missiles that actually hit. See **Advanced Equipment** for details.

MISSILE HITS (2D6)

Roll	Number of Missiles Fired						
	2	**4**	**5**	**6**	**10**	**15**	**20**
2	1	1	1	2	3	5	6
3	1	2	2	2	3	5	6
4	1	2	2	3	4	6	9
5	1	2	3	3	6	9	12
6	1	2	3	4	6	9	12
7	1	3	3	4	6	9	12
8	2	3	3	4	6	9	12
9	2	3	4	5	8	12	16
10	2	3	4	5	8	12	16
11	2	4	5	6	10	15	20
12	2	4	5	6	10	15	20

An Archer *fires its 20-pack long-range missile launcher and hits its target. The attack is successful, so the attacking player must now determine how many of his 20 missiles actually hit the target. He rolls an 8, and cross-references this roll down the left side of the table with the 20 missiles he fires along the top of the table to find that 12 of his missiles reach their target. If he had rolled a 2, only 6 missiles would have hit the target.*

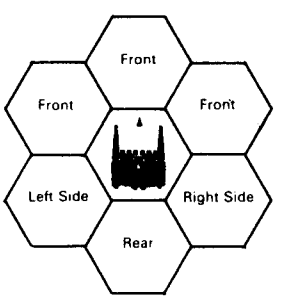
HIT LOCATION

★ Attack Direction ★

When an attack hits a BattleMech or vehicle, it hits from either the front, back, left, or right side of the target, and the attacking player must determine what part of the target his weapon or missiles hit. Hits on infantry and buildings do not have to make this determination and players should go directly to **Damage** when resolving hits on these targets. Detailed explanations for allocating damage to infantry and buildings are found in their respective sections.

Lay a straightedge from the center of the attacker's hex to the center of the target's hex. Find the hexside crossed by the straightedge on the diagram below to find the side of the unit hit by the fire. If the straightedge crosses exactly at the intersection of two sides, the defender chooses which side is hit by the attack.

To determine which side of the BattleMech is hit, the facing of a standing BattleMech is based only on the facing of its feet. If the BattleMech is prone, the hexside in which its head is pointing is the direction of its facing. The side on which a vehicle is hit is based on the alignment of its front side.



★ Determining Hit Location ★

To determine the exact location of the hit, the attacker should roll both dice and consult the appropriate column of the *BattleMech* or *Vehicle Hit Locations* table. One roll is made for each short-range missile (SRM) that hits.

Long-range missile (LRM) hits are a special case, and the attacker should roll once for every five missiles that hit the target. Group the missiles that hit into clusters of 5, i.e., form as many 5-point groups as possible, gathering any remaining points into one smaller group, and determine a hit location for each cluster.

BATTLEMECH HIT LOCATIONS (2D6)

Roll	Left Side	Front/Back	Right Side
2	Lt. Torso (critical)	Ct. Torso (critical)	Rt. Torso (critical)
3	Left Leg	Right Arm	Right Leg
4	Left Arm	Right Arm	Right Arm
5	Left Arm	Right Leg	Right Arm
6	Left Leg	Right Torso	Right Leg
7	Left Torso	Ct. Torso	Right Torso
8	Ct. Torso	Left Torso	Ct. Torso
9	Right Torso	Left Leg	Left Torso
10	Right Arm	Left Arm	Left Arm
11	Right Leg	Left Arm	Left Leg
12	Head	Head	Head

Vehicle hit location tables are found in **Vehicles**.

Note that a result of 2 gives the target a critical hit. Damage to the armor in that section is applied in the normal manner, but the attacking player also gets to roll once on the *Critical Hit Effects* table.

An Archer *hits its target with its medium laser. The straightedge shows that the attack is being made against the target's left side. The attacking player rolls to determine hit location. His roll is an 8. Consulting the column for left-side hits, he finds that his medium laser hits the target' s center torso.*

DAMAGE

Damage Value

Damage for each weapon is listed in the appropriate *Weapons and Equipment* table. Missiles do the same amount of damage for each missile at any range, but the number of missiles that hit determines how much damage a missile attack does. Long-range missiles have a damage value of 1 and short-range missiles have a damage value of 2 for each missile that hits its target.

Recording Damage

Every time a location is hit, the player of the targeted BattleMech or vehicle finds the appropriate hit location shown in the record sheet's Armor Diagram, then crosses off one box on the Armor Diagram at the appropriate location for every point of damage given. When all of the Armor Value boxes at that location have been crossed off, the damage is transferred to the internal structure of the BattleMech or vehicle, and the appropriate number of boxes are crossed off of the Internal Structure Diagram. When a hit strikes an unarmored location, cross off one box in the Internal Structure Diagram to show each point of damage taken. When all of the Internal Structure boxes in a given location have been crossed off, that location has been destroyed and all of its functions are lost. Any weapons, equipment, and heat sinks mounted there are totally destroyed.

If a BattleMech's side torso has all of its internal structure destroyed, the corresponding arm is also blown off (see **Critical Hit Effects on BattleMechs**). The corresponding leg is not damaged.

Hits on unarmored infantry are marked off on the Infantry Record Form, with each point of damage normally resulting in one infantry box checked off. Infantry hit while in Clear terrain have twice the normal damage applied against them, even if mounted on another unit.

Hits on BattleArmor units are marked off as per the BattleArmor rules in **Infantry**.

Damage to buildings is subtracted from the building's current Construction Factor (CF), and the resulting number becomes the building's new CF.

Buildings reduce the damage done to BattleMechs and vehicles inside of them. The damage is reduced by a factor equal to the building's current CF divided by 10, fractions rounded down.

A Warhammer*'s left arm is hit by a particle projector cannon (damage value 10), a large laser (damage value 8), and two 5-point clusters of long-range missiles (damage value of 1 per missile hit or 5 points per cluster). Before this turn, the BattleMech had lost none of its Armor Value of 20 in that arm. The cannon hit reduces the Armor Value by 10, so 10 boxes are crossed off. The Laser hit knocks off an Armor Value of 8, and 8 more boxes are crossed off, leaving 2 boxes. The first cluster of missiles then reduces the Armor Value by another 5 points. The* Warhammer*'s remaining armor has a Armor Value of 2 (2 boxes left) so 3 points of damage get through.*

These 3 points reduce the Internal Structure Value, and so 3 boxes are crossed off the Internal Structure Diagram, leaving only 8 boxes of the original 11. The last group of missiles reduces the Internal Structure by another 5 points, and 5 more boxes are crossed off the Internal Structure Diagram, leaving 3. If the Warhammer*'s left arm takes a hit with a damage value of 3 or more, it will have been completely destroyed and all of the weapons and other equipment mounted there lost.*

★ Transferring Damage ★

BattleMechs, unlike vehicles, can survive the destruction of a body section. If a section has been destroyed and the section is hit again, that damage is passed to the outer armor of the next logical part. Excess ammunition explosion damage is also transferred to the internal structure of the next logical part.

Damage to a missing arm or leg is transferred to the torso on the same side (left leg damage is transferred to the left torso, left arm damage is transferred to the left torso, and so on.). Excess damage to a side torso goes to the center torso.

Damage from the rear firing arc that hits a missing limb is transferred to the appropriate rear torso location. For example, damage from the rear that hits a missing left leg would be transferred into the left rear torso.

★ CRITICAL HITS ★

Every time the internal structure of a BattleMech or vehicle is damaged, either by a weapon attack, a physical attack, or an ammo explosion triggered by excess heat, there is a chance for a critical hit to an internal component of the unit. Regardless of the number of internal structure boxes that a single weapon (or other attack) destroyed, only one roll on the *Critical Hit Effects* table is made. Thus, if a BattleMech was hit by a laser that damaged 5 internal structure boxes, a single roll on the *Critical Hit Effects* table would be made.

In addiiton, a roll of 2 on the *BattleMech Hit Locations* table indicates a chance for critical damage. A critical hit does serious damage to the unit.

The exact nature of the critical hit is determined by the location of the damage. Each part of a BattleMech's body has a different set of possible critical hits. Furthermore, each different BattleMech type has different possible critical hits, depending on the array of weapons and other equipment it carries. The *Critical Hit Tables* for each type of BattleMech are listed on the Record Sheet for that type. An incomplete set of *Critical Hit Tables* for all BattleMechs is printed on the blank BattleMech Record Sheet. The *Critical Hit Tables* for the various types of vehicles are found in **Vehicles**.

Determining Critical Hits

After each individual attack that damages a BattleMech's or vehicle's internal structure, the attacking player determines if a critical hit has occurred. He rolls two dice, and if his roll is equal to or greater than 8, a critical hit has been scored. The higher the roll, the more serious the damage, as shown in the *Critical Hit Effects* table.

CRITICAL HIT EFFECTS (2D6)

Roll	Effect
2 – 7	No Critical Hit
8 – 9	Roll 1 Critical Hit Location
10 – 11	Roll 2 Critical Hit Locations
12	Head/Limb Blown Off or Roll 3 Critical Hit Locations*

*Roll 3 Critical hit locations if the section struck is a torso.

When an attacker inflicts a critical hit, the defending player should consult the *Critical Hit Table* for the appropriate location on his Record Sheet (if the target is a BattleMech) or the appropriate vehicle critical hit table in the **Vehicle** section. The defender then rolls dice for each critical hit and consults the table to find out exactly what damage the critical hit inflicted.

Each weapon and other piece of equipment fills at least one *slot* (a critical hit location) on the *Critical Hit Tables*. If the player rolls a slot for which there is no component, or a slot which is marked Endo Steel, CASE, or Ferro-Fibrous Armor, or a slot that has already taken a hit, he rolls again. If all of the possible slots in that location have already taken critical hits, the critical hit transfers to the next location specified by the Damage Transfer Diagram on the Record Sheet. Center torso and head hits don't transfer.

If a critical hit on a location is rolled, but that location has already been destroyed, the critical hit transfers to the next location, just like regular damage does. On the other hand, if a critical hit is rolled for the damage that destroys a location, no critical hits transfer. All attacks in a phase are simultaneous, so a location would have to have been destroyed in a previous phase for critical hits to transfer inwards.

Note that some weapons, double heat sinks, and other equipment take up multiple slots on the *Critical Hit Tables*. Only one hit is necessary to disable any weapon or equipment except the engine, gyro, and sensors. (On the other hand, a heat sink hit doesn't destroy *all* heat sinks, just the specific heat sink hit.) Hits on other slots that the weapon, double heat sink, and so on occupies only increase the difficulty of repairing it (see **Repair Difficulty**).

CRITICAL HITS ON BATTLEMECHS

Head or Leg Hits

If the critical hit is inflicted on the BattleMech's head or legs, only one die is rolled, giving a number from 1 to 6. Find the appropriate number on the *Critical Hit Table* for the body location hit, and read the damage effect.

Torso or Arm Hits

If the critical hit is on the torso or arms of the BattleMech, both dice are rolled, but the numbers showing on the dice are not simply added together. Instead the number showing on one die tells which half of the table is affected, and the number on the other tells the exact slot hit.

The first die tells whether the slot hit is in the 11 – 16 group or the 21 – 26 group. A 1, 2, or 3 on the first die means that the slot hit is in the 11 – 16 group; a 4,5,or 6 on the first die means that the slot hit is in the 21 – 26 group. For example, if a 2 is rolled, the slot hit is either 11,12,13, 14, 15, or 16.

The second die then specifies which exact slot is hit. The first die gives a result of 1 or 2. The second die roll gives a number ranging from 1 to 6. Tacking these two results together creates a number ranging from 11 to 16 or from 21 to 26. For example, if the first die indicates that the slot is in the 21 – 26 group, and the second die roll is a 3, the result is slot 23.

If the slot rolled cannot take a critical hit (or if it has already taken a critical hit), roll the dice again.

CRITICAL HIT EFFECTS ON BATTLEMECHS

This section describes what effect each type of critical hit produces.

Head Critical Hits

Life Support

A BattleMech's life support system keeps its pilot, the MechWarrior, alive in the middle of its own internal heat, on airless worlds, and in hostile atmospheres. In **BattleTech**, the life support system's main function is to protect the pilot from heat generated by its fusion reactor, movement, and weapons systems.

Any critical hit knocks this system out permanently, and the MechWarrior takes one point of damage every turn that the BattleMech's internal Heat Scale ranges from 15 – 25. The MechWarrior takes 2 points of damage for every turn that the Heat Scale is above 25.

Cockpit

A critical hit to the cockpit destroys it, kills the MechWarrior, and puts the BattleMech out of commission for the game.

Sensors

A critical hit to the BattleMech's sensors adds a +2 modifier to the To-Hit Number every time it shoots. A second sensor hit makes it impossible for the BattleMech to fire any of its weapons.

Head Blown Off

This occurs on a roll of 12 on the *Critical Hit Effects* table when the original hit location is the head. It destroys the BattleMech's head section, kills the MechWarrior, and puts the BattleMech out of commission for the rest of the game.

Leg Critical Hits

Hip

A hip critical hit freezes the affected leg in a straight position. The BattleMech's Walking MP is cut in half (rounding up). The BattleMech has a +2 modifier for any subsequent *Piloting* Skill roll. The BattleMech must make a *Piloting* Skill roll every turn that it runs.

A critical hit to the final hip immobilizes the BattleMech and adds another +2 modifier to its *Piloting* Skill roll target number. It can no longer kick.

Actuator

This critical hit destroys the muscle (actuator) in the upper leg, lower leg, or foot. The BattleMech's Walking MP is reduced by 1, and there is a +1 modifier to any subsequent *Piloting* Skill roll.

Leg Blown Off

This occurs on a roll of 12 on the *Critical Hit Effects* table when the original hit location is a leg. When a BattleMech's leg is blown off, it automatically falls, although it might be able to stand up again. The BattleMech falls and takes normal falling damage. See **Leg Destruction**, below. The leg may be picked up and used as a club, following the rules for **Clubs**.

Center (and Side) Torso Critical Hits

★ ***Engine*** ★

BattleMech engines have 3 points of shielding. Each critical hit destroys 1 point of shielding. As shielding points are destroyed, the amount of heat escaping from the BattleMech's fusion drive increases.

The first hit increases its heat build-up by 5 points per turn. The second results in 10 (total) points of added heat build-up, and the third destroys the engine, and puts the BattleMech out of commission for the rest of the game. **XL Engines** take up additional slots (in the side torsos), but three critical hits destroy an XL engine, also.

★ ***Gyro*** ★

A BattleMech's gyro is one of its most sensitive pieces of machinery. It keeps the BattleMech upright and able to move. It can take only one critical hit; the second destroys it.

After the first gyro hit, the BattleMech must make a *Piloting* Skill roll every time it runs or jumps, and any *Piloting* Skill roll it makes is modified by +3. If the BattleMech's gyro is destroyed, it cannot move and, if forced to make a *Piloting* Skill roll, it automatically falls down. (This means that a BattleMech on the ground with a destroyed gyro cannot stand up again.) Record these hits by marking off the gyro slots in the *Critical Hit Tables*.

BattleMechs that have had their gyro destroyed may make normal weapons attacks. They may also torso-twist. They may not attempt any type of Physical Attack, nor may they change their facing.

Left/Right Arm Critical Hits

Shoulder

This critical hit freezes the shoulder joint. No punches with that arm are allowed. All attacks from weapons mounted on that arm have a +4 modifier to their To-Hit Number. After a shoulder hit, all other weapons fire modifiers from arm critical hits are ignored and the total To-Hit modifier for weapons and actions with the damaged shoulder is +4.

Upper/Lower Arm Actuator

This hit destroys the actuator in the BattleMech's upper or lower arm. It adds a modifier of +1 to the To-Hit Number for weapons firing from that arm and a +2 modifier for any punches.

These effects are cumulative: if both the upper and lower arm actuators are destroyed, the To-Hit Number for weapons fire is modified by +2.

Hand Actuator

This critical hit destroys the muscles controlling the BattleMech's wrist and hand. All punches with this arm have a modifier of +1 added to the To-Hit Number. The BattleMech cannot pick up anything.

Arm Blown Off

This occurs on a roll of 12 on the *Critical Hit Effects* table when the original hit location is an arm. It blows off the arm, destroying all weapons mounted there. The arm may be picked up and used as a club, following the rules for **Clubs**.

Weapons Critical Hits

Weapons systems are delicate, so a critical hit destroys a weapon. Some weapons systems occupy more than one slot on the *Critical Hit Tables*, but the weapon is destroyed the first time that it is hit. Additional critical hits to a multi-slot weapon have no further effect, other than to make it more difficult to repair. For example, a particle beam projector cannon mounted on a BattleMech's arm fills three critical hit slots. However, the cannon is destroyed the first time any of its three critical slots are hit.

Jump Jet Exhaust Port Critical Hits

When a jump jet exhaust port takes a critical hit, it becomes impossible for that jump jet to deliver thrust through it. This means that the BattleMech can no longer jump as far as it could originally. The jump jet is not damaged itself, for it is deeply protected from weapons fire to prevent the devastating explosion that would occur if it were hit. The control system senses the damage to the exhaust port and shuts down the engine that uses that port. For each exhaust port hit, reduce the number of jump MPs by 1.

Heat Sink Critical Hits

Every time a heat sink is hit, it is destroyed and the BattleMech's ability to dissipate heat is reduced. For example, if a BattleMech could originally dissipate 16 points of heat per turn, and 3 of its heat sinks have been destroyed, it can now only get rid of 13 heat points per turn. A double heat sink critical hit eliminates 2 points of heat dissipation ability.

★ Ammo Critical Hits ★

If a critical hit destroys a slot with ammo, it explodes. The MechWarrior automatically takes 2 Damage Points through his neurohelmet from the exploding electronic systems. The BattleMech takes damage to its internal structure.

When one ammo slot in a particular location explodes, all of the ammo in that location explodes. If the player has not stated which ammo is located in which location (because his Record Sheet is incomplete), assume that the ammo that will do the most damage is the ammo hit. The damage value of all of that remaining ammo is totalled and applied to the Internal Structure Diagram. If the location is not protected by CASE, any excess damage is transferred to the Internal Structure of the next location. Locations that have CASE mounted in them have excess damage first applied to the location armor (the rear armor, for torso locations) and then any other excess damage is vented without further harm. See **Advanced Equipment** for details.

A critical hit to ammo only explodes the ammo located in that location. It explodes with a force equal to the ammo's damage value times the shots remaining. Missile ammo explodes with a force equal to the *number* of missiles remaining times their damage value. One full ton of MG ammo explodes with a force of 400 points (2 x 200), while one full ton of SRM 2 ammo explodes with a force of 200 points (2 x 2 x 50).

Leg Destruction

When a BattleMech has lost one leg, either through a critical hit or the destruction of the leg's Internal Structure, the BattleMech automatically falls down. In the next turn the BattleMech may try to stand up on its one remaining leg. There is a +5 modifier to the *Piloting* Skill roll plus any modifiers for other damage. If the BattleMech does stand up again, it has 1 Walking MP. Any *Piloting* Skill roll made thereafter has the +5 modifier applied to it for the missing leg. It may still jump (without any of the jump jets on the missing leg), but it must make a *Piloting* Skill roll each time it lands.

DESTROYING A UNIT

BattleMechs

A BattleMech is considered destroyed and out of the game if its MechWarrior pilot dies, the cockpit is destroyed, the head is destroyed, the center torso is destroyed, or the BattleMech suffers three engine hits.

Vehicles

A vehicle is destroyed and out of the game when all of its Internal Structure boxes in one section are marked off, or when its critical hit table specifies that it is destroyed.

Infantry

Unarmored infantry platoons are destroyed when all of their manpower blocks have been marked off. BattleArmor units are destroyed when all members of the unit have their blocks marked off.

AMMUNITION EXPENDITURES

Missile launchers, machine guns, autocannons, and other ballistic and missile weapons possess limited amounts of ammunition. The Record Sheet for each BattleMech should indicate the number of times a given weapon can fire before it is out of ammunition. The player should keep a tally on the Record Sheet, making a check mark every time the weapon is fired. When the number of check marks equals the amount of ammo carried, the weapon is out of ammunition and cannot be fired for the rest of the game.

★ AIMED SHOTS ★

A shutdown BattleMech, or one whose pilot is unconscious, is subject to Aimed Shots by all weapons other than missile launchers. When firing on a BattleMech that is shut down, the attacking player can choose any target location and receives the standard –4 To-Hit Modifier for firing at an immobile target. If he hits, the player rolls again: on a 6,7, or 8, his shot hits the designated location. If not, the player rolls normally on the appropriate *BattleMech Hit Locations* table.

Do not use this procedure if the attacker is aiming at the BattleMech's head. In that case, modify the To-Hit Number by +3. If the shot hits, the player rolls two dice and hits the head on an 8 or higher. If he fails this die roll, he rolls normally on the *BattleMech Hit Locations* table, ignoring all leg hits.

It is permissible for a missed shot to still hit the intended location when rolling on the *BattleMech Hit Locations* table.

Clan targeting computers also allow called shots. See **Advanced Equipment** for details.

★ PHYSICAL ATTACKS ★

There are six different forms of physical attack: punching, clubbing, pushing, kicking, charging and Death From Above. Vehicles may only charge (ram). In order to make a physical attack, the unit must be adjacent to its target and the target must be within the appropriate firing arc, normally the forward arc (see **Charging** for exceptions).

Each type of physical attack has its own Base To-Hit Number, which is modified by terrain, movement of both the attacking unit and its target, and the critical damage that the attacker has taken in its arms and/or legs. The To-Hit roll is made against a modified To-Hit Number, just as with weapons fire. The damage location is determined by special tables, but it is recorded just as with weapons fire.

In many cases, damage is calculated by dividing the tonnage of the attacking BattleMech by some number. In these cases fractions are rounded up.

Only one form of physical attack may be used by a BattleMech during a turn. For example, BattleMechs may not both punch and kick in the same turn.

Note that physical attacks are resolved after the Movement Phase. If a unit declares a charge against a unit that has not moved yet, or attempts some other Physical Attack, the target can simply move out of the attacking unit's forward arc and avoid the attack. A physical attack must be possible at the time it is declared. Declaring an attack in anticipation that it will *become* possible later in the Physical Attack Phase is not allowed.

Also note that Physical Attacks are only resolved after the Weapon Attack Phase. If, during the Weapons Attack Phase, a unit is destroyed, falls to the ground, or otherwise is no longer able to carry out the Physical attack within the rules, that attack is aborted.

★ PUNCHING ★

A BattleMech can either punch or fire its arm weapons in a turn. A BattleMech does not need hands (or hand actuators) to punch. It may punch with one or both arms, but it may not fire any weapons from the arms that will punch later in the turn. Weapons mounted in the torsos, legs, or head may be fired without affecting punches.

The BattleMech's shoulder must not be critically damaged, and any arm actuator damage on that arm makes success more difficult. All punch attacks must be made against targets in the BattleMech's forward or side arcs. If the target is in the right or left arc, then only the right or left arm, respectively, may punch. If the target is in the forward arc, then both arms may be used to punch.

The Base To-Hit Number for a punch is 4, which is modified by movement and terrain, just as in weapons fire; by +2 for each arm actuator destroyed or not present; and by +1 if the hand actuator has been destroyed or is not present. Note that BattleMechs that do not come equipped with a hand on the punching arm suffer the +1 modifier for not having a hand. Likewise, BattleMechs that do not come equipped with a lower arm actuator on the punching arm suffer a +2 modifier to the Base To-Hit Number.

A To-Hit roll is made for each arm that is punching. The punch from each arm has a damage value of 1 for every 10 tons (or fraction of 10 tons) that the attacker weighs. The damage is cut in half for each arm actuator damaged or not present, with the effects being cumulative—both arm actuators gone reduces the damage to one-quarter of its original value (fractions rounded down). The damage location, for BattleMech targets, is determined for each separate punch by rolling one die and consulting the table below.

Ground vehicles, surface naval vessels, and infantry may not be punched by a BattleMech (unless the BattleMech is one level lower than normal because it is prone, on lower terrain, or standing in Depth 1 water). Punch attacks against these units are resolved on the Front Side column of their *Hit Location Tables*. Punches against VTOLs and Submarines are covered in their rules section.

Prone BattleMechs may not punch other prone BattleMechs.

BATTLEMECH PUNCH LOCATIONS (1D6)

Roll	Left Side	Front/Back	Right Side
1	Left Torso	Left Arm	Right Torso
2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso
4	Left Arm	Right Torso	Right Arm
5	Left Arm	Right Arm	Right Arm
6	Head	Head	Head

An Archer *punches a* Warhammer *on the right side with one fist; the* Archer *has a damaged upper arm actuator. This damage gives a To-Hit modifier of +2 and cuts the normal damage in half. The Modified To-Hit roll is a 6 (4 + 2); he rolls an 8, and hits. The* Archer *weighs 70 tons, and so its punch has a normal damage value of 7 (70 divided by 10 is 7), but this is reduced to 3 because of the damaged actuator. The attacking player rolls a 3, which is the target's center torso. The player with the* Warhammer *records 3 points of damage by crossing 3 boxes off of the Armor Diagram on his Record Sheet.*

CLUBS

Whenever a BattleMech has one of its legs or arms blown off, the limb is left lying in the hex where the BattleMech took the damage. Other BattleMechs that later occupy that hex might pick up the arm or leg and use it as a giant club. A BattleMech may not fire weapons or make physical attacks during the turn that it picks up a club.

Other objects may also be used as clubs. If the BattleMech is in a woods hex, it may uproot a tree and use it as a club. Uprooted trees may be used for only *one* successful club attack. Girders from rubbled Medium, Heavy, or Hardened Buildings may also be used as clubs. The player must roll 2D6 during the Weapon Attack Phase to search the rubble for a suitable girder. A roll of 7+ is needed for a rubbled Medium Building, a 6+ is needed for a rubbled Heavy Building, and a 5+ is needed for a rubbled Hardened Building, to find a proper girder.

In order to attack another unit with this club, all of the BattleMech's shoulders and hand actuators must be in working order, and no arm-mounted weapons can have been fired in the turn. Weapons mounted in the torso, leg and head may be fired. The target must be in the forward firing arc.

The club is used in a two-handed swing and has a Base To-Hit Number of 4. Normal To-Hit modifiers for terrain and movement are also applied.

If any of the BattleMech's upper or lower arm actuators have been destroyed or are not present, use the punch modifier: +2 per absent arm actuator. A BattleMech attacking with a club does 1 point of damage for every 5 tons that the BattleMech weighs.

Clubs may be used against any type of unit, but infantry have an additional +3 To-Hit modifier. See **Physical Attacks Against VTOLs** (in **Vehicles**) and **Underwater Operations** (in the **Optional Rules**) for special rules about club attacks.

★ Hatchets ★

Some BattleMechs are equipped with hatchets. Hatchets are treated as normal weapons, having weight and taking up one or more slots on an *Arm Critical Hit Table*. A BattleMech must have a functioning hand actuator in the arm in which the hatchet is mounted.

Hatchets allow a BattleMech to make club physical attacks as per the normal club rules, but only one arm is needed for the attack rather than two. Thus, weapons mounted on the arm not carrying the hatchet may be fired in the preceding Weapon Attack Phase. Hatchets weigh 1 ton for each 15 tons, or fraction thereof, that the BattleMech weighs. Hatchets take up one critical slot for each ton that they weigh.

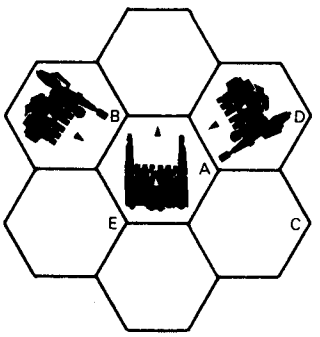
Hits on a hatchet critical slot represent damage to the shaft of the weapon. If a hatchet critical slot is hit, the weapon is no longer functional.

PUSHING

A BattleMech uses both arms to push its target. No arm-mounted weapons can be fired in the turn that a BattleMech makes a push attack. All torso-, leg-, and head-mounted weapons may be fired normally. Push attacks can be made against targets in the forward arc only.

The Base To-Hit Number for a push is 4. This is modified for movement, terrain, and by +2 for each shoulder actuator destroyed. A successful push does not automatically damage the

target. Instead, it moves the defending BattleMech into the adjacent hex in the direction that it is being pushed by the attacker. If the push is successful, the attacking BattleMech advances into the hex formerly occupied by its target. At the same time, the defender must make a *Piloting* Skill roll or fall down. Vehicles and infantry may not be pushed.



In the drawing, if the Warhammer *in Hex A is successfully pushed from Hex B, it will be moved into Hex C. If on the other hand it is pushed by a BattleMech in Hex D, the* Warhammer *will be forced into Hex E. In both cases, the* Warhammer *will have to make a Piloting Skill roll to remain standing, and its attacker will advance into Hex A.*

★ KICKING ★

Only one of a BattleMech's legs can kick per turn. No weapons mounted on that leg can fire on the turn it kicks. Both hips must be undamaged. The BattleMech's target must be in one of the three forward arc hexes. The BattleMech may kick vehicles in its forward arc, or kick (stomp) a vehicle in the same hex that it is in. Kicks against VTOLs and submarines are covered in their rules sections.

A kick by a BattleMech has a Base To-Hit Number of 3. The Base To-Hit Number must be modified by movement and terrain, just as with weapons fire. Kicks have a damage value of 1 for every 5 tons that the attacking BattleMech weighs (a *Warhammer*'s Kick would inflict 14 DdamagePoints!). For each leg actuator damaged (on either leg), this damage value is cut in half, with the effects being cumulative—two leg actuators gone reduces the damage to one-quarter of its original value (fractions rounded down). Damage location is determined by rolling one die and consulting the table below.

A BattleMech that has been successfully kicked must make a *Piloting* Skill roll. A BattleMech that misses a kick must also make a *Piloting* Skill roll.

All normal To-Hit Modifiers are used, including the –2 for attacks against prone BattleMechs from adjacent hexes. Damage location on a prone BattleMech is determined using the normal *BattleMech Hit Locations* table, using the hex side that the kick comes in from as the attack direction. Do not use the *BattleMech Kick Locations* table against prone BattleMechs.

Vehicles and infantry may be kicked, but there is a +3 modifier for infantry, as infantrymen tend to scurry around when BattleMechs get too close. The side on which a vehicle takes damage is determined randomly if the BattleMech is attacking from the same hex.

BATTLEMECH KICK LOCATIONS (1D6)

Roll	Left Side	Front/Back	Right Side
1 – 3	Left Leg	Right Leg	Right Leg
4 – 6	Left Leg	Left Leg	Right Leg

★ CHARGING ★

All BattleMechs and vehicles may charge. In order for a BattleMech to charge, both legs must be functioning. The unit may not have moved backwards in the Movement Phase of the turn. The target must be in the hex directly in front of the charging unit at the beginning of the Physical Attack Phase, i.e. the charging unit must be able to enter the target unit's hex without making a turn. No weapon attacks can be made by the charging unit.

The Base To-Hit Number for a charge is 5 plus movement modifiers for both the attacker and defender. If the charge hits, the defender is moved just as if it had been pushed, and the attacker advances into its hex. If the unit misses the attack, it will displace to the right or left hex of its forward arc; the choice is the attacker's. Ground vehicles and infantry may not be charged. Rules for charges against VTOLs and submarines are covered in their rules sections.

Charges must be declared during the Movement Phase, but like all other physical attacks, they are resolved during the Physical Attack Phase. This sequence means that the charging unit can only attack units that have finished their movement.

The charging unit must spend Movement Points to enter the target hex, whether or not the charge is successful. If a unit does not have enough Movement Points left over from its Movement Phase to enter the target hex, it may not charge. In addition, if the target hex is restricted terrain for the unit, the unit may not charge.

Piloting Skill Modifier

Whenever one BattleMech charges another, compare the MechWarriors' *Piloting* Skills. The difference between the two skill levels is a *Piloting* Skill modifier to the attack roll. If the defending MechWarrior's skill level is lower, subtract the modifier from the To-Hit Number; if the attacker's *Piloting* Skill is lower, add the modifier to the To-hit Number.

Damage

Both units take damage from the collision. The defender takes 1 point of damage for every 10 tons that the charging unit weighs, and this damage is multiplied by the number of hexes moved by the attacker in the previous Movement Phase. The charging unit takes 1 point of damage for every 10 tons the target weighs. Round any fractions up.

Damage caused by charges is grouped into 5-point clusters. The attacking player then rolls once on the appropriate *Hit Locations* table for each cluster.

If a unit charges a target that is in a building, the building absorbs damage as usual (see **Combat Effects**, in **Buildings**). Also, the charging pilot must make a *Piloting* Skill roll with a +3 modifier in addition to the Building modifier to avoid taking damage from entering the building (see **Movement Effects**, in **Buildings**). The target unit must make this roll if its displacement causes it to cross walls.

For example. an Archer *moves four hexes and declares a charge against another BattleMech. If the charge hits, the defender will take 28 points of damage (7 for the* Archer's *tonnage multiplied by 4 for the number of hexes it moved).*

Falls

After any successful charge, both attacking and defending BattleMechs must make *Piloting* Skill rolls with +2 modifiers. Failure means that the BattleMech falls in its current hex and takes additional damage from the fall.

DEATH FROM ABOVE

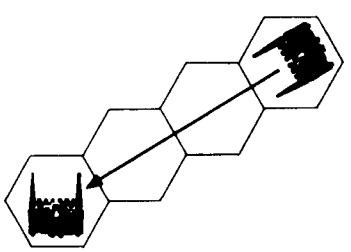
BattleMechs can charge while jumping, a physical attack that is damaging to both the attacking BattleMech and its target. In effect, the charging BattleMech crashes into the target from three elevation levels (18 meters) above it, using its feet and weight to inflict damage to the target's upper torso, arms and head. In return, the charging BattleMech will probably take damage to its legs, which are not designed for the enormous stresses of this attack. Finally, both BattleMechs are almost certain to fall.

This type of charge does potentially less damage than a regular charge, but the damage is concentrated on the upper part of the target BattleMech. The chance for a head hit is one in six, very high indeed! Death From Above attacks may also be made against vehicles and infantry. Hits against a vehicle are resolved on the Front column of that vehicle's *Hit Locations* table. A successful Death From Above attack on a VTOL automatically hits the rotor. Infantry targets have an additional +3 To-Hit Modifier.

Only one Death From Above to a target can be attempted in a turn.

★ Weapon Attack Phase ★

Like all other physical attacks, Death From Above is performed only after the Weapon Attack Phase of the turn is over. During the Weapon Attack Phase, the unit is adjacent to the target hex along the path that it traveled. It is facing its target hex. It can be fired on as normal during the Weapon Attack Phase. The jumping unit does not get the benefit of any terrain modifiers when being shot at; every other unit on the board has LOS to it. No weapon attacks can be made by the jumping unit.



A Stinger *is making a Death From Above attack on a* Locust. *The* Stinger's *path during the jump is as noted. During the Weapon Attack Phase, the* Locust *may fire on the* Stinger *with any weapons that it can bring to bear at a range of one, against the* Stinger's *Front side.*

If the BattleMech takes damage that forces it to make a *Piloting* Skill roll, the player should roll as normal. Failure means that the attack automatically misses. Resolve the attacker's fall and location as per the rules below.

While a BattleMech is executing a Death From Above attack, it is not counted for stacking purposes until it completes its attack. However, it is counted once it has landed. Units "under" the jumping BattleMech can fire on it at a range of 1 and use the Back column of the *BattleMech Hit Locations* table.

Base To-Hit Number

The Base To-Hit Number for this attack is 5, just as for a normal charge. This number must be modified for movement (i.e. the jumping movement of the attacker and the normal movement of the target), but not for terrain.

If the attack is successful, damage is given to both BattleMechs as determined below. If the attack missed, the jumping BattleMech crashes into the ground, as discussed below.

Damage to Target

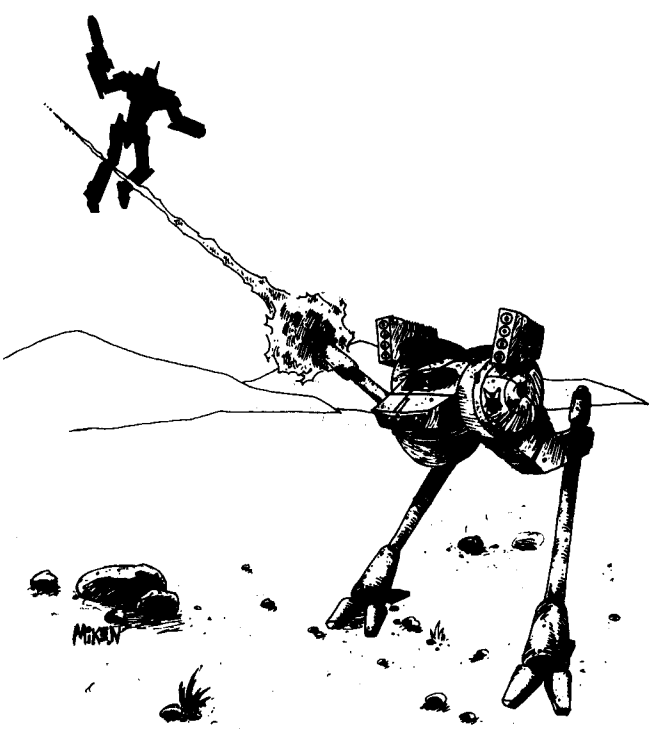
This damage is determined by dividing the weight of the attacking BattleMech by 10 and multiplying the result by 3. This means that a *Spider* with a weight of 30 gives 9 points of damage, all to the upper part of the target!

This damage is given as though it were a series of 5-point punches. Group the damage into 5-point clusters. Determine the hexside hit as though the attack had come from the charging BattleMech's starting hex. Then determine the hit location of each cluster by rolling one die and consulting the *BattleMech Punch Locations* table for each cluster. Record damage as usual.

Vehicle targets take damage to their Front sides.

Damage to Attacker

The damage from a successful attack is determined as though the attacker had fallen one elevation level, and it is given only to the legs. To find the damage, divide the attacker's weight by 5, rounding up. Split this into 5-point clusters, and roll damage locations on the *BattleMech Kick Locations* table for each cluster, using the Front column.



Falls

After a successful attack, both BattleMechs might fall. The MechWarriors must make *Piloting* Skill rolls, with the target having a +2 modifier and the attacker having a +4 modifier.

After an unsuccessful attack, the attacker automatically falls. Damage is determined as though it had fallen two elevation levels. Divide its weight by 10, multiply by 3, divide the total into 5-point clusters, and determine hit locations as though the BattleMech had landed on its back.

Location after Attack

The attacker lands in the target's original hex. If the Death from Above attack is successful, the target is pushed one hex in the direction opposite of the attack. If the attack fails, the target must move one hex (his choice). (The target must move, even if immobile or prone.) This might result in **Accidental Falls From Above** or a **Domino Effect** (both described below).

★ DIFFERENT ELEVATIONS ★

The rules for Punching, Clubbing, Kicking, and Charging assume that the BattleMechs are each at the same elevation. Most physical attacks against vehicles occur only if the vehicle is being attacked by a unit at the same elevation. See **Vehicles** and **Underwater Operations** for exceptions.

A BattleMech may physically attack another BattleMech only if they are within one level of each other. Use the following chart to determine which forms of physical attack are allowed in which situations. Note that different hit location tables are used when punching, clubbing, or kicking an opponent on a different level.

DIFFERENT ELEVATIONS

Target is:	Allowed Physical Attack
1 level higher	Charge, Punch (use kick table), or Club (use kick table)
1 level lower	Charge, Kick (use punch table), or Club (use punch table)

Death From Above is always allowed, if the BattleMech has the necessary Jumping MP.

PHYSICAL ATTACKS BY PRONE BATTLEMECHS

Physical attacks by prone BattleMechs are impossible except for Thrash Attacks against infantry and punches against ground vehicles in the same hex. Vehicles take such Punch damage against their Front sides.

When a downed BattleMech and an infantry unit (armored or unarmored) are in the same hex, the BattleMech may execute a *Thrash Attack*. This consists of wildly waving the arms and legs in hopes of making contact with the infantry. The attack can only be made in Clear terrain and is automatically successful. The damage inflicted on the infantry is equal to the BattleMech's tonnage divided by 3. This is the only physical attack allowed the BattleMech in the turn, and the MechWarrior must make a *Piloting* Skill roll to prevent damage to his BattleMech. If the skill roll fails, the BattleMech suffers normal falling damage.

★ ACCIDENTAL FALLS FROM ABOVE ★

When a BattleMech accidentally falls two levels or more into a hex occupied by another BattleMech, make a To-Hit roll with a Base To-Hit Number of 7, modified by target movement and terrain. When a BattleMech accidentally falls one level or less into a hex occupied by another BattleMech, treat it as a **Domino Effect** (discussed below). No rolls are made if the BattleMech falls into a hex occupied by an infantry or vehicle unit—infantry are automatically missed; vehicles are automatically hit by an accidental fall and missed by the Domino Effect.

A BattleMech may not intentionally "accidentally" fall from above.

Falling BattleMech Hits Target

If the To-Hit roll is successful (or if the target unit is a vehicle), treat the fall as a successful Death From Above attack. If the unit fallen on is a BattleMech, it takes damage to its upper body. If there is more than one non-infantry unit in the target hex (friend or foe), pick one at random to be the target unit.

The amount of damage given to the target unit is determined by dividing the weight of the falling BattleMech by 10. Break the damage into 5-point clusters as above, and determine damage on the *BattleMech Punch Locations* table. Damage to the falling BattleMech is determined as usual for a fall, with the BattleMech falling on its back. (Once it has fallen, it is assumed to be prone on its front, as with all other prone BattleMechs.)

Falling BattleMech Misses Target

If the To-Hit Roll is not successful, the falling BattleMech lands in an adjacent hex, as close to the hex that it fell from as possible, and takes the usual damage from falling. The BattleMech missed by the fall suffers no consequences.

★ DOMINO EFFECT ★

If a BattleMech accidentally falls one level or less, or is pushed into a hex occupied by another BattleMech, the second BattleMech is forced out of the hex in the same direction. The second BattleMech must also make a *Piloting* Skill roll to avoid falling down. This domino effect continues as long as there are BattleMechs adjacent to one another in the direction of the push.

When a domino-effect push is directed against a BattleMech's side, however, the BattleMech can avoid the push by moving one hex directly forward or back, *if* it had sufficient MP left to move there in the previous Movement Phase, and *if* it is both mobile and standing. If the player successful makes a *Piloting* Skill roll for that BattleMech, the domino-effect chain is broken.

HEAT BUILD-UP

Internal heat build-up is one of the most severe problems facing any BattleMech in combat. The BattleMech builds up heat whenever it moves or fires its weapons. Every BattleMech can get rid of heat through its heat sinks or by positioning itself in water.

Even so, a high rate of activity usually produces more heat than the BattleMech can dissipate. It is possible for a BattleMech to overheat and continue to function. Nevertheless, there is a price to pay. As a BattleMech's internal heat increases, its movement slows down and its weapons fire becomes less accurate. If its internal heat reaches too high a level, the ammunition that it carries may explode. The BattleMech's fusion reactor may even

shut down, causing the BattleMech to become inactive until the heat is reduced below a certain point.

Vehicles do not generate heat in the same manner as BattleMechs. A vehicle only needs to be designed with enough heat sinks to fire all of its energy weapons at once. Because of its more open (and flimsier) structure, a vehicle can automatically shed heat built up from movement or from firing non-energy weapons.

HEAT POINTS

The internal heat of a BattleMech is indicated by the number of heat points it has built up. The greater the number of heat points, the greater the internal heat. The player keeps track of the heat points built up by his BattleMech on its Record Sheet, in the column of boxes called the *Heat Scale*. The Heat Scale records from 0 to 30 Heat Points. As the BattleMech's internal heat reaches various levels on the Heat Scale, the BattleMech will suffer the adverse effects listed at those levels on the scale.

★ BUILDING UP HEAT ★

Different activities build up heat at different rates. A good MechWarrior balances the tactical value of a certain activity against the heat that it will add to his BattleMech. The *Heat Points* chart gives the number ofHeat Points built up by various activities and damage. It also shows the number of Heat Points that a BattleMech can get rid of through its heat sinks and by standing in a Water Hex. Note that there are two types of Heat Sinks availible: normal Heat Sinks that dissipate 1 point of heat a turn and Double Heat Sinks that dissipate 2 points of heat a turn.

HEAT POINTS

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (minimum of 3 per turn)
Trying to Stand	+1 per attempt
Weapons Fire	As per *Weapons and Equipment* tables
Heat Sink	−1 per operational heat sink
	−2 per operational double heat sink
	−1 additional per heat sink under water (6 max)
	−2 additional per double heat sink under water (6 max)
1st Engine Hit	+5 per turn
2nd Engine Hit	+10 (total) per turn
Fire	
Walking Through	+2 per hex
Standing In	+5 per turn

Note that jumping uses more heat than walking or running, even if the BattleMech is only moved one hex, because the jump jets add a minimum of 3 points when they are fired up. The heat cost for jumping depends on the length of the jump. The farther the jump, the longer the jump jets are used, and the more heat they create. To find out the number of Heat Points used in a jump, count the hexes moved. If this is three or fewer, the heat point cost is 3 points. If it is four or greater, it is the number of hexes jumped.

RECORDING HEAT BUILD-UP

During the Heat Phase of every turn, each player adds up the heat points built up by his BattleMech. He subtracts the heat given off by his BattleMech's heat sinks and, if his BattleMech occupies a Water Hex, any additional dissipation. The resulting number can be positive or negative. This number is added to the Heat Scale on the BattleMech's Record Sheet. If the number is negative, the Heat Scale is adjusted downwards, if positive upwards. The Heat Scale can not go below 0 or above 30. It is a good idea to use a pencil on the Heat Scale, because the heat will go up and down many times during the game.

EFFECTS OF HEAT

The effects of increased heat cause the BattleMech to function less efficiently. It will move more slowly, fire less accurately, and be in danger of exploding or even shutting down. Some of these effects are permanent and cannot be removed, but some are removed when the internal heat goes back down again.

All of the effects listed below take place after the heat for the turn has been adjusted as described above.

★ Movement Effects ★

At 5, 10, 15, 20, and 25 Heat Points, subtract the number given from the BattleMech's Walking MPs. For example, at 5 Heat Points, subtract 1 from the BattleMech's Walking MPs as long as the heat is at or above 5. Remember that Running MPs are 1.5 times the current Walking MPs, so if the Walking MPs are reduced, the BattleMech's Running MPs also have to be recalculated (fractions rounded up).

This effect is not cumulative with any previous heat-caused MP loss. When a BattleMech's heat build-up reaches 5 on the Heat Scale, its Walking MPs are reduced by 1. When the build-up hits 10 on the Heat Scale, its Walking MPs are reduced by 2 total, not 2 more.

When the heat build-up is reduced below the point at which the effect occurs, the BattleMech regains 1 Walking MP, though previous loses are still in force. Thus, if the heat drops below 10 on the Heat Scale, the −2 MP effect is removed, but the −1 MP effect is still in force until the heat drops below 5.

Note that a BattleMech's Jumping MPs are not affected by the reduction in Walking MPs due to heat build-up.

Weapons Attack Effects

At 8, 13, 17, and 24 Heat Points, add the number given to the BattleMech's Base To-Hit Number. For example, at 8 Heat Points, add 1 to all Base To-Hit Numbers while the heat is at or above 8. Treat these effects like movement effects: they are not cumulative and may be removed by reducing the heat build-up.

Shutdown Effects

At 14, 18, 22, 26, and 30 Heat Points, a BattleMech shuts down its fusion reactor automatically as a safety procedure. Until the MechWarrior restarts the reactor, the BattleMech may not move or fire.

This effect may be avoided if the MechWarrior is able to override the fusion reactor's safety shutdown procedure, as indicated by the *avoid number* listed with the effect. (Shutdown cannot be avoided at 30 Heat Points.) The player rolls two dice. If the roll is equal to, or greater than, the avoid number (4+, 6+, and so on), the effect is avoided until the heat rises again. If the heat rises to another trigger point, or falls and rises to the same trigger

point, the roll must be made again. If heat accumulation reaches two trigger points in one turn, roll only once against the highest avoid number.

If the BattleMech shuts down, it remains motionless and cannot build up any heat by its own actions. Its heat sinks will still work, however, and so will get rid of the heat it has. For every turn it is motionless, the heat will drop, and then the player has a chance of restarting the reactor during that Heat Phase. The player rolls 2D6. If his roll is equal to, or greater than, the highest current avoid number, he can restart the reactor. When the heat drops below 14 on the Heat Scale, the reactor restarts automatically, even if the pilot is out of action.

A shutdown BattleMech can be a target for aimed shots.

Ammunition Effects

If an Ammo Explosion threshold is reached or exceeded (at 19, 23, and 28 Heat Points), ammunition carried in the BattleMech might explode.The explosion may be avoided by pure luck, as indicated by the avoid number. To see if an explosion is avoided when an ammo explosion threshold is reached, the player rolls two dice. If the roll is equal to, or greater than, the listed avoid number, there is no explosion.

When a BattleMech's ammo explodes due to overheating, the ammunition with the most destructive ammo rack explodes first. An ammo rack is defined as the damage that one turn's worth of shots will do. Thus, a rack of machine gun ammo has a value of 2, an A/C 10's value is 10, an LRM 15 has a value of 15 and an SRM 6 has a value of 12. When there are two equivalent racks, the BattleMech's pilot can choose which ammo will explode.

All of the appropriate ammo type explodes at a force equal to the ammo's damage value times the shots remaining. In the case of missiles, the ammo explodes with a force equal to the *number* of missiles remaining times their damage value. Thus, one ton of AC/10 ammo explodes with a force of 100. A full ton of LRM 20s explodes with a force of 120 (20 x 6 x 1). All of the damage is taken by the internal structure and excess damage is transferred as normal to the internal structure of the next section (following the Damage Transfer Diagram).

Mechwarrior Effects

If the life support systems have suffered a critical hit, the MechWarrior suffers 1 point of damage for every turn that the BattleMech's internal heat is 15 or more. Every turn of heat *above* 25 causes 2 points of damage to the MechWarrior.

A Warhammer *starts a turn with a Heat Scale reading of 4. During the turn, it fires both of its PPCs and walks (for a total of 21 Heat Points generated). The BattleMech still has 16 standard heat sinks left. They dissipate 16 of the 21 Heat Points, leaving 5 to build up. During the Heat Phase, these 5 points are added to the 4 already on the Heat Scale, bringing the total to 9. In the next turn, the BattleMech will have its Walking MPs reduced by 1 and has a To-Hit Number 1 greater than normal.*

If the BattleMech does the same thing in the next turn, 5 more Heat Points will be added to the Heat Scale, bringing the total to 14. The player must roll a 4 or more on 2D6 to avoid having his BattleMech's fusion reactor shut down. Even if he avoids the shutdown, the Warhammer*'s Walking MPs will be reduced by 1 more, for a total of 2, until its heat drops below 10 on the Heat Scale, and its weapons will fire with a +2 modifier.*

BUILDINGS

BattleMechs evolved out of the need for a highly-mobile weapons platform that could be dropped from space, perform extended operations with a minimum of supplies, and still carry enough firepower to win the planned objective. The current design can perform all of these missions easily, especially when moving through open terrain.

However, just as cities and urban areas caused problems for ancient armored vehicles, cities cause problems for BattleMechs. Long, narrow streets, with buildings blocking line-of-sight and providing enemy hiding places and limited protection from weapons fire, necessitate changes in tactics and operations. Even infantry have a chance to substantially damage a BattleMech before they can be swatted down.

BUILDING TYPES

There are four types of buildings in **BattleTech**: Light, Medium, Heavy, and Hardened. They are rated to show the damage they can withstand, the protection they afford, and the weight that they can bear. Buildings are described by two numbers: the Construction Factor (CF), and Elevation.

Building elevation is treated exactly like other terrain elevation for both line-of-sight and movement, with each level of a building being about six meters tall.

The Construction Factor is used to determine how the physical structure of the building affects the play of the game. The CF is the number of points of damage that each hex of a building can take before being reduced to rubble. It is also the number of tons a building can support without collapsing. However, no matter what the building's current Construction Factor, its type never changes. A damaged Heavy building with a current CF of 15 is still a Heavy Building.

If a building's CF is not specified, assume that a Light Building has 15 CF, a Medium Building has 40 CF, a Heavy Building has 90 CF, and a Hardened Building has 120 CF. These are also maximum values, for all but the Hardened Building. The maximum CF for a Hardened Building is 150.

MOVEMENT EFFECTS

BattleMechs can move into or onto buildings. Ground vehicles can not move onto the top of a building. VTOLs may never attempt to enter a building, but can land on top of buildings. If the current CF of a building is equal to, or greater than, the tonnage of the BattleMech, then that BattleMech can climb up or jump to the top of the building. If the current CF is less than the BattleMech's tonnage, the BattleMech will fall, taking falling damage from the top of the building.

Every time a BattleMech or vehicle moves into a building (by entering a Building hex), it passes through a wall and the MechWarrior or Driver must make a *Piloting* Skill roll. This roll is modified by all applicable modifiers in the *Piloting Skill Roll Modifiers* chart. In addition, it is modified by the unit's movement, as specified by the *Building Movement Modifiers* chart, below. (These modifiers are equal to the target movement modifiers to weapons fire.) If the *Piloting* Skill roll is successful, the unit takes no damage. If the roll fails, the BattleMech or vehicle takes damage on the Front side equal to the building's current CF divided by 10 (round up). Note that the BattleMech does not fall. A *Piloting* Skill roll must also be made when leaving a building and when moving from hex to hex inside a single building.

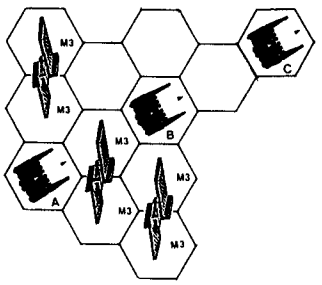
In addition, whenever a BattleMech or vehicle moves through a building wall (by moving from or into a Building Hex), the building suffers damage equal to the unit's tonnage divided by 10 (rounded up).

BUILDINGS: COSTS AND MODIFIERS

Type	Original CF	MP	Piloting Skill Modifier	Fire Starting Modifier
Light	1 – 15	2	0	0
Medium	16 – 40	3	+1	+1
Heavy	41 – 90	4	+2	+2
Hardened	91+	5	+5	+3

BUILDING MOVEMENT MODIFIERS

Hexes Moved in Turn	Piloting Skill Modifier
1 – 2	0
3 – 4	+1
5 – 6	+2
7 – 9	+3
10+	+4

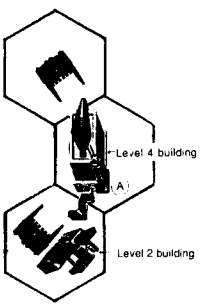


A 70-ton Archer *wants to move through a Medium Building to fire at units on the other side. The* Archer *runs one hex to get adjacent to the building, and then spends 3 MP to enter the hex containing the building. As one wall is crossed, a Piloting Skill roll must be made. Because this is a Medium Building, there is a +1 skill roll modifier. Further, because the* Archer *only moved two hexes, there is no movement modifier, as shown by the Building Movement Modifiers chart. The* Archer *rolls a 10 and makes the roll. The BattleMech suffers no damage, but the building takes 7 points (the* Archer's *70 tons divided by 10). The* Archer *must make a second Piloting Skill roll in order to leave the Building Hex. The building movement modifier this time is +1, because this is the 'Mech's 3rd hex of movement. This time a 3 is rolled, less than the 7 needed to pass through the wall with no damage. The* Archer *suffers 4 points of damage to its front (the current CF, 33, divided by 10, rounded up), and the building suffers a further 7 points of damage, reducing the current CF to 26. The* Archer *now spends its remaining 2 MP to move to Hex C*

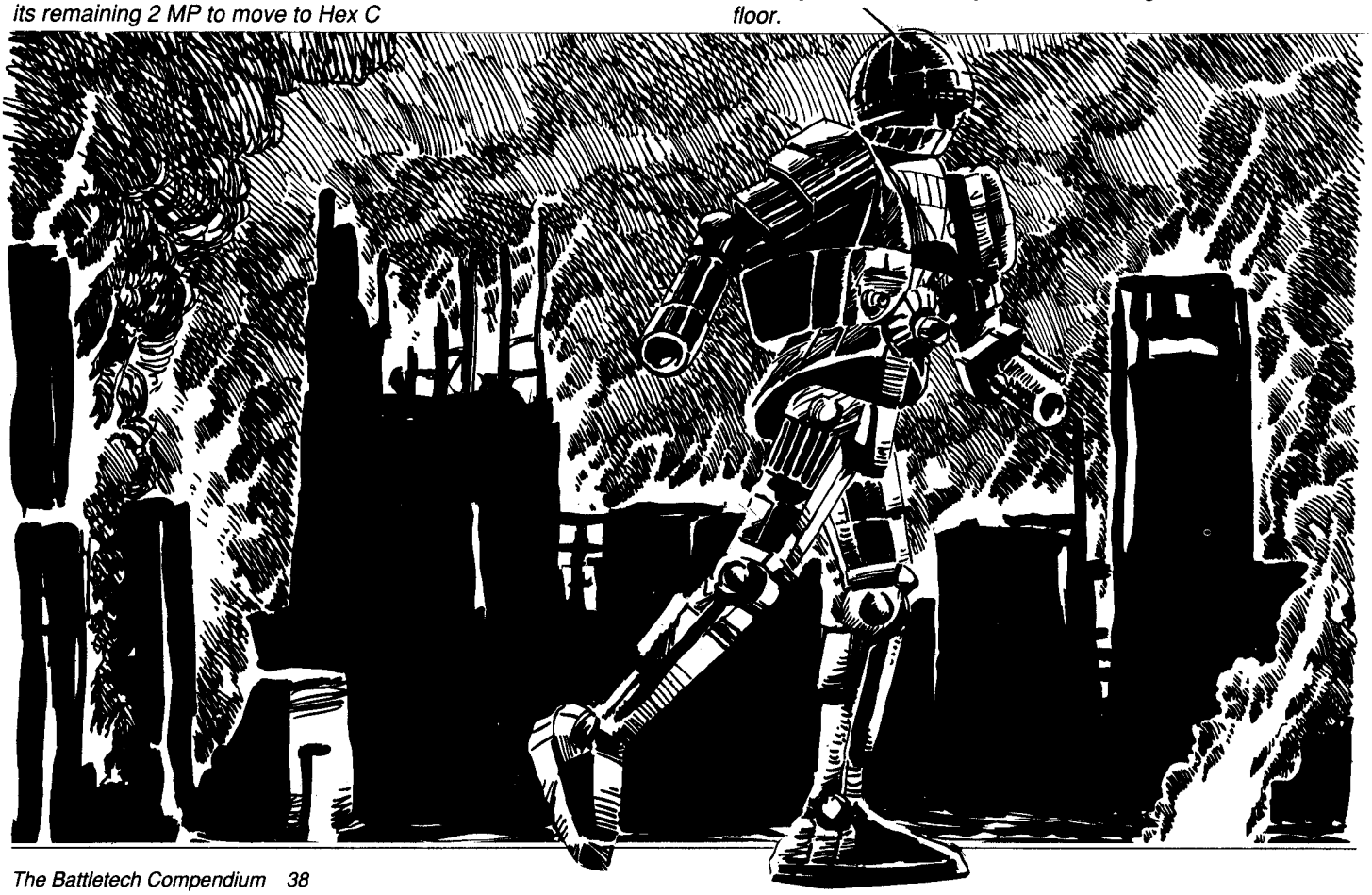
Ground vehicles can only enter or exit the ground level of a building. If the building is Level 2 or less, or if a BattleMech has a Jump capability at least equal to the height of the building, then the BattleMech may get onto the building's roof, through normal expenditure of MPs (see **Movement**). Likewise, jump infantry and BattleArmor may move to the roof of any building that is Level 3 or less.

A BattleMech, or infantry, may enter a building at an elevation different from ground level only if entering the building from an adjacent hex with an elevation equivalent to the building level being entered. It costs infantry 1 MP to enter a building and 1 MP to change levels within a building.

Normal stacking limitations are in effect at each level in a building. Interior floors of a building sustain the same weight as its roof.



For example, a Stinger *is adjacent to the Level 4 Building in Hex A. The* Stinger *may attempt to enter the building at ground level or it may jump up to the roof. The* Wasp *on the roof of the adjacent Level 2 building may jump or climb to the roof of the building in Hex A, or it may enter the building and be on its second floor.*



COMBAT EFFECTS

★ DAMAGE TO BUILDINGS ★

Buildings are represented on the map by full-color counters. On one side is a picture of the intact building, labeled according to its type and number-coded for elevation. When a building suffers damage, simply subtract the damage from the current CF and write the resulting number in pencil on the back side of the counter. When the cumulative damage equals or exceeds the CF, flip the counter over to the rubble side. The building is now rubble for the rest of the game.

Some building counters are larger than a single hex. However, the CF of the building is for the counter as a whole, not for its individual hexes.

For every point of damage that a Building hex takes as a result of combat, fire, or movement, the building loses one construction factor. When the CF of a building is reduced to 0 or less, all of the hexes that it occuppies are reduced to rubble.

There is a –4 To-Hit Modifier when firing directly at a building. Shots aimed at buildings from adjacent hexes always hit, as do all physical attacks. *All* missiles launched from an adjacent hex will hit.

DAMAGE TO UNITS INSIDE

When firing at a vehicle or BattleMech that is inside of a building, there is no modification of the To-Hit Number, but the damage taken by the target is affected. An amount of damage equal to the current Construction Factor divided by 10 (round up) is taken by the building before any damage actually hits the BattleMech or vehicle. This damage is deducted for each separate attacker (not for each separate weapon). If five BattleMechs are shooting at a target in the same building, each would deduct the damage absorbed by the building. Only after all weapons fire is complete is the CF reduced.

All missed shots which were aimed at something inside a building do full damage to the building, instead.

For example, a Marauder *and a* Rifleman *have hit a* Hunchback *which is inside of a Heavy Building with a current CF of 82. The* Rifleman's *damage to the* Hunchback *is reduced by 9 because of the protection of the building. The* Marauder's *damage to the* Hunchback *is also reduced by 9. The building's new CF will be 64 (82 - 9 - 9 = 64).*

Weapons fire directed at infantry inside of a building is a special case. When the firing unit is outside, or on a different level within the same building, the fire must be directed at the building itself, and damage is passed along to the infantry. A detailed description of this procedure is found in **Infantry**. If the firing unit is inside the building and at the same level, normal weapons and physical attack procedures are used, with no modification for the terrain. Do not add a level to a BattleMech's height when it is inside a building. If it is on the second floor of the building, it can fire directly at infantry on the second floor, but only indirectly at infantry on the third floor.

If a building takes more damage than it has CF to withstand, any unit inside suffers some damage in the collapse. This damage is equal to the building's CF at the beginning of the current phase divided by 10, multiplied by the number of levels of building above the affected unit (round up). Infantry suffer three times the normal damage caused by a collapsing building.

A BattleMech that is on an upper floor or roof of a collapsing building also suffers normal falling damage in addition to the above damage, according to the number of levels fallen. Other units on top of a collapsing building suffer damage as though they were on the highest level possible inside it.

It is possible for many units to be in the same hex, if they are on different levels of the same building. When units within a building fire at each other, normal To-Hit procedures are followed with the following additions. The difference in levels is the range. If the building occupies more than one hex, and the target is not in the same hex as the one firing but still in the building, then the horizontal distance also counts when figuring range. Finally, a +3 To-Hit modifier for partial concealment is added because of the fact that all of the target might not be visible. There are no minimum range modifiers used in this case. If a shot from a different level hits a BattleMech, the *Special Hit Locations* tables are used. If a shot hits a vehicle, that vehicle's *Hit Location* table should be used; the shot hits the Back of the vehicle. Remember that all units get the protection of the building. None of these modifiers are used when an attacker fires at a unit on the same level of a building that it is.

SPECIAL HIT LOCATIONS (1D6)

Shot From Above

Roll	Hit Location
1	Left Arm
2	Front/Rear Left Torso*
3	Front/Rear Center Torso*
4	Front/Rear Right Torso*
5	Right Arm
6	Head

Shot from Below

Roll	Hit Location
1	Left Leg
2	Left Leg
3	Front/Rear Left Torso*
4	Front/Rear Right Torso*
5	Right Leg
6	Right Leg

* The attack hits the Front if from the front or the side. It hits the Rear if from the rear.

VEHICLES

BattleMechs reign supreme on the battlefield, but armored vehicles have their own place in combat. Though usually not able to pack as much punch as a BattleMech, they are cheaper to build and have an almost even fighting chance in situations where a BattleMech's capabilities are limited. Cities and urban areas are one such setting.

There are three types of vehicles: ground, air (VTOL), and naval. Ground vehicles include wheeled, tracked, and hovercraft; VTOLs are primarily rotary wing craft, but also include tilt rotor aircraft and other small vertical takeoff and landing aircraft; naval vessels are classified into surface vessels such as displacement hull ships (normal boats), hydrofoils and submarines. Each vehicle has its own advantages and disadvantages, as described in the following rules.

MOVEMENT

Vehicles change their position on the mapsheet by using one of their possible movement modes or actions. During a turn, a vehicle can elect to use its Cruising Speed MPs or its Flank Speed MPs, or to Stand Still. These movement actions are analogous to a BattleMech's Walking, Running, and Standing Still modes. The different types of movement available to a vehicle cannot be mixed in one turn.

Vehicles may mix backward and forward movement only if they are moving at Cruising Speed.

GROUND VEHICLE MOVEMENT

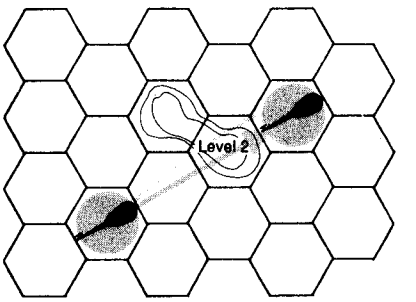
Ground vehicles are limited in the types of terrain that they can cross. See the *Movement Points* chart (in **Movement**) for a list of these limitations.

Ground vehicles can change elevation levels at a cost of 2 MP per level. A ground vehicle may only change one level per hex traveled. Level changes are not possible within buildings.

A ground vehicle's turret (if it has one) can be turned to face any hexside during the Reaction Phase.

VTOL MOVEMENT

VTOL movement is a bit different from the movement of BattleMechs and other vehicles. Like other vehicles, the VTOL may move at either Cruising or Flank Speed during its Movement Phase, and it pays 1 MP for each facing change and 1 MP for every new hex that it enters, regardless of the terrain type. Moreover, VTOLs move vertically as well as horizontally on the map board. It costs a VTOL 1 MP per elevation that it ascends or descends during its Movement Phase. A VTOL can move any number of elevations up and down in a single hex, as long as it doesn't spend more MPs than it has. The only move or facing change that a VTOL can make while at ground level is to ascend at least one level above the ground. A VTOL that begins or ends its movement at an elevation equal to the terrain's elevation has landed. VTOLs may only land in Clear, Paved, or Building hexes (on the roof).



A VTOL starts its movement landed behind a level 2 hill. The player decides that he wants to move the VTOL to the other side of the hill, three hexes away. It costs 3 MPs to rise high enough in the starting hex to cross the hill, 3 MPs to move to the new hex, and 3 MPs to land again, for a total of 9 MPs.

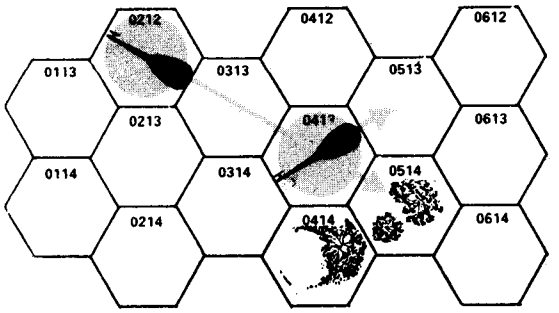
Crashing

During movement, VTOLs that enter a hex horizontally at or below the same level as the terrain in the hex have flown into the side of that terrain and have crashed. VTOLs cannot fly at or below the tops of trees while in Wooded Hexes (2 levels tall), nor can they fly at or below the top of a building unless they are landing on the building. Entering a Wooded Hex at or below the top of the trees results in a crash. The damage is taken on the Front of the VTOL and is equal to the number of hexes that the VTOL has moved times the VTOL's tonnage, divided by 10 (rounded up). Damage caused by crashing is grouped into 5-point clusters, with any extra damage forming a smaller cluster (i.e., the normal procedure for clustering damage). The attacking player then rolls once on the *VTOL Hit Locations* table for each cluster. If the VTOL can still function after the damage of the crash, and the crash hex is terrain in which it can normally land, the VTOL is considered to have landed in the hex and can move as normal in the next turn. Otherwise the VTOL is considered destroyed. The VTOL may not attack in the turn that it crashes.

Sideslipping

A VTOL that is moving at Flank speed and attempts a turn may not be able to do so. A Flank Speed VTOL that continues to move after a facing change must make a *Piloting* Skill roll. If the roll succeeds, the VTOL follows its desired course. If the roll fails, the VTOL *sideslips* into the hex that it would have normally moved into if it had not made the facing change. A *Piloting* Skill roll is not necessary if the VTOL does not move after it changes its facing.

The player has no opportunity after the roll to change the elevation of the VTOL before it enters the new hex. Therefore, it is possible for a VTOL to sideslip into terrain that causes it to crash. If it hasn't crashed, a VTOL may move normally after the hex of sideslip.



A VTOL at Level 1, in Hex 0212, declares that it will move at Flank Speed. The VTOL then moves two hexes to Hex 0413 without changing elevation. Once in 0413, the VTOL changes facing and then declares that it will move into 0513. The player makes a Piloting *Skill roll. The roll is a 4 (needing a 5 for success), and the VTOL sideslips into Hex 0514. Since the terrain is Light Woods (with the top of the trees reaching to Level 2) and the VTOL is at level 1, the VTOL crashes into the hex. If the VTOL had first climbed to Level 3 before attempting the turn, then it would not have crashed and it could have continued to move normally into Hex 0613.*

NAVAL MOVEMENT

Surface Vessel Movement

Surface naval vessels may only move over Depth 1 or deeper Water Hexes. It costs 1 MP per hex entered, regardless of depth. For line-of-sight purposes, the surface vessel is on the surface of the water, at Level 0.

Submarine Movement

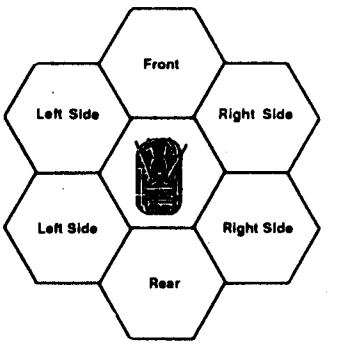
Submarines, like VTOLs, move vertically as well as horizontally. Regardless of the depth, a submarine expends only 1 MP for each new Water Hex that it enters. It costs a submarine 1 MP per depth that it ascends or descends during its Movement Phase. A submarine can move any number of levels up and down in a single Water Hex, as long as its combined MP expenditure does not exceed its total allowance. A submarine may obviously not descend to a depth greater that the depth of its hex or ascend above the surface of the water. In order to move horizontally or change facing, the submarine must be at a depth that is higher than its current hex's depth. It should only be necessary for the player to record the submarine's depth at the end of its movement.

COMBAT

Vehicles fire weapons just as a BattleMech does. All of the rules for firing arcs, multiple targets, and To-Hit Modifiers are identical.

A vehicle may not fire at a target in the same hex as it is, unless they are inside a building.

Vehicle hit locations are simpler than BattleMech hit locations. The following diagram illustrates the Front, Side, and Back damage locations for all vehicles.



Once a vehicle has been hit, consult the *Hit Locations* table for that type of vehicle to determine just what was hit. Other results may also apply, as noted on the table.

A vehicle can be destroyed by a critical hit result or by losing all of its internal structure boxes in any one location. In addition, VTOLs may be destroyed by crashing into restricted terrain. Vehicles take damage like BattleMechs do, with Damage Points first being marked off against armor, and then against internal structure.

GROUND VEHICLE COMBAT

GROUND VEHICLE HIT LOCATIONS (2D6)

Roll	*Front/Back*	*Side*
2	Armor (critical)	Armor (critical)
3	Armor[1]	Armor[1]
4	Armor[2]	Armor[2]
5	Armor[3]	Armor[2]
6	Armor	Armor
7	Armor	Armor
8	Armor	Armor
9	Armor	Armor[3]
10	Turret Armor	Turret Armor
11	Turret Armor[4]	Turret Armor[4]
12	Turret Armor (critical)	Armor (critical)

[1] A track, axle, or lift fan has been destroyed; the unit cannot move for the rest of the game.

[2] A drive, wheel, or airskirt has been damaged; –1 Cruising MP for the rest of the game.

[3] If the vehicle is a hovercraft, an airskirt has been damaged (–1 Cruising MP for the rest of the game). If not a hovercraft, no additional effect.

[4] The turret locks in its current position and cannot be moved for the rest of the game; it can only fire out of its current arc. If there is no turret, no additional effect.

If there is no turret, then all turret hits become normal armor hits.

GROUND VEHICLE CRITICAL HITS (1D6)

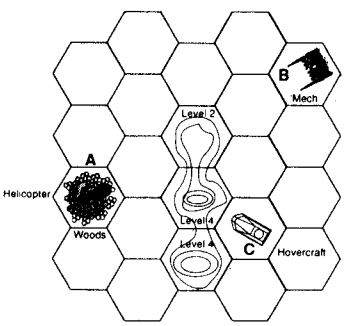
Roll	*Result*
1	Crew Stunned (no actions for next two turns)
2	Main Weapon Jams (no fire from largest system for one turn)
3	Engine Hit (no movement for rest of game)
4	Crew Killed (vehicle out of game)
5	Fuel Tank Hit (vehicle explodes)
6	Ammo/Power Plant Hit (vehicle explodes)

VTOL COMBAT

A VTOL *never* receives terrain modifier benefits for a hex that it occupies while in flight. Therefore, a VTOL's only possible terrain modifier is for fire that passes *through* a Light or Heavy Woods Hex.

VTOLs that expend any MPs in a turn are considered to have jumped, both for Attacker and Target Movement Modifier purposes.

Line-of-sight is resolved as if the VTOL is in a Clear Hex at an elevation equal to the VTOL's present level.



The VTOL in the illustration is at Level 3, one level higher than the woods below it. The BattleMech in Hex B can see and be seen by the VTOL. The hovercraft in Hex C does not have a line-of-sight to the VTOL because of the intervening Level 4 hill.

A VTOL may not fire at a target in the same hex as it is.

Once a VTOL has been hit, the *VTOL Hit Locations* table is used to determine just what was hit. Other results may also apply, as noted on the table.

VTOL HIT LOCATIONS (2D6)

Roll	Front/Back	Side
2	Rotor Destroyed (critical)	Rotor Destroyed (critical)
3	Rotor Destroyed	Rotor Destroyed
4	Rotor (–1 MP)	Rotor (–1 MP)
5	Rotor (–1 MP)	Rotor (–1 MP)
6	Armor	Armor
7	Armor	Armor
8	Armor	Armor
9	Armor	Main Weapon Destroyed
10	Rotor (–1 MP)	Rotor (–1 MP)
11	Rotor (–1 MP)	Rotor (–1 MP)
12	Rotor (–1 MP) (critical)	Rotor (–1 MP) (critical)

VTOL CRITICAL HITS (1D6)

Roll	*Result*
1	Cockpit Hit, Crew Killed (VTOL out of action if landed, crashes if flying)
2	Main Weapon Jams (no fire from largest system for one turn)
3	Engine Hit
4	Cockpit Hit, Crew Killed (VTOL out of action if landed, crashes if flying)
5	Fuel Tank Hit (VTOL explodes)
6	Ammo/Power Plant Hit (VTOL explodes)

Engine Hits

If a VTOL's engine is hit, it is not allowed to move for the rest of the game, if landed. If flying, make a *Piloting* Skill roll to avoid crashing over a Clear, Paved, Rough or Building Hex; if flying over other terrain, the VTOL automatically crashes. If the roll is successful, the VTOL lands in a hex. No further movement is allowed for the rest of the game.

Rotor Destruction

If a VTOL's rotor is destroyed while the VTOL is flying, it crashes into its current hex. The damage taken by a falling VTOL is equal to 1 point for every 10 tons that it weighs (rounding up) times the number of levels plus 1 that it fell. VTOLs over woods fall to the ground, not the top of the trees. If it fell into a Water Hex, treat the Water Hex as a Level-0 Hex and cut the resulting damage in half (rounding up).

Divide the damage into 5-point clusters—form as many 5-point groups as possible, gathering any remaining points into one smaller group—and determine a hit location for each cluster. Use the appropriate column of the *VTOL Hit Locations* table as specified by the *Facing After a Fall* table in **Movement**. The results of the fall occur simultaneously with all other damage results in the phase.

★ VTOL Explosions ★

If any of a VTOL's internal structure, other than that of the rotors, is damaged by a crash, the VTOL explodes. Also, the *VTOL Critical Hits* table sometimes indicates an explosion. If the VTOL is driven by an internal combustion engine (ICE), then the hex of the crash or explosion is on fire regardless of the terrain (fuel floats on water and causes a burning slick). If the hex is a Woods Hex, use the optional **Fire** rules. Other terrain will only burn until the end of the next turn and then go out; there is no chance of this fire spreading.

A burning fuel slick in a Water Hex will affect a BattleMech in that hex if the hex is Depth 0 or 1. Surface naval vessels occupying a Water Hex with a burning fuel slick are destroyed unless an 8 or better is rolled on two dice. A submarine in a Water Hex with a burning fuel slick is at hazard only if it is at Depth 0.

These rules are only applied to VTOL explosions. Other vehicles, such as tanks and hovercraft, use must less volatile fuels. When these other vehicles explode, there is no chance for the hex to catch on fire.

★ Physical Attacks Against VTOLs ★

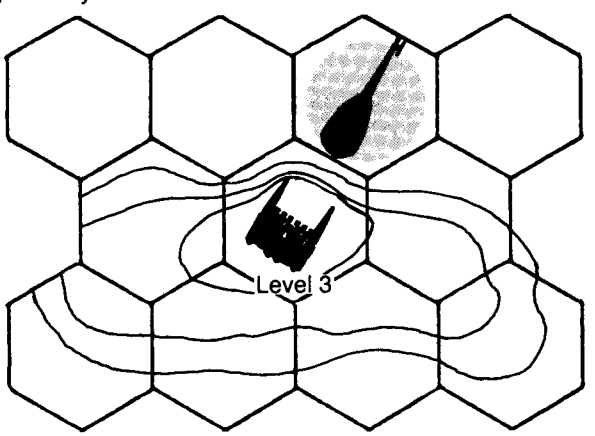
BattleMechs may make normal physical attacks against VTOLs while landed. In addition, however, a BattleMech may also physically attack a flying VTOL. Use the chart below to discover what type of attacks are allowed the BattleMech. The first column lists the difference between the BattleMech's level (without adding a level for the height of the BattleMech, as is done with LOS) and the VTOL's level; subtract the BattleMech's level from the VTOL's level.

PHYSICAL ATTACKS AGAINST VTOLS

Level Difference	Type of Physical Attack Allowed
–1 or lower	None
0	All except Punch
1 – 2	All except Kick
3	Club only
4+	None

Death From Above attacks may only be carried out if the BattleMech's Jump MPs are at least as great as the difference between the BattleMech's level and the VTOL's level.

Any successful physical attack by a BattleMech automatically destroys the VTOL's rotor.



A BattleMech is on a Level 3 Hill facing a VTOL that is at level 2. The elevation difference between the BattleMech and the VTOL is –1 (2 – 3). The BattleMech may not physically attack the VTOL. If the VTOL were 1 level higher, then the elevation difference would have been 0 and the BattleMech would have been able to make any physical attack except a punch. If the BattleMech had not moved yet, was jump-capable, and the VTOL had finished its movement, the BattleMech could make a Death From Above attack.

NAVAL COMBAT

NAVAL HIT LOCATIONS (2D6)

Roll	Front/Back	Side
2	Armor (critical)	Armor (critical)
3	Armor[1]	Armor[1]
4	Armor[2]	Armor[2]
5	Armor[3]	Armor[2]
6	Armor	Armor
7	Armor	Armor
8	Armor	Armor
9	Armor	Armor[3]
10	Turret Armor	Turret Armor
11	Turret Armor[4]	Turret Armor[4]
12	Turret Armor (critical)	Armor (critical)

[1] The engine room or foils are destroyed; the vessel can't move for the rest of the game.

[2] The engine room or foils are damaged; –1 Cruising MP for the rest of the game.

[3] If the vessel is a hydrofoil, its foils are damaged (–1 Cruising MP fo rthe rest of the game). If not, there is no additional damage.

[4] The turret locks in its current position and cannot be moved for the rest of the game; it can only fire out of its current arc. If there is no turret, no additional effect.

If there is no turret, then all turret hits become normal armor hits.

NAVAL CRITICAL HITS (1D6)

Roll	Result
1	Crew Stunned (no actions for the rest of this turn and two more turns)
2	Main Weapon Jams (no fire from largest system for one turn)
3	Engine Hit (no movement for rest of game)
4	Crew Killed (vehicle out of game)
5	Fuel Tank Hit (vehicle explodes)
6	Ammo/Plant hit (vehicle explodes)

A submarine's **Underwater Operations** are described in the **Optional Rules**.

Torpedoes

Torpedos are maritime versions of SRM and LRM missiles. Torpedo stats are the same as the stats of their land-based counterparts. However, torpedos may only be fired by a unit that is in a Water Hex of Depth 1 or greater, and its target must be in a Water Hex of Depth 1 or greater, though the target itself can be on the surface of the water. Furthermore, the LOS must be traced through Water Hexes of Depth 1 or greater. Units equipped with torpedo missile racks may not use normal missile ammo, and missile racks may not use torpedo ammunition.

INFANTRY

While BattleMechs and vehicles are expensive, there is almost no limit to the number of men who, willingly or unwillingly, can be thrown into battle. Infantry units do not usually last very long when on the field with BattleMechs, but they can sometimes inflict just enough damage to turn the tide of battle.

There are four types of infantry: *foot, motorized, jump* infantry, and BattleArmor infantry. Foot and motorized units are 28-man platoons. Jump units are 21-man platoons. BattleArmor units are 5-man points equipped with powered combat suits.

Standard infantry units can be armed in one of five ways: with rifles, machine guns, flamers, portable lasers, or short-range missiles.

All members of a BattleArmor point carry an SRM 2 launcher and two reloads on their backs. In addition, members of a point also carry one anti-BattleMech weapon system, either a regular small laser, a flamer, or a machine gun. All personnel in a point must carry the same type of anti-BattleMech weapon system, because they fire as a combined unit in battle.

The table below shows the different types of units, their Movement Points, the number of men in each when at full strength, and the maximum amount of damage an undamaged unit can do.

INFANTRY UNITS

Type	MP	Men	Max. Damage
Foot Infantry			
Rifles	1	28	7
Machineguns	1	28	10
Flamers	1	28	10
Portable Lasers	1	28	14
SRMs	1	28	14
Motorized Infantry			
Rifles	3	28	7
Machineguns	3	28	10
Flamers	3	28	10
Portable Lasers	2	28	14
SRMs	2	28	14
Jump Infantry			
Rifles	3	21	6
Machineguns	3	21	7
Flamers	3	21	7
Portable Lasers	2	21	11
SRMs	2	21	11
BattleArmor	3	5	See **Combat**, below

Each infantry unit has a record sheet that is used to keep track of its status during the game. Prior to the start of the game the players should fill out the appropriate sheets indicating their units' type, weaponry, and other stats.

MOVEMENT

Infantry have no facing and can move in any direction unless blocked by terrain. In general, infantry must pay the same Movement Point costs as other units. However, in cities it only costs infantry 1 MP to enter or leave buildings. Infantry units may also climb up interior stairs of buildings to reach different levels. The cost is 1 MP per level.

Infantry may not move into Depth 1 or deeper water and may only climb 1 elevation level per hex. Jump infantry and BattleArmor can move as per the jump rules for BattleMechs.

An infantry platoon counts as one unit for stacking purposes.

★ INFANTRY CARRIERS ★

Infantry may ride inside of a vehicle during the course of a game. Any vehicle equipped with cargo space may carry infantry inside of it. The unit's capacity is only limited to the tonnage of cargo space that it has. BattleArmor units take up 1 ton of cargo space. A foot infantry platoon takes up 3 tons of cargo space. A jump infantry platoon takes up 4 tons of cargo space. A motorized infantry platoon takes up 6 tons of cargo space. These tonnages are not reduced for casualties.

To mount a vehicle, an infantry unit must start its Movement Phase in the same hex as the vehicle. A platoon may dismount a vehicle only at the end of that vehicle's Movement Phase. It costs the vehicle 1 MP to mount or dismount a platoon. Infantry that have dismounted in the current turn may not move or engage in combat.

While mounted, an infantry unit does not count toward stacking limitations. A dismounted infantry unit does count toward stacking limitations.

Mounted infantry may not fire weapons. If the vehicle explodes during combat, all infantry units mounted in the vehicle are also destroyed. If a vehicle suffers a Crew Killed critical hit result, all infantry mounted in the vehicle are killed. If a vehicle suffers a Crew Stunned result, all infantry mounted in the vehicle are stunned and cannot be used or removed from the vehicle until the vehicle's crew has recovered. Infantry mounted in vehicles that are destroyed without exploding may move and fire normally in the turn after the vehicle was destroyed.

★ MECHANIZED BATTLEARMOR ★

Clan BattleArmor units (composed of Elementals) are trained to cooperate closely with OmniMechs in combat. Each OmniMech has handholds constructed on its torso to allow up to five BattleArmor infantry to attach themselves to the OmniMech transport. A point can mount an OmniMech using the normal rules for mounting/dismounting from more conventional vehicles. Once

infantry are mounted, the OmniMech cannot use any torso-mounted weapons. All hits on any of the OmniMech's torso locations (except the Front Center Torso) are assessed against the infantry first. A randomly chosen trooper receives the damage before the OmniMech takes hits. Only one trooper may take damage from any single hit intended for the OmniMech; if there is excess damage to be marked off after a trooper is killed in this fashion, it is applied to the OmniMech.

COMBAT

Infantry combat is divided into two main types: combat with standard infantry units (foot, motorized, or jump), and combat with BattleArmor.

STANDARD INFANTRY ATTACKS

Infantry fire and To-Hit procedures are the same as for BattleMechs and vehicles. The only differences are that infantry units have a 360° arc of fire, and the range of their weapons is severely limited. Following is a chart of standard infantry weapons and their To-Hit Numbers by range. Rules for attacks by BattleArmor are listed in **BattleArmor Attacks**.

BASE TO-HIT NUMBERS OF STANDARD INFANTRY WEAPONS

Weapon Type	Range in Hexes 0	1	2	3	4	5	6
Rifle	2	4	6	-	-	-	-
MG	2	4	6	8	-	-	-
Flamer	3	4	6	-	-	-	-
Laser	2	4	6	8	-	-	-
SRM	3	4	4	6	6	8	8

The amount of damage that a standard infantry platoon does is based both on the number of men that it currently has, and the type of weapons with which it is armed. These figures are listed on the **Infantry Record Form**. Thus, a full-strength rifle platoon does 7 points of damage each time that it hits, while an 11-man laser platoon does 6.

Standard infantry damage to targets is grouped into 5-point clusters.

Infantry units use all of the same line-of-sight, target movement, and terrain modifiers as BattleMechs and vehicles when calculating the To-Hit Number.

★ STANDARD INFANTRY DAMAGE ★

Standard infantry platoons take damage in the normal manner, i.e. they are fired on as normal units with appropriate modifiers, and take damage equal to the damage value of the weapon. As damage is taken, the men on the platoon's Record Form are marked off, left to right, one for each Damage Point suffered.

Unarmored infantry hit while in the open—in Clear terrain with no terrain modifiers for their hex—have twice the normal damage applied against them, even if mounted on another unit.

When a standard infantry platoon (not BattleArmor) is hit by a vehicular or BattleMech-mounted machine gun, roll 2D6. The result is the damage done to the infantry platoon. As above, this damage is doubled if the infantry platoon is in the open.

Machinegun-equipped BattleArmor that fire on an unarmored infantry platoon should roll 1D6 for each hit that they achieve on the *BattleArmor Direct Fire* table. The sum of the result is the damage that is done to the unit. As above, this damage is doubled if the infantry platoon is in the open.

Infantry in Buildings

Because buildings block line-of-sight, no direct fire at infantry (standard or BattleArmor) inside of a building is allowed. Instead, attacking units may fire at the building itself. Because infantry platoons are not armored, damage done to buildings is passed on to the infantry units inside according to the chart below.

INFANTRY DAMAGE IN BUILDINGS

Building Type	*Damage Suffered By Infantry Platoon*
Light	3/4 of damage is passed on to platoon
Medium	1/2 of damage is passed on to platoon
Heavy	1/4 of damage is passed on to platoon
Hardened	no damage is passed on to platoon

This chart is used only when damage is intentionally inflicted on the building, either from shot damage, a physical attack, or from a BattleMech or vehicle moving into or out of a building with infantry in it.

If a BattleMech is adjacent to an infantry unit that is in a building, all attacks, weapons fire, and physical attacks must be directed against the building, rather than the unit itself. If the BattleMech is inside a building and in the same hex as an infantry unit, it may make a physical attack against that unit. The BattleMech may fire at the building both it and the infantry unit occupy, or it may make a direct physical attack against the infantry in the building.

Infantry may fire at units in the same hex as they are. All damage done in such an attack hits the Front side of the target.

★ BATTLEARMOR ATTACKS ★

When a point of BattleArmor attacks, it fires as a single unit. In any combat round, the point may fire twice, once with SRMs and once with its other weapon (small laser, flamer, or machinegun). These attacks follow all range and line-of-sight restrictions appropriate for the weapon. All attacks against units in the same hex as the BattleArmor are considered to be at a range of 1. BattleArmor units have a 360° arc of fire.

The modified To-Hit Number is calculated normally. Attacker and Defender movement, terrain and all other modifiers are taken into account.

If the SRM To-Hit roll is successful, consult the table below to determine the number of hits scored by the missiles. Each hit inflicts the usual two points of damage on the target, with a hit location determined separately for each missile.

BATTLEARMOR MISSILES (2D6)

Roll	Members Active (Number of Missiles Fired)				
	1 (2)	2 (4)	3 (6)	4 (8)	5 (10)
2	1	1	2	2	3
3	1	2	2	3	3
4	1	2	3	3	4
5	1	2	3	4	6
6	1	2	4	4	6
7	1	3	4	5	6
8	2	3	4	5	6
9	2	3	5	6	8
10	2	3	5	7	8
11	2	4	6	8	10
12	2	4	6	8	10

When an anti-BattleMech small laser, flamer, or machine gun hits its target, roll on the table below to determine the number of troopers in the point who scored a hit. Each trooper who hits inflicts normal damage for the weapon. A hit location is determined separately for each hit.

Note that if the target is a standard infantry platoon and the weapon used is a machine gun, the amount of damage is determined by rolling a die for each hit and adding the result together.

BATTLEARMOR DIRECT FIRE (2D6)

Roll	Point Members Active/ Number of Weapons Fired				
	1	2	3	4	5
2	1	1	1	1	1
3	1	1	1	2	2
4	1	1	2	2	2
5	1	1	2	2	3
6	1	1	2	2	3
7	1	2	2	3	3
8	1	2	2	3	4
9	1	2	3	3	4
10	1	2	3	4	4
11	1	2	3	4	5
12	1	2	3	4	5

Note that BattleArmor-equipped units are highly trained, elite troops, and are automatically capable of delivering Anti-BattleMech attacks as described in the optional rules for **Anti-BattleMech Infantry**, if that optional rule is being used.

BATTLEARMOR DAMAGE

When a point is fired on in **BattleTech** combat, make the attack against the unit as a whole. All normal modifiers are applied to attacks on BattleArmor points. In addition, BattleMechs and vehicle attacks have to modify the To-Hit Number by +1 because of the dispersal of BattleArmor troops.

If a hit is achieved, roll 1D6, rerolling a 6 result. The number indicates which one of the troopers takes damage from the hit. Note that long-range missile fire against BattleArmor is handled as for BattleMechs; each 5 missiles that hit the unit strike a different, randomly selected trooper.

Each suit of BattleArmor has an armor value of 11 points. For simplicity's sake in **BattleTech**, the armor is considered to be in a single "location." If all armor is destroyed, the trooper inside is out of action.

NON-CLAN BATTLEARMOR

The Clans have made use of BattleArmor for well over a century, and have used selective breeding techniques to develop a caste of Elemental pilots with the size, strength, and agility to make the most effective use of BattleArmor. The Successor States are taking steps to field their own copies of these suits in the near future, but Inner Sphere infantry lack the physical development to use them as well as their Clansman opponents. Therefore, all Inner Sphere BattleArmor units start play with one hit assessed against each suit's armor. In addition, Inner Sphere units are not always organized into points, and may contain anywhere from one to five soldiers at the start of battle.

OPTIONAL RULES

These rules are given to expand and add more flavor to a **BattleTech** game. Before the start of a game, the players should go through all of these rules and agree which ones they will use and which ones they will not.

★ ANTI-BATTLEMECH INFANTRY ★

Some forces have been training infantry in anti-BattleMech tactics. The infantry are trained to close with a BattleMech, scale it, and plant satchel charges in strategic locations. This tactic is dangerous and requires highly skilled and dedicated troops, but it can turn the tide of battle quickly.

Anti-BattleMech attacks are resolved in the Weapon Attack Phase of the turn.

Please note that anti-BattleMech trained infantry platoons are a rare sight on the battlefield. The training is quite specialized, time-consuming and expensive. Most governments will not spend the necessary effort to train more than a handful of units in anti-BattleMech tactics. A ratio of 1 anti-BattleMech platoon to 8 normal platoons is normal.

LEG ATTACKS

Anti-BattleMech infantry platoons and BattleArmor-equipped infantry that start a Weapon Attack Phase in the same hex as a BattleMech may elect to attack the BattleMech's legs instead of making a normal weapons attack. This form of attack involves the infantry climbing the legs of the BattleMech and planting explosive charges in the joints in order to damage the actuators. The infantry unit's Base To-Hit Number is modified as normal for movement and terrain. A –4 modifier is added to the To-Hit Number if the BattleMech is prone or immobile.

If this attack also uses the **Point Blank Shots from Hidden Units** optional rule (in **Hidden Units**), the To-Hit Number is not modified for movement or terrain.

The Base To-Hit Number is based on how many men are left in the unit. The more men, the greater the chance of success. Use the *Leg Attacks* chart to determine the Base To-Hit Number.

LEG ATTACKS

Number of Men in Platoon	Number of BattleArmor	Base To-Hit Number
28 – 22	4 – 5	4
21 – 16	3	7
15 – 10	2	10
9 – 5	1	12
4 – 1		no attack possible

If the To-Hit roll is successful, the attacker rolls 1D6. A roll of 1 – 3 means the attack hit the left leg, a result of 4 – 6 means the right leg was hit. (If one leg is gone, the attack automatically hits the other leg.) The attacker then rolls on the *Critical Hit Effects* table for the leg that is hit. If the roll is 7 or less, then 4 points are taken off of the armor of the appropriate leg. If one or more critical hits result from the roll, it (they) should be resolved normally.

★ SWARMING ★

Swarm attacks are the boldest and most dangerous attacks that infantry can perform against a BattleMech. It involves a unit rushing up to a BattleMech, grappling and climbing it, and then inflicting damage against the MechWarrior or the upper portions of the BattleMech.

Anti-BattleMech infantry platoons and BattleArmor-equipped infantry that start a Weapon Attack Phase in the same hex as a BattleMech may elect to swarm the BattleMech, rather than use their weapons or attack its legs. Like leg attacks, the infantry unit has a Base To-Hit Number, based on the size of the unit, that is modified normally for movement and terrain. The Base To-Hit Number is modified by –4 if the BattleMech is prone or immobile.

If this attack also uses the **Point Blank Shots from Hidden Units** optional rule (in **Hidden Units**), the To-Hit Number is not modified for movement or terrain.

SWARM ATTACKS

Number of Men in Platoon	Number of BattleArmor	Base To-Hit Number
28 – 22	4 – 5	7
21 – 16	1 – 3	10
15 – 1	_	no attack possible

This To-Hit roll is made simply to see if the infantry are successful in getting secure footholds on the BattleMech. No damage is inflicted on the BattleMech during either combat phase of this turn.

If the infantry successfully swarms a BattleMech, the BattleMech can try and remove them during the Physical Attack Phase of the turn. This is done using the arms of the BattleMech to force the troops off—in effect, a modified punch. The player may make up to two *Piloting* Skill rolls (one for each arm) with a +4 modifier, along with any damage or construction modifiers normally applied to a Punch. If any roll is successful, the infantry unit is forced off of the BattleMech and back into the hex, and they take damage equal to a punch from that BattleMech. If a roll is unsuccessful, the BattleMech damaged itself in the attempt and should take Punch damage from that arm. (However, this is one of the few *Piloting* Skill rolls where failure does *not* mean that the BattleMech falls.) Roll on the Front column of the *BattleMech Punch Locations* table to determine the location that is damaged. If a BattleMech makes two punches, it is possible that one is successful and the other isn't. If both are declared, both must be resolved, even if the first is successful.

During the Movement Phase of the following turn, infantry units that have not been shaken off travel with the BattleMech. Jump-capable BattleMechs may attempt to shake off their attackers during the Movement Phase. If the BattleMech jumps, the player should make a *Piloting* Skill roll with a +4 modifier upon landing. There are no other modifiers applied to this roll; it is in addition to any other *Piloting* Skill rolls required by the jump. If it is successful, the infantry unit falls off into the hex in which the BattleMech landed. The infantry unit cannot move or shoot for the rest of the turn, and it takes 11 points of damage.

If the BattleMech enters water that is Depth 2 or deeper, and the infantry unit is an Anti-BattleMech platoon (not a BattleArmor point), the unit is destroyed. If the BattleMech ends its movement in a Fire Hex and the infantry unit is an Anti-BattleMech platoon (not a BattleArmor point), the infantry fall off. In addition, roll two dice. On a roll of 8 or better, the unarmored infantry are destroyed. If the infantry unit survives the fall into the burning hex, it cannot move or shoot for the rest of the turn.

If the BattleMech falls (not going voluntarily prone) at any time prior to the next Weapon Attack Phase, the infantry unit falls off of the BattleMech in that hex. The infantry unit cannot move or shoot for the rest of the turn and it takes 11 points of damage. A BattleMech cannot intentionally go prone to roll and shake off its assailants.

If the infantry unit succeeds in staying on the BattleMech, they may make a normal weapons attack during the Weapon Attack Phase of the turn after they successfully swarmed the BattleMech. All attacks automatically hit. The player should roll on the *Swarm Hit Locations* table below to discover the location of the hit.

SWARM HIT LOCATIONS (2D6)

Roll	Location
2	Head
3	Rear Center Torso
4	Rear Right Torso
5	Front Right Torso
6	Right Arm
7	Front Center Torso
8	Left Arm
9	Front Left Torso
10	Rear Left Torso
11	Rear Center Torso
12	Head

Damage is equal to the normal damage that the unit gives with its weapons. BattleArmor units apply all of their damage to one hit location. Thus, a full strength small laser BattleArmor unit will give 15 points of damage to one location. Additionally, the attack of an anti-BattleMech unit might result in one or more critical hits. In addition to normal damage, the player automatically rolls on the *Critical Hit Effects* table to check for critical hits.

Infantry units can continue to make these attacks on the BattleMech in subsequent Weapon Attack Phases until the BattleMech is destroyed or the BattleMech has managed to shake the attacking unit off.

ARTILLERY

While setting up a battle, the players may wish for one or both sides to have off-board indirect artillery available. If this is the case, the normal sequence of play is modified. The new sequence to be used is as follows:

Initiative Phase
Targeting Phase
Movement Phase
Reaction Phase
Off-board Attack Phase
Weapon Attack Phase
Physical Attack Phase
Heat Phase
End Phase

SET-UP

Prior to setting up units, the players should decide where the off-board artillery is set up with respect to the **BattleTech** mapboard. Normally, off-board artillery is set up behind the area where the on-board friendly forces will set up. For example, if the friendly forces set up on the north side of the map, the off-board artillery is located to the north of the board. Specifically locating the artillery is important because the locations of hits on BattleMechs and vehicles are determined by the direction from which the artillery fire arrives, i.e. if the target BattleMech is facing north and the artillery is sited in the north, then the Front column of the *BattleMech Hit Locations* table is used.

After the site location is determined, players also need to determine how far the artillery piece is from the mapboard. Distance from the mapboard is expressed in units of 500 meters (the length of one **BattleTech Mapsheet**). An off-board artillery piece may be sited at any distance away from the mapboard, up to its maximum range (see the *Artillery Pieces* chart). The further an artillery piece is, the longer it takes for one of its shells to reach a target on the mapboard. On the other hand, the closer the piece is, the greater the likelihood that it will be overrun if its side loses the battle (see optional **Artillery Campaign Rules**). If the players cannot decide on a range, assume that the artillery is sited at a distance of half its maximum range from the battlefield.

The "defending" player may *pre-register* up to 5 hexes on the battlefield map. Artillery fire on a pre-registered hex automatically hits.

TARGETING

During the Targeting Phase, a player with off-board artillery may select and record the map hex numbers that he wishes his artillery to fire on. Off-board artillery fire is only directed at hexes, not individual targets. Artillery fire may be directed at hexes that are not under the direct observation of any friendly unit; however, this fire may not be *adjusted* (see below). Each individual artillery piece that a player controls may target a different hex. Note down the turn that each piece fired, each target hex, and the turn in which each shell will land. The turn that a shell will land is equal to the current turn plus the time in flight for the shell. The time in flight for any shell is found on the following chart.

SHELL TIME IN FLIGHT

Distance From Battlefield (Mapboards)	Time in Flight (Turns)
1 – 2	1
3 – 4	2
5 – 6	3
7 – 8	4
9 – 10	5
11 – 12	6
13 – 14	7
15 – 16	8
17 – 18	9
19 – 20	10

In a mobile battle, artillery not very close to the fighting, and not pre-registered, has little chance of doing any effective damage.

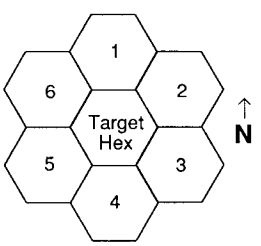
During the Off-Board Attack Phase, artillery rounds that land in that turn are declared and their fire is resolved. Artillery fire may or may not land in the hex that it was designated to hit. The round has a base To-Hit Number of 11. Apply the following modifiers.

ARTILLERY MODIFIERS

For each point of *Gunnery* Skill less than 4 possessed by the gunner of the artillery piece.	–1
For each point of *Gunnery* Skill greater than 4 possessed by the gunner of the artillery piece.	+1
For every two points of *Gunnery* Skill less than 4 possessed by the observing unit (fractions rounded down toward zero).	–1
For every two points of *Gunnery* Skill greater than 4 possessed by the observing unit (fractions rounded down).	+1
Adjusting fire: for each previous shot fired at the target hex by the artillery unit (see **Adjusting Fire**).	–1

If the roll equals or exceeds the modified To-Hit Number, the round hits the target hex; otherwise, the shot *scatters*. To determine the hex where the scattered shot lands, roll two dice. The first die gives the direction of the scatter as per the scatter diagram, and the second die gives the distance away from the target hex that it lands (in hexes).

Once an artillery unit has hit its intended target hex, it is able to automatically hit that hex thereafter.



Scatter Diagram

ADJUSTING FIRE

An artillery piece may attempt to adjust subsequent fire at specific hexes, by noting how far off, and in which direction, its shot landed. If the target hex was in the LOS of a friendly unit with *Gunnery* Skill at the end of the Movement Phase of the turn the piece fired the *same* friendly unit has the target hex in its LOS at the time the shell arrives, and the artillery piece has not fired at another target during the intervening turns, then the piece may adjust its fire at that hex. Each previous shell which has been observed modifies the To-Hit Number by –1, as listed in the *Artillery Modifiers* chart.

DAMAGE

All units and structures in a hex hit by artillery take damage. Resolve hit locations according to the artillery piece's orientation to the units in the hex; the artillery piece is considered to be in the center hex of the map edge behind which it is sited. Thus, if the piece is located to the north of the map, hit locations are resolved as if the attack came from the center of the north edge of the mapsheet. Resolve damage using the damage values listed in the *Artillery Pieces* chart. These pieces damage adjacent hexes also. All units in adjacent hexes are also hit—damage is calculated as above but using the adjacent hex damage value.

A building absorbs part of the damage (its CF/10), just like most other attacks against units in the building. Units in flight are not affected by shells that hit their current hex (see optional **Flak** rules). Underwater units take normal damage from any shell which hits their hex. A BattleMech that is in the middle of executing a Death From Above attack is not affected by a shell that hits the BattleMech's current hex or its target hex.

ARTILLERY PIECES

Type	Max Range (in boards)	Target Hex Damage	Adjacent Hex Damage
Sniper	12	10	5
Long Tom	20	20	10
Thumper	14	5	2

SMOKE ROUNDS

Instead of conventional rounds, off-board artillery units may fire smoke rounds instead. When a smoke round hits a hex, that hex is full of smoke; if the artillery piece normally damages adjacent hexes, those hexes are also full of smoke. The To-Hit Number of an attack into or out of a smoked hex is modified by +2. Smoke has 1 level of elevation and blocks line-of-sight through it, but not into or out of its hex.

Smoke from an artillery round disperses in the End Phase of the third turn after it lands.

★ ONBOARD ARTILLERY FIRE ★

Most artillery attacks are handled as off-board, indirect attacks. When an artillery-equipped unit is on the gameboard, it may also be used to fire directly rather than indirectly.

To fire an artillery weapon directly, there must be a line-of-sight to the target hex. The Base To-Hit Number, regardless of range, is 9. Since the round is fired at the hex and not actually at the target in the hex, there are no modifiers for target movement or for the terrain of the target hex. The firing unit does not receive the immobile target bonus. The Base To-Hit Number is modified normally for the attacker's movement and for firing through (not into) woods and other terrain features. If the attack hits the target hex, the round does normal artillery damage, including spillover damage to adjacent hexes. If the round misses its target, it scatters as described in **Targeting**.

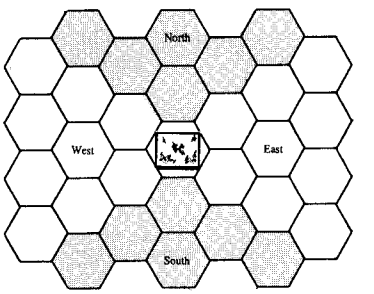
Artillery pieces that start the game on the board may also fire indirectly as per the normal off-board artillery fire rules. In this case, the time in flight is 1 turn, and any movement by the attacking piece during the turn it fires modifies the Base To-Hit Number.

ARTILLERY CAMPAIGN RULES

The artillery train of any military force is a prime target for air strikes and counter-battery fire. If ground units are able to close with artillery pieces, the life expectancy of these very expensive and valuable units is greatly reduced. If players wish to, they may use these rules to add more realism to their use of artillery in **BattleTech**.

AEROSPACE FIGHTERS

If players are using both AeroSpace or conventional fighters and off-board artillery, the fighters have the opportunity to strafe and bomb the artillery unit. The battlefield map is in the center of the AeroTech low altitude map. The low altitude map location of each off-board artillery unit (with respect to the battlefield map) is then written down by the controlling player. Once a piece has fired, the owning player informs his opponent from which arc (North, South, East, or West) the piece is firing, but not its exact location.



Enemy fighters may attempt to search for the artillery piece. Instead of firing weapons during the Weapon Attack Phase, a fighter may declare that he is searching the ground in the hex below. If any artillery units are located in that hex, they are spotted and may be attacked by strafing or dive-bombing at any time thereafter, using the **Ground Targets** rules in **AeroTech**.

For strafing attacks, the Base To-Hit Number is 10, modified by the pilot's *Gunnery* Skill. The damage value of the hit is equal to the sum of the damage values of all of the fighter's forward-firing weapons. A fighter may only attack one artillery piece in a turn, even if they are in the same hex. All damage hits the Front of the artillery unit.

For dive-bombing attacks, the Base To-Hit Number is 8. The player must declare how many bombs he is dropping and resolve each attack separately. The attacks are resolved normally. Scattered bombs and misses do no damage. Each fighter may only attack one artillery piece. All damage hits the Front of the artillery unit. Artillery units may not return fire against aircraft when using these rules.

COUNTER-BATTERY

Spotted artillery units may also be attacked by enemy artillery units that are in range. Aircraft that do not make any attacks during the turn that the counter-battery fire arrives may serve as observers in the normal manner. This type of fire is plotted and resolved as detailed in **Artillery**, using all of the rules for **Targeting** and **Damage**.

GROUND UNIT OVERRUNS

As part of the victory conditions for a game with off-board artillery, players should get points for exiting units off of the map side where enemy artillery is located. Exited units have a chance to find and destroy artillery units close to the battlefield before the artillery has a chance to withdraw. To see if the exited units are able to find an artillery unit, use the following chart.

GROUND UNIT OVERRUNS

Distance of Unit from Battlefield (in Boards)	*Success Number*
1 – 2	6+
3 – 4	7+
5 – 6	8+
7 – 8	9+
9 – 10	10+
11 – 12	11+
13 – 14	12+
15 – 16	13+
17 – 18	14+
19 – 20	15+

OVERRUN MODIFIERS

Artillery piece spotted by any unit	–2
Slowest current walking/cruising MP of any unit in group is less than 4	+4
Slowest current walking/cruising MP of any unit in group is greater than 8	–2
For each unit less than 4 in the group	+1/unit
Number of turns artillery has been declared withdrawn from battle before the group exited	+1/turn

Exited units operate in groups of any number, and each group's search is resolved separately. A roll is made for each group on each turn. A successful roll means that all of the artillery units in that mapboard-sized area (or low altitude hex) have been overrun by the group. At that point, the fight for the artillery piece may be resolved. The artillery player sets up his units on a **BattleTech Mapsheet**, and the group then enters from the appropriate map edge. Alternatively, players may agree before the game begins to some automatic resolution of overruns.

The owning player may wait until he has formed a group of a size that he feels is sufficient before he starts searching the rear areas.

BASEMENTS

Most buildings have basements. This could cause quite a problem if a heavy BattleMech walked through a Light Building and crashed through the floor. Depending on the circumstances, the resulting damage could be quite severe. On the other hand, a BattleMech might be able to use a basement to gain the advantages of partial cover. The *Effects of Basements* table can be used to determine the various effects connected with basements.

A vehicle takes normal falling damage when it falls into a basement; the Front/Back column of the vehicle's *Hit Locations* table is used. Any non-flying vehicle that falls through a basement is trapped there for the rest of the game. It may only fire at targets in adjacent hexes, unless the target is higher than the ground floor of the building the trapped unit occupies. If the target is elevated, the range increases one hex for each level of elevation above the building's terrain. For example, a target two hexes away must be at least one level higher than the building's underlying terrain. Similarly, the vehicle cannot be shot at except by units that it can hit. The following table lists other effects of basements.

EFFECTS OF BASEMENTS (2D6)

Roll	Effect
2	Double Basement. The BattleMech has fallen 2 levels with all damage going to its legs (use the Front column of the *BattleMech Kick Locations* table).
3	Basement. The BattleMech has fallen 1 level, with all damage going to its legs (use the Front column of the *BattleMech Kick Locations* table).
4	Basement. The BattleMech has fallen 1 level, with all damage resolved on the Front/Back column of the *BattleMech Hit Locations* table.
5	No Basement.
6	No Basement.
7	No Basement.
8	No Basement.
9	Small Basement. Protects infantry from damage, but traps them if the building is destroyed while they are there. No effect on BattleMechs. Vehicles can fall in and will not be able to get out.
10	Basement. The BattleMech has fallen 1 level with all damage resolved on the Front/Back column of the *BattleMech Hit Locations* table.
11	Basement. The BattleMech has fallen 1 level head first (use the Front/Back column of the *BattleMech Punch Locations* table).
12	Double Basement. The BattleMech has fallen 2 levels head first (use the Front/Back column of the *BattleMech Punch Locations* table).

A unit falls through a floor and into a basement only if the unit's tonnage is greater than the current CF of the building.

BATTLEMECH LIFTING CAPABILITIES

In some situations, a BattleMech may have to lift and carry a piece of equipment. Only BattleMechs with two functioning hand actuators may pick up an object. To pick up an object, a BattleMech must end its Movement Phase in the same hex as the object, and may make no weapons or physical attacks. A BattleMech can pick up objects that weigh up to ten percent of its tonnage. While the BattleMech is carrying the object, it cannot fire any arm or forward-firing torso-mounted weapons, punch, or use a club; it may charge, execute Death From Above, and kick. In addition, the BattleMech suffers the limitations described in **Cargo Carriers**.

CARGO CARRIERS

During construction of any BattleMech or vehicle, a player may devote tonnage to cargo space. This tonnage is considered enclosed and protected by the armor of the unit. Any cargo weighing up to this tonnage may be carried by the unit without any penalty.

A unit may also carry unprotected cargo (in slings, strapped to the top, in lightweight containers, and so on) equal to its own tonnage. A vehicle carrying an external cargo weighing up to a quarter of its own weight loses 3 MPs from its Cruising MPs or half of its Cruising MPs (round down), whichever is less. A load weighing more than a quarter of its own tonnage causes the vehicle to cut its Cruising MPs in half (round down).

Any successful attack on a unit carrying unprotected cargo also strikes the cargo. If the cargo is infantry, the attacking weapon does 4 times its damage value. Roll for location and damage on the carrying unit as normal; the unprotected cargo does not reduce the damage that the carrying unit suffers. Protected cargo is destroyed at a rate equal to one ton per point of damage once the armor protecting it has been destroyed.

Cargos can be dropped by the hauling unit. During his Movement Phase, the player may, by expending 1 MP, declare that he is dumping all of his cargo. If the hauling unit is at ground level, the dropped cargo is just left in the hex in which it was dropped. If the hauling unit is flying above ground level, the cargo suffers normal falling damage and lands in the hex above which it was dropped. If the hauling unit is operating on the low altitude map (from **Aerotech**), then all of the cargo is destroyed.

★ CLEARING WOODS ★

Wood Hexes can be cleared by heavy weapons fire, though an attempt to do so may set them on fire by accident. Woods can be reduced from Heavy to Light, or cleared of trees altogether, though the fallen trees convert the hex to Rough, not Clear, terrain.Though the BattleMechs and vehicles of the 31st century have awesome firepower, they do not have enough to alter a Rough or Clear Hex. No type of Small Laser, Machine Gun, AC/2, AC/5, or SRM 2 can be used to clear woods, nor can infantry weapons be used to clear woods.

When a player wants his BattleMech or vehicle to clear a Woods Hex, he announces its target during the Weapon Attack Phase. The To-Hit Number is modified by range and by –4 for a stationary target. There are no modifiers for firing into or out of wooded terrain, but modify the roll normally if firing *through* wooded hexes. If the attack is a success, the Woods Hex is converted.

TERRAIN CONVERSION

Former Terrain	New Terrain
Heavy Woods	Light Woods
Light Woods	Rough
All others	No change

★ DUMPING AMMUNITION ★

During the course of a game, a player might wish to dump the ammunition that is carried by his BattleMech. This is accomplished by opening the ammo loading doors on the back of the Battlemech and allowing the ammunition to fall out.

During the End Phase of a turn, a player can announce that his BattleMech is going to dump ammunition during the next turn. Any or all of the ammunition carried by a BattleMech may be dumped. Ammunition must be dumped by location; if any ammo in a location is dumped, all of the ammo in that location must be dumped. Dumping is carried out during the course of the following turn.

Ammunition that is being dumped is not available for use after the declaration that it is being discarded. However, the ammunition is not actually gone from the BattleMech until the End Phase of the following turn. For one turn, the ammunition is still onboard and can be affected by heat build-up and critical hits.

A BattleMech that is dumping ammunition cannot run or jump in that turn. Any hit on any rear torso location during the turn's Weapon Attack or Physical Attack Phases does normal damage, but also causes all dumping ammunition that can explode to explode. (Ammunition can be stored throughout a BattleMech, but it is loaded and unloaded through the rear torso.)

Ammunition that is dumped into a hex cannot be exploded or used for any type of attack.

EJECTION

There occasionally comes a time in battle when a MechWarrior must leave his BattleMech in a hurry. This can be accomplished by using the cockpit ejection system. Once this system is fired, the cockpit canopy is blown away by explosive bolts and the pilot is rocketed away from the now disabled BattleMech. The ejecting MechWarrior usually lands in the hex immediately behind the BattleMech (though some BattleMechs eject their pilots forward, instead). BattleMechs are equipped with sensors that detect ammo explosions and will automatically eject a pilot from a BattleMech whose ammo is exploding. With the advent of CASE (described in **Advance Equipment**), it is possible for a BattleMech to survive an ammo explosion. Many MechWarriors disable this feature. Players with CASE should decide before each battle whether or not it is disabled.

During the Movement Phase, a player can have the MechWarrior eject instead of moving; if the auto-eject function is operational, he can also eject at the end of any Attack Phase.

Ejection can be dangerous, and the pilot may suffer damage upon landing. A successful *Piloting* Skill roll is required to prevent damage. The skill roll is modified by the following circumstances.

EJECTION MODIFIERS

Landing Terrain Modifiers	
Clear	–2
Water	–1
Rough	0
Rubble	0
Light Woods	+2
Heavy Woods	+3
Per Level of Building	+1
Situation Modifiers	
BattleMech Prone	+5
Pilot Unconscious	+3
Per Point of Head Internal Structure Damage	+1
Automatic firing	+1

If the roll fails, the pilot takes 1 point of damage and a consciousness roll might be required.

A conscious pilot may move at the rate of 1 MP per turn in the same manner as a standard infantry unit. He may be fired at as if he were an infantry unit, with a +2 To-Hit Modifier added to all normal modifiers. If the pilot ends a Movement Phase with any non-BattleMech unit (friendly or enemy), the pilot is considered to have been picked up in the End Phase; he may choose which unit if there are more than one. Pilots who have been picked up by friendly units that survive the battle, or who have been able to move off the board, have survived and can be used again in future games. Captured pilots may be ransomed if the players wish to do so.

★ FIRE ★

Many battles have been decided not by the skill or abilities of the soldiers involved, but by the spread of fire across the battlefield. Players may use the following rules to simulate the effects of this situation.

A fire counter should be placed on any hex that is set on fire during the game. Once started, a fire will continue to burn for the rest of the game. Buildings take a long time to burn; for each turn that a building is on fire, it loses 2 CF. If a BattleMech moves through a burning building, it suffers normal fire heat build-up as well as all other normal damage.

ACCIDENTAL FIRES

Weapons that are designed to smash a BattleMech with one blow are also capable of extensive collateral damage, the most devastating of which is fire. Players may use the following rules to represent this unintentional damage.

If a unit attempts to clear a Woods Hex, it might start the woods on fire accidentally. To see if this occurs, the player must roll 2D6. If the roll is 5 or less, the woods have been accidentally set alight rather than cleared.

If a weapons attack against a unit in a Woods Hex misses, and the weapon can be used to start fires (see **Intentional Fires**) or convert terrain (see **Clearing Woods**), the player making the attack must roll again to see whether or not his attack has accidentally set a fire or changed the terrain in the target's hex. If the roll is a 2 or 3 (on two dice), the hex is set on fire. If the roll is an 11 or 12, and the hex was Light Woods, it is now Rough; if it was Heavy Woods, it is now Light Woods. A building may not be unintentionally set on fire.

★ INTENTIONAL FIRES ★

Many of the weapons carried by BattleMechs can be used to start fires in Woods Hexes. These fires can spread from hex to hex, and they produce heat in BattleMechs that move through or stand in them. Different weapons have different chances of starting a fire.

Players wishing to set intentional fires may fire weapons at any Woods or Building Hex. (Standard infantry weapons cannot be used to start a fire.) All of these attacks have a stationary target –4 To-Hit Modifier added to the Base To-Hit Number, as well as the attacker's normal movement and other modifiers. If the attack hits, the player rolls two dice and consults the *Starting Fires* chart to determine if the attack set a fire. If a fire starts, place a fire counter in the target hex. Multiple successes at attempting to start a fire in a particular hex do not make the fire any larger.

STARTING FIRES (2D6)

Weapon Type	Success Number
Flamer	4+
Energy Weapon[1]	7+
Missile[2]	9+
Inferno	Automatic
Modifiers	
Woods	0
Light Building	0
Medium Building	+1
Heavy Building	+2
Hardened Building	+3
Other terrain	Fire cannot start
Spreading Fires	
Hex is downwind	9+
Hex is 60° from downwind	11+
Crossing hex that isn't burning	+3

[1] Small Laser or ER Small Laser may not be used.
[2] Gauss Rifle, SRM 2 and Standard SRM Infantry may not be used.

For example, a Marauder *fires two PPCs at a Medium Building to attempt to set it on fire. Both attacks hit. Energy weapons normally start fires on a roll of 7 or better. But this number is modified by +1 since the target is a Medium Building, making the Target Number 8. The player rolls a 9 and a 10. Only the first result counts and the building is on fire.*

SMOKE

A fire spreads smoke to the adjacent hex downwind of it and to the two adjacent hexes 60° from downwind (i.e., the 3 adjacent hexes of the fire's "forward arc"). It does *not* create smoke in its own hex (though a fire upwind from it may do so). The To-Hit Number of an attack into or out of a smoked hex is modified by +2. Smoke has 1 level of elevation and blocks line-of-sight through it, but not into or out of its hex.

★ SPREADING FIRES ★

If fires are started on the battlefield, they can spread from hex to hex in the direction of the wind. Fires can spread into woods and buildings, but they cannot spread into Clear, Rough, or Water Hexes.

Determining Wind Direction

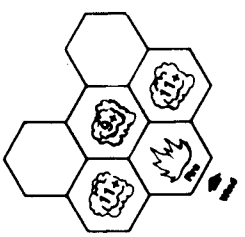
At the beginning of the game, declare one side of a hex to be Direction 1, numbering the remaining hex sides 2 through 6 clockwise. Roll one die. The wind will blow in the direction shown on the die for the entire game.

★ Determining Spread ★

During the End Phase of every turn, check to see if any of the fires currently on the map spread to new hexes. Roll 2D6 for the adjacent hex directly downwind of a fire hex. If the roll is equal to, or greater than, 9, and if that hex can burn, the fire spreads into the hex. Also roll two dice for each of the two hexes adjacent to the burning hex and 60° from downwind. If either roll is equal to, or greater than, 11, and if the hex rolled for can burn, the fire will spread into that hex as well.

A burnable hex directly downwind from a fire but with a non-burning hex between it and the fire also has a small chance of catching on fire. If the intervening hex is not (yet) on fire, fire can spread to a burnable hex directly downwind from a fire on a roll of 12.

If several burning hexes have a chance to set a particular hex on fire, roll for each chance.



Fire spreads to these hexes on rolls shown

EFFECTS OF FIRE

During the Heat Phase, a BattleMech that is in a burning hex takes an additional 5 Heat Points. A BattleMech also takes 2 Heat Points for each burning hex that it moved out of during its movement. A BattleMech whose hex is ignited during the combat phases of the turn will not be affected by heat build-up until the Heat Phase of the following turn, when it accumulates 2 Heat Points if it moved out of the hex and 5 Heat Points if it stayed in the hex.

Any other unit that ends its Movement Phase on the ground in a burning hex or moves through a burning hex on the ground is destroyed, unless the controlling player rolls an 8 or better on 2D6. (Roll each time either condition is met.)

★ FLAK ★

On-board artillery and LB-X class autocannons can be used to make effective attacks against VTOLs and LAMs (LandAir Mechs) flying in Air-Mech mode. These rules cannot be used against strafing or dive-bombing AeroSpace or conventional aircraft.

ARTILLERY FLAK

An onboard artillery weapon (Arrow V with non-homing missiles, Long Tom, Sniper, or Thumper) can be used to directly fire at an airborne VTOL or LAM. The player must declare that he is firing at the VTOL or LAM, and must have a valid line-of-sight to the unit. The attack is resolved as a normal artillery direct fire attack, as per the rules in **On-Board Artillery Fire**. Note that the target movement modifier is not applied. The Base To-Hit Number is 9 and is only modified by the firing unit's movement and damage it has taken. Damage is applied as normal to flying units (including flying BattleMechs) in the target hex and adjacent hexes.

Non-flying units in the target and adjacent hexes are unaffected by the attacks. VTOLs and LAMs that are flying at a different altitude from the target are also unaffected. Missed rounds scatter as normal, but explode at the elevation of the target unit.

LB-X CLUSTER FLAK

The LB-X class of autocannons, when firing cluster ammunition, are also very effective against VTOLs and LAMs in flight. Any attacks with cluster ammunition against a flying VTOL or LAM have a –3 modifier added to the Base To-Hit Number. All other aspects of the attack are handled above.

FLAMERS

Under normal circumstances, a flamer cannot cause heat damage to a target. However, as an optional rule, players may choose (each time they fire) to have a flamer hit add 2 to a target BattleMech's Heat Scale for that turn, rather than doing 2 points of damage.

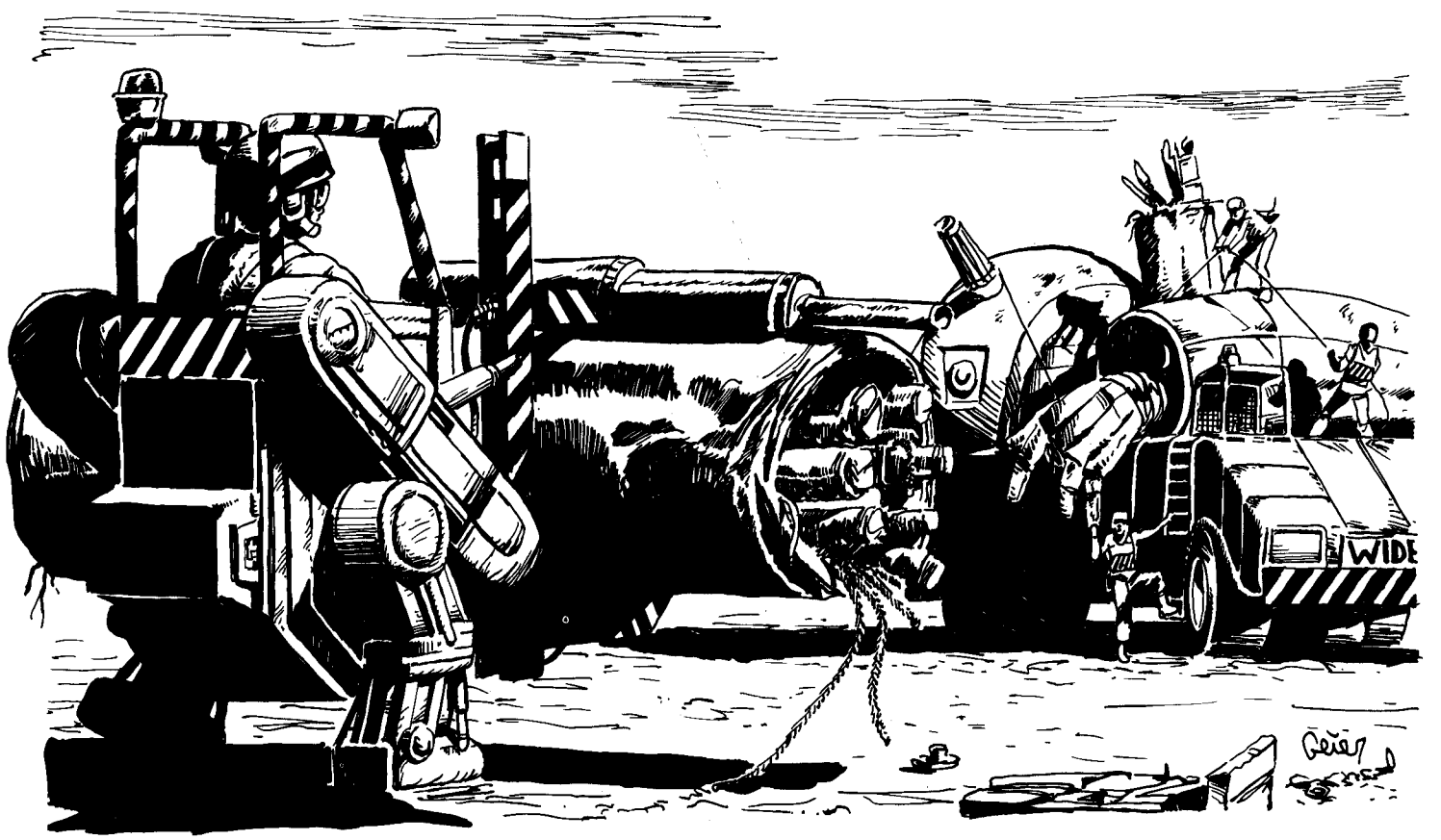
The flamer given in **BattleTech** is an energy weapon that taps into the superheated plasma of the fusion reactor. Vehicle-mounted flamers, resembling conventional flamethrowers, are available, though these versions are very inefficient compared to traditional fusion-powered flamers. Their stats are listed in the two *Weapon and Equipment* charts.

★ FLIPPING ARMS ★

BattleMechs may be constructed without hand and lower arm actuators. These BattleMechs have the ability to flip their armed-mounted weapons over so that they can fire directly into their rear arc.

During the Reaction Phase, a BattleMech that does not have these actuators mounted in *either* arm may elect to flip *both* arms over rather than perform a torso twist. (Both arms must flip if this maneuver is performed.) If the arms are flipped, the BattleMech may then fire any arm-mounted weapon into the rear firing arc.

Note that BattleMechs that are constructed without lower arm and hand actuators suffer no weapons fire penalties for lacking these components. However, a +3 modifier is added to the Base To-Hit Number for any punch attacks (+1 for the missing hand and +2 for the missing arm actuator).



★ FOUR-LEGGED BATTLEMECHS ★

Normally, the Goliaths and Scorpions used in a **BattleTech** game use exactly the same rules as normal bipedal BattleMechs. Players wishing to add variety to their games may use the following optional rules whenever any quadrupedal BattleMech is used. Unless otherwise noted below, all of the rules for two legged BattleMechs hold for four-legged BattleMechs (or *Quads*).

As with all optional rules, the players should go through all of these rules prior to the start of the game and agree whether or not they will use them.

RECORD SHEET CHANGES

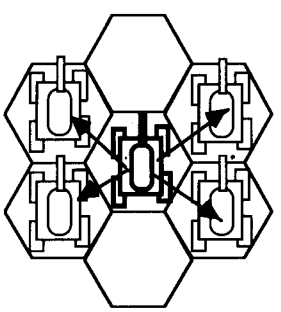
The record sheet for a four-legged BattleMech is modified from the standard one; a blank Quad Record Sheet is with the other blank forms at the end of this book. The Right and Left Arm locations are replaced by an additional set of legs. Note that there are 12 fewer critical hit slots on the Quad *Critical Hit Table*.

MOVEMENT RULE CHANGES

Lateral Shift

Quads move in the same manner as normal two-legged BattleMechs. However, they may also perform a special movement action that allows them to move laterally, or sideways. Using a Lateral Shift, a Quad can move into any adjacent hex that is not directly to its front or rear. The Quad retains its facing, as shown in the example below.

It costs an additional movement point to move to one of these side hexes in this manner. (Note that a two-legged BattleMech can perform the same action by changing facing twice for a cost of one more MP).



Possible Lateral Shifts
(1 additional MP to enter Hex)

Piloting Skill Rolls

Because of the inherent stability of four-legged BattleMechs, they get a bonus to any *Piloting* Skill roll made to avoid a fall. As long as none of the Quad's legs are destroyed, it has a –2 modifier added to all *Piloting* Skill rolls made to avoid falls. For example, a *Scorpion* with a MechWarrior who has a *Piloting* Skill of 5, would need a 3 (5 - 2) or better to remain standing when entering a depth 2 Water hex. After a successful charge, this Quad would need to roll a 5 (5 + 2 - 2) or better to remain standing.

Once one of the four legs has been destroyed, either by being blown off or because it has been reduced to zero internal structure points, the Quad no long receives this bonus.

COMBAT CHANGES

The following changes should be made in the combat rules when using four-legged BattleMechs.

Hit Locations Table

All damage that hits the Right or Left Arm is applied to the Right or Left Forward Leg of the four-legged BattleMech. All damage that is to be applied to the Right or Left Leg is applied to the Right or Left Rear Leg.

Leg Critical Hits

All critical hit damage is cumulative. Thus, three destroyed hips cut the Quad's Walking MPs to an eighth of its normal rate, and give it a +6 *Piloting* Skill modifier (but the –2 modifier from above is still in effect).

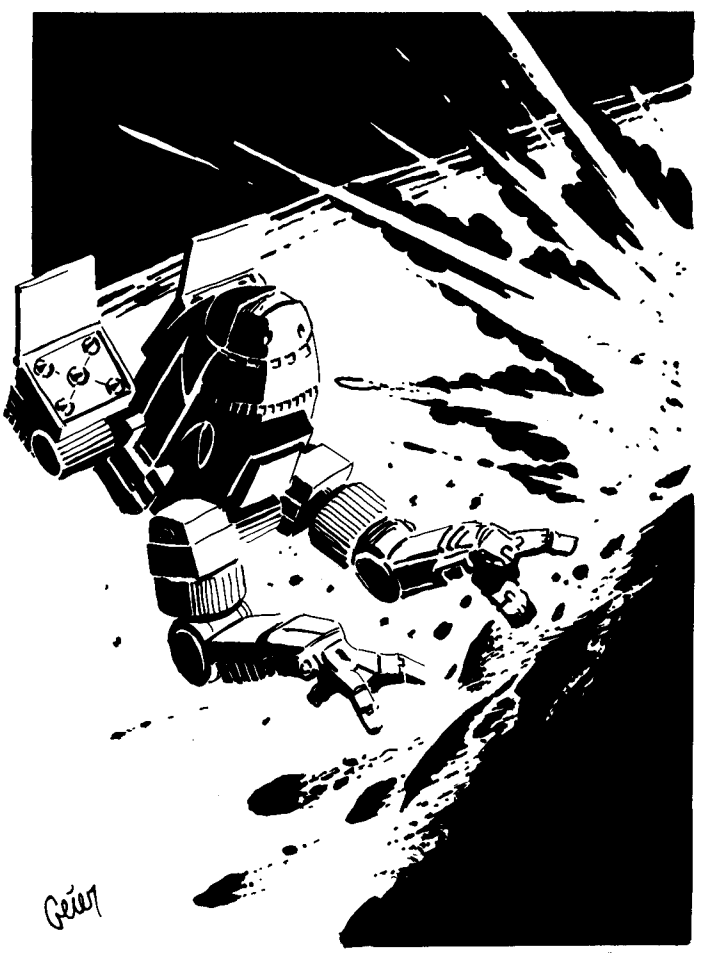
A single blown-off leg results in an immediate fall for a four-legged BattleMech, and loss of the –2 *Piloting* Skill bonus. The Quad is now subject to all of the **Leg Destruction** modifications (in **Critical Hit Effects on BattleMechs**).

Physical Attacks

Quads cannot use Punching, Pushing, or Club physical attacks because of their lack of arms. They may Charge a target and, in the case of jump-capable quads, perform Death From Above attacks in the normal manner.

HEAT BUILD-UP

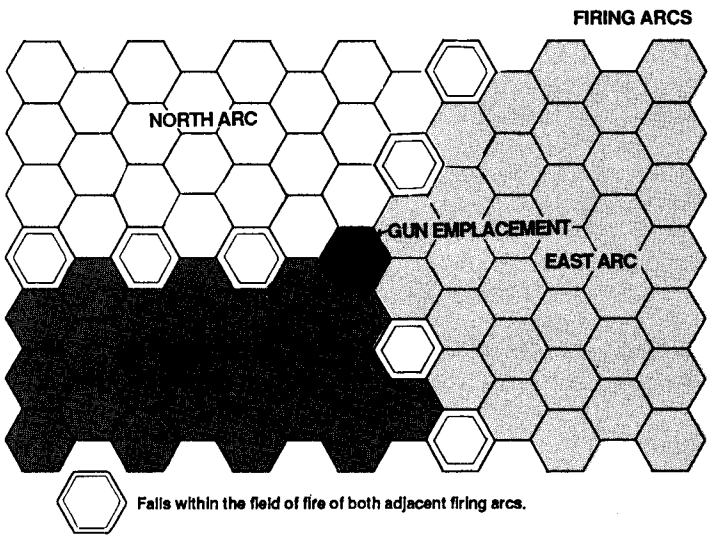
All four legs of a quadrupedal BattleMech can be submerged in Level 1 water. In this situation, all heat sinks in the legs operate at double efficiency up to the maximum allowed on the *Heat Points* chart in **Heat Build-Up**.



GUN EMPLACEMENTS

Any type of gun can be housed in a gun emplacement. A gun emplacement is treated as a building with a CF. The building can be a standard type or it can be specially designed according to **Installation Construction**. Within the limits of these rules, any number of weapon systems may be fixed in an emplacement. These weapons may be located in a turret that gives them a 360° traverse and the same firing arcs that vehicles have. Turrets have an Armor Value that is separate from the CF of the emplacement itself.

Alternately, a weapon may be mounted with a fixed firing arc. There are three arcs: North, East and West, as illustrated below.



The North arc is always oriented toward the north of the Mapsheet.

In combat, a gun emplacement is treated as a building of the appropriate CF. However, when hit, the gun emplacement uses the following damage table to identify the location of the damage.

DAMAGE TO GUN EMPLACEMENTS (2D6)

Roll	Effect
2	Critical Hit: All Weapons Destroyed
3	Turret Hit and Locked (or Normal Damage)
4	Turret Hit (or Normal Damage)
5	Turret Hit (or Normal Damage)
6	Building Takes Normal Damage
7	Building Takes Normal Damage
8	Building Takes Normal Damage
9	Turret Hit (or Normal Damage)
10	Turret Hit (or Normal Damage)
11	Turret Hit and Locked (or Normal Damage)
12	Crew Killed, Weapons Left Intact

When firing at a gun emplacement, all other rules for firing at buildings are in effect, including To-Hit Modifiers and fire damage.

If a turret becomes locked, but still has functioning weapons, it can fire those wepons into its current arc. If the turret takes more damage than it has Armor Value, the turret and its weapons are destroyed, but the remaining weapons in the emplacement can continue to function until the building itself is rubbled. If the building has no turret, rolls 3 – 5 and 9 – 11 result in damage to the building itself.

HIDDEN UNITS

At the start of a game, each side may secretly hide a limited number of units on the map. Players should write down the number of each hex that a unit is hidding in, as well as designate its facing.

These units will remain hidden until they attack, move, or have an enemy unit move into their hex or end its movement adjacent to it.

★ POINT BLANK SHOTS FROM HIDDEN UNITS ★

If an enemy unit moves adjacent to, or into, a hex with a hidden unit, the hidden unit may fire a point blank shot. This can only be done if the unit was placed on the map as part of the initial game set-up and has not moved or fired since. Any or all of the unit's forward-firing weapons can fire, and the range is 1. The Base To-Hit Number is not modified for movement or terrain, and it should be 4 for all shots. No physical attacks are allowed. Any damage takes effect immediately during the Movement Phase. The results of this damage might affect the actions of that unit for the rest of the phase. A unit making a point blank shot may not move, fire again, or perform any other action during that turn.

★ HOSTILE ENVIRONMENTS ★

Many times battles are fought in extreme temperatures, low gravity, or even vacuum. Players may use the following rules to simulate combat in those types of environments.

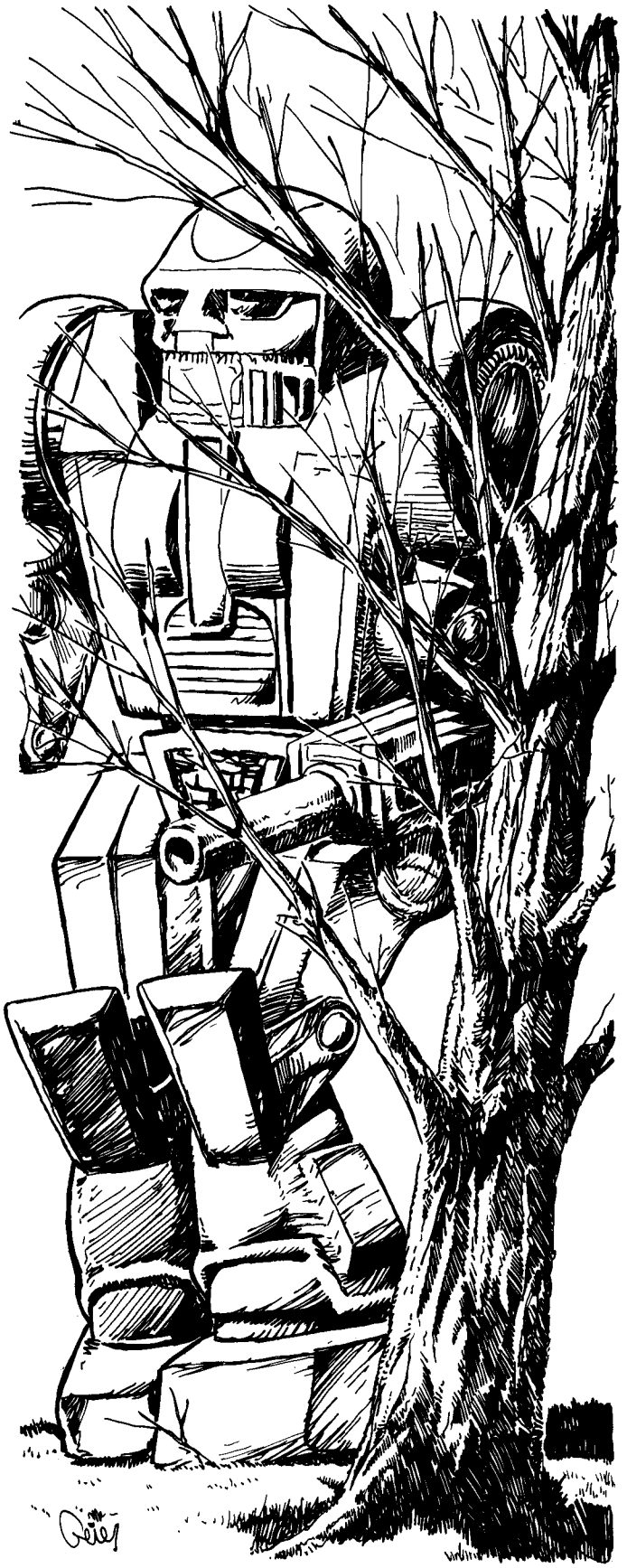
EXTREME TEMPERATURES

Combat in temperatures between –30° and 50° C (–22° and 122° F) has no impact on a game of **BattleTech**. However, fighting in significantly higher or lower temperatures affects the heat dissipation ability of BattleMechs and lowers the combat effectiveness of other units.

For BattleMechs, for each 10° C (or fraction thereof) higher than 50, add 1 Heat Point to its overall heat build-up each turn. For every 10° C (or fraction thereof) less than –30, subtract 1 Heat Point in the BattleMech's overall heat build-up each turn.

For vehicles, for each 10° C (or fraction thereof) higher than 50°, reduce their Cruising speeds by 1 Movement Point. For every 10° C (or fraction thereof) less than –30°, reduce their Cruising speeds by 1 Movement Point. Flank speeds are recalculated based on the new Cruising speeds. Infantry in BattleArmor lose Movement Points in the same way.

Unarmored infantry platoons cannot be deployed outside of a vehicle or building in temperatures that exceed 50° C or are less than –30° C.



Ice

Extreme cold (0° C or less) can cause a body of water to freeze over, allowing units to cross it. There is a danger that the ice will break and the unit fall through. In addition, normal terrain can become coated with ice, making movement treacherous.

Prior to the start of the game, players should indicate which hexes are ice-coated and which are not.

BattleMechs and ground vehicles that turn and then move on an ice-coated hex may suffer a skid, as per **Skidding** (in **Movement**), even if they are just Walking or Cruising. Treat Woods and Rough Hexes as buildings to stop the skid. If the unit starts a skid in a Woods or Rough Hex, the unit simply suffers a 1-level fall. Vehicles take such damage on their Front side.

Any BattleMech, ground vehicle, or airborne vehicle that is landing (or crashing) and enters an ice-covered Water Hex may break through the ice and fall into the water below. This break-through rule should only be used if the players decide that the water is not frozen solid. Also note that the tonnage of the unit is not a factor in causing the ice to break. Breaking through ice is a factor of ground pressure, not overall weight. Larger BattleMechs and vehicles have larger "footprints," and thus their pressure on the ice per square meter is as low as that of lighter units whose footprints are correspondingly smaller.

Any time one of the above units enters an ice-covered Water Hex (that isn't frozen solid), roll one die. On a 6, the ice breaks and the unit falls into the water. BattleMechs take normal falling damage, but remember that falling in water does half damage. Ground or air vehicles are destroyed (but hovercraft are unaffected). The hex is unfrozen water for the remainder of the game.

A BattleMech can climb up out of a Depth 1 or Depth 2 Water Hex and move back onto the ice. A BattleMech in Depth 3+ water can only travel under the ice, following the depth of the water, until it reaches a Depth 2 Hex, at which point it can break through the ice (if using the **Underwater Operations** optional rules), or until it reaches a Depth 1 Hex, at which time it automatically breaks through the ice, converting the hex to open water.

BattleMechs that jump onto an ice-covered Water Hex break through on a 4+ on a 1D6 roll.

An ice-covered Water Hex can be converted into a normal Water Hex by weapons fire, using the **Clearing Woods** optional rules. Units in such a converted hex (except hovercraft) fall into the water. Infantry units and ground vehicles which fall into the water are destroyed.

HIGH/LOW GRAVITY

Combat on worlds with gravity that is significantly greater or less than normal Earth gravity (1 G) affects a unit's normal movement rates. Also, while low gravity can result in increased movement rates, there is a danger of damaging a BattleMech or vehicle because their mass and momentum are not reduced. A BattleMech traveling 200 kph on a .5 G world will probably snap off its legs.

All units' movement rates are affected by gravity in the same way. To determine a unit's new movement rates, divide its Walking (or Cruising) and Jumping rates by the G-rating of the world and round to the nearest whole number (round down at .5). Recalculate its new Running (or Flank speed) rate based on its revised Walking (or Cruising) rate. Thus, a unit with a normal

Walking rate of 4, would have a new Walking rate of 5 while on a .75 G world (4/.75 = 5.3, which rounds to 5). On a 1.25 G world, that same unit would have a Walking rate of 3 (4/1.25 = 3.2, which rounds to 3). Units that have a movement rate reduced to zero are incapable of moving in that way.

BattleMech legs and vehicle suspensions are designed to operate on worlds with close to 1 G of gravity. Exceeding the normal (1 G) Running (or Flank speed) rate of a unit can result in damage to its internal structure. If a unit spends more MPs than its normal Running (or Flank speed) rate during a turn, the player makes a *Piloting* Skill roll prior to the turn's Weapon Attack Phase. This roll is modified normally. If the *Piloting* Skill roll fails, a BattleMech takes 1 point of internal structure damage to each of its legs for every point of movement that the unit exceeded its normal Running rate. (However, the BattleMech does *not* fall down if this roll fails.) Thus, a BattleMech with a normal Running rate of 8 that spends 10 MPs during a turn and then fails a *Piloting* Skill roll would take 2 points of internal damage to each of its legs. A vehicle takes points of damage to its Front side internal structure for each movement point spent that exceeds its normal Flank speed rate.

Jumping is handled in the same manner. A *Piloting* Skill roll is made and, if it fails, the BattleMech takes 1 point of internal structure damage to each leg for each movement point of Jumping spent that exceeds its normal Jumping rate.

Remember that any internal structure damage requires a roll on the *Critical Hit Effects* table for that location (a vehicle's Front or each of a BattleMech's legs). All results are applied prior to the Weapon Attack Phase of the turn.

If a movement rate is exceeded because of movement during a Physical Attack Phase, make the check (and apply the results, if any) at the end of that phase.

Damage from falls should be calculated normally, but then multiplied by the G-rating of the world.

SWAMP

Depth 0 water normally represents swampy ground. For ease of play, its effect on movement in the basic rules has been simplified. Players can use the following rules to more realistically represent swampy ground.

Before play, convert all Depth 0 Water Hexes to some other type of terrain. Instead, any Clear, Rough, or Woods Hex can also be designated as swampy. Units are still restricted by the underlying terrain type, e.g. wheeled vehicles cannot enter swampy Rough or Woods Hexes. Conversion to swampy terrain does not modify a hex's effect on LOS. However, swampy terrain impedes movement (by increasing the MP cost for the terrain), and might get units stuck.

Increase the movement cost to enter any Swampy Hex by 1. Thus, a Swampy Clear Hex costs 2 MP to enter (rather than 1 MP) and a Swampy Light Woods Hex costs 3 MP to enter (rather than 2). These cost increases apply to all units (including infantry) except hovercraft. Hovercraft are unaffected by Swampy Hexes.

When a BattleMech or ground vehicle enters a Swampy Hex, a *Piloting* Skill roll is made. If the roll fails, the unit is stuck in the hex and may not continue moving for the rest of the turn (a BattleMech which fails this roll does *not* fall). The unit may torso twist or rotate its turret normally, but may not change its facing. Any type of infantry gets stuck on a two die roll of 4 or less. Any weapon or physical attacks against a stuck unit are made with a –2 modifier to the To-Hit Number.

A BattleMech that jumps into a Swampy Hex automatically becomes stuck. Jumping infantry units do not automatically become stuck.

At the start of the next turn's Movement Phase, a stuck unit makes a *Piloting* Skill roll. If it is successful, the unit becomes unstuck and may move normally; otherwise the unit stays stuck. (As before, a BattleMech does *not* fall if it fails this roll.)

VACUUM

Combat on airless worlds is rare, but all BattleMechs are capable of airless operation. Like underwater combat, combat on an airless world is very dangerous, as exposing the inner workings of a BattleMech to vacuum will result in actuators freezing up and weapon components failing. Standard combat vehicles cannot function in a vacuum.

Hull Integrity

Whenever a hit is made on a BattleMech or vehicle that is in vacuum, a two die roll is made to see if the unit's hull has been breached. If 10+ is rolled, the integrity of that location has been lost and it is exposed to vacuum. If all of a location's armor is destroyed, that location is automatically breached.

For game purposes, treat all of a BattleMech's components in a breached location as nonfunctional. None of that location's actuators, weapons, or other equipment works; and the engine functions as if it took as many critical hits as there were engine critical slots in that location.

Equipment and components in the breached location can take critical hits as normal, even though the component is temporarily nonfunctional. Normal combat damage to that location is not transferred until that location's internal structure is destroyed.

Only fusion-powered ground vehicles can operate in a vacuum, but ten percent of a ground vehicle's tonnage must be devoted to sealing the vehicle and providing life support for the crew if it is to operate in a vacuum. Hovercraft, naval vessels, and VTOLs may never operate in a vacuum. If any location on a vehicle is breached in a vacuum, it is destroyed.

Infantry

Infantry units equipped with spacesuits, or modified BattleArmor units, can function normally in vacuum. However, double any damage taken by an infantry unit while in vacuum. This represents the loss of personnel due to simple breaches in their suits, damage that would normally not result in any casualties.

IMPROVED POSITIONS

Given enough time, a defending unit is capable of improving the natural defensive value of the surrounding terrain. If both sides agree, units that start on the mapsheet may begin the game in *improved positions*. These field fortifications act as a Light Building with a CF of 15. However, these positions do not affect line-of-sight or movement in any manner, and a unit cannot climb on top of them to increase its level. Normal terrain modifiers are applied to any unit that is in an improved position. Units that start in improved positions may use the **Hidden Units** optional rules.

★ INFERNOS ★

Infernos are special-purpose missiles designed to affect the heat level of enemy BattleMechs. Instead of impacting on a target, an Inferno round explodes in midair, dispersing a highly flammable fluid over the target area. Infernos may be used against BattleMechs and vehicles, but they may not be used against any sort of infantry. Infernos may be used to start fires in hexes.

Any vehicle with an SRM 2 or a Streak SRM 2, or SRM-equipped infantry can carry an Inferno 2-pack instead. An Inferno 2-pack is fired with the same hit probabilities and ranges as the short range missile system that it replaces. Inferno missiles must make normal To-Hit rolls. If the roll misses, the target hex is set on fire (see below), but it has no other effect.

The heat level of a BattleMech hit by an Inferno is increased by 6 points during the Heat Phase. Due to the adhesion of the fluid to the BattleMech's outer armor, this effect lasts for three turns; the total heat build-up is 18 points.

Vehicles hit by an Inferno attack must make a 2D6 roll during the Heat Phase of each of the 3 turns that the fluid is burning. On a result of 8 or better, the vehicle is still operational; with any lower roll the vehicle is destroyed.

The hex that the target was in is on fire regardless of whether the target was hit, and regardless of the terrain type. Rough, Water, and Clear Hexes are on fire for the rest of that turn and 3 more turns. Woods Hexes and Building Hexes are on fire for the duration of the game.

A unit in a Building Hex that is hit by one or more Infernos takes full damage from the missiles.

Additional missiles hitting the same BattleMech or target hex only prolong the effect of the first hit. Thus, if two Infernos hit a BattleMech, it would suffer a heat build-up of +6 for 6 turns rather than 3. An SRM infantry platoon hits its target with a number of Inferno missiles equal to its normal damage divided by 2 (fractions rounded down).

BattleMechs that carry Infernos are subject to an additional set of Heat Scale avoid rolls to keep the Inferno ammo from exploding. These rolls are at:

10 (avoid on a 4+)
14 (avoid on a 6+)
19 (avoid on an 8+)
23 (avoid on a 10+)
28 (avoid on a 12)

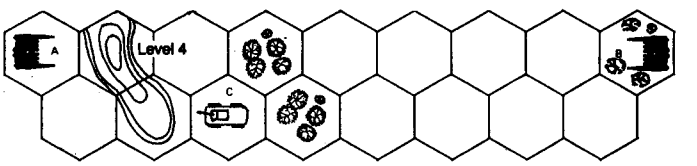
The last three rolls are in *addition* to the normal avoid rolls required at those levels. If the Infernos do explode, they add 30 points of heat to the Mech, along with the damage normally received from an SRM 2 explosion.

BattleMechs that have been hit by an Inferno missile may stop the heat build-up by moving into water of Depth 2+ (or by going prone in Depth 1 water). If a BattleMech does so, the flaming gell is no longer on the BattleMech and no further heat is built up. However, the surface of the Water Hex is on fire and will remain on fire until the gel burns out normally.

★ LRM INDIRECT FIRE ★

Units armed with LRM type weapons may fire indirectly. Indirect fire allows a unit to fire its weapon at a target without a direct line-of-sight to the target. However, like off-board artillery fire, some friendly unit must have a valid line-of-sight to the target. Unlike off-board artillery fire, there is no time in flight; the attack is resolved on the turn that it was launched.

The Base To-Hit Number is based on the range between the target and the firing unit. There is an automatic +1 modifier for using indirect fire. All normal *Gunnery* Skill and movement modifiers for the attacker and target apply. However, terrain modifiers are based on the line-of-sight from the *spotter*. Also, the spotter's movement for the turn modifies the To-Hit Number (using the attacker movement modifiers). A unit can spot for itself. The spotting unit cannot make any attacks in the turn that it spots for another unit.



For example, an Archer *has walked into Hex A, behind a Level 4 Hill. On the other side of the hill in the Light Woods of Hex B is a Clan* Dragonfly. *Normally, the* Archer *could not attack this target since it does not have a valid line-of-sight. However, a friendly* Savannah Master, *which cruised this turn, is in Hex C with a valid line-of-sight though a hex of Light Woods to the* Dragonfly. *The* Archer *may fire its LRMs indirectly at the* Dragonfly, *using the* Savannah Master *as a spotter. The modified To-Hit Number is 6 (medium range) +1 (indirect fire) +1(*Archer *movement) +1 (*Savannah Master *movement) +1 (through Light Woods)+1 (into Light Woods), for a total of 11.*

MINEFIELDS

There are three forms of minefields in **BattleTech**: conventional fields, command-detonated fields, and Vibrabomb fields.

★ CONVENTIONAL MINEFIELDS ★

At the start of play, the defending player receives a set number of unspecified hexes that he can designate as conventional minefields. Whenever any ground unit (BattleMech, ground vehicle or infantry, friend or foe) enters a designated hex, it is automatically attacked. On a 2D6 roll of 7 or more, the unit has hit a mine. The attack is resolved, and damage takes effect before the unit continues its movement. (The defending player may be allowed to make this roll secretly, so that if it doesn't explode, the location of the minefield is not revealed.)

Conventional minefields do 6 points of damage to the Front of the unit entering the hex. The *BattleMech Kick Locations* table should be used for BattleMechs. Unlike the other two forms of minefields, a conventional field remains active and can make any number of attacks throughout the game, unless cleared (see **Clearing Minefields**, below).

COMMAND-DETONATED HEXES

At the start of play, the defending player receives a set number of unspecified hexes that he can mine with command-detonated explosives. At any time during the turn sequence, the defending player may detonate any or all of these mines. However, a mined hex may only be detonated if a defending unit has a line-of-sight to it.

Detonating the explosives does 10 points of damage to each unit occupying the hex and 4 points of damage to each unit in each adjacent hex. A building normally absorbs damage before the remainder of the damage is applied to units in the building (whether the building is in the target hex or in an adjacent hex).

Damage is taken on the Front side of the unit, and the *BattleMech Kick Locations* table is used for BattleMechs. This attacked is resolved and the damage takes effect before the turn sequence continues.

A command-detonated hex may only be exploded one time during a game.

VIBRABOMBS

At the start of play, the defending player receives a set number of unspecified hexes that he can plant with vibrabombs. A vibrabomb behaves like a conventional mine, with the following exceptions. Vibrabombs are set off only by the unique and considerable vibrations created by an approaching BattleMech. Any BattleMech can set off a vibrabomb, and vibrabombs go off automatically. Vehicles and infantry cannot trigger vibrabombs.

Vibrabombs are variable in sensitivity, and must be set for a specific mass when placed. Masses ten or more tons lighter than the setting will have no effect on the minefield. Masses more than ten tons heavier than the setting will set off the mine at a greater distance—1 hex for each 10 full tons heavier than the bomb's setting.

For example, if the bomb is set for 40 tons, and a *Marauder* (75 tons) enters a hex 3 hexes away, the bomb explodes. A *Javelin* (30 tons) walking directly through the hex containing the bomb would not set it off.

If a unit is in the same hex as an exploding vibrabomb, the unit's Front suffers 10 points of damage. Unit's in adjacent hexes and units in the air over the target hex take no damage. Use the *BattleMech Kick Locations* table if an affected unit is a BattleMech.

A vibrabomb will only explode once during a game.

★ CLEARING MINEFIELDS ★

Clearing minefields is a dangerous job, so it is given to the infantry. If an enemy infantry unit ends its turn in a mined hex, the opposing player must be informed, even if the field has not been detonated.

Infantry that spends one Movement Phase without moving in a mined hex may elect to clear the field instead of attacking during the attack phases. If the infantry unit rolls a 10 or better in the Weapon Attack Phase, they have successfully cleared the field. A roll of 5 or less means that the minefield has exploded and the infantry takes normal damage. Conventional fields are still active after such an accidental detonation, while the other fields are cleared. If multiple infantry units are attempting to clear the same hex, all must make this roll. If any unit rolls a 5 or less, they all take damage.

Alternatively, the field may be cleared by off-board artillery fire or a salvo from an LRM 20. The player must designate the fire mission as one designed to clear the minefield. Once the fire mission has hit the hex, the player should roll. On a 5 or better, the minefield has been cleared. Artillery fire also does normal damage to units in the hex, though an LRM 20 salvo does not. Mines cleared in this way do no damage, and clearing artillery fire does not affect adjacent hexes in any way.

NIGHT COMBAT

BattleMechs and other combat units are adversely affected by the lack of visible light. Their ability to target and thus hit an opposing unit is affected, rather than their ability to see that unit.

If combat takes place at night, add an automatic +2 to all To-Hit Numbers.

BattleMechs equipped with searchlights (*Warhammers, Thors, Guillotines, Riflemen,* and so on), may turn their searchlights on (or off) during the Movement Phase. A searchlight-equipped unit illuminates any unit that is in its LOS and in its forward firing arc during any attack phase, while also illuminating itself. Attacks against illuminated units disregard the +2 Modifier.

Each time a searchlight-equipped BattleMech is hit in any torso location (Front or Back), or when a searchlight-equipped vehicle is hit in the Front or Side, a separate roll for searchlight destruction is made. On a 7+, the searchlight is destroyed.

PRIZES, REPAIRS, AND SCAVENGING

To keep from throwing good BattleMechs after bad, it is common for one side to withdraw from the battlefield when it appears there is no longer a reasonable chance of winning. This leaves the remaining side in control of any disabled and destroyed BattleMechs, enemy and friendly, on the field. Some of these units are now little more than scrap, with few, if any, parts remaining for salvage. Others, however, may have suffered repairable damage. Some may even be virtually intact, having been disabled through overheating or the incapacitation of their MechWarrior. These prize BattleMechs can be the most valuable booty a BattleMech unit collects. Characters who learn to take maximum advantage of these opportunities greatly improve their chances for continued survival, as well as their personal and family status.

After each battle in an extended campaign, MechWarriors will normally have an opportunity to repair part of the damage their BattleMechs have sustained. The extent of the repairs possible immediately following a battle depends on a variety of factors. These include the availability of repair materials in the Lance's or Company's supply stores, the relative difficulty of the repair to be attempted, and the time that the unit is willing to devote to the repair.

★ MATERIAL AVAILABILITY ★

Units acquire initial stockpiles of BattleMech replacement parts when creating their BattleMech units. Over the course of time, units will deplete these stores in making repairs, and may supplement them with booty from raids, parts gathered by scavenging defeated enemy BattleMechs, supplies received as wage or payment, or through the rare cash purchase from House stockpiles. A BattleMech unit can only make repairs for which it has the necessary spare parts.

The side that wins a battle has captured any enemy BattleMechs or other equipment that was destroyed or abandoned. These BattleMechs may be repaired or broken up into scrap and used to repair other damaged BattleMechs. A location that has lost all of its internal structure is destroyed, along with all of the equipment mounted there—none of it can be used for spare parts.

★ REPAIR DIFFICULTY ★

Repair rolls may only be attempted once per time required period on each damage area. A repair roll that fails leaves the BattleMech in the same condition it was prior to the attempt. Thus, if a BattleMech with a critical hit to one engine fails its repair roll, the BattleMech could still operate, but would continue to generate 5 points of heat per turn, and would only have 2 points of shielding left. Partially repaired heat sinks operate at half efficiency, as noted on the table. This is cumulative (rounded down), so that 3 partially repaired single heat sinks reduce heat accumulation by 1 point a turn. Partial repairs cannot be fully repaired later.

To determine the total amount of time required to repair a BattleMech, simply add up the time requirements for each repair needed. (Note that, for example, if there are three BattleMech locations that need armor restoration, and two engine critical hits, the full time listed will be required for each of these five repairs—690 minutes, total.) Players and gamemasters should also remember that a repair takes the same amount of time whether or not it succeeds.

The Clans and the Inner Sphere use sufficiently different technologies that attempt to use any parts constructed by the other for repairs is very difficult. Add +4 to the target number for all repair attempts when using such incompatible repair parts.

UNDERWATER OPERATIONS

UNDERWATER MOVEMENT

Only BattleMechs and submarines can move underwater. BattleMechs that are in Depth 2 water and submarines that are at Depth 1 or deeper water are underwater.

Submarines pay 1 MP for each hex that they enter and 1 MP for each level of depth that they change. An underwater BattleMech pays 4 MPs and must make a *Piloting* Skill roll using the appropriate modifiers for each Depth 2 or greater Water Hex that it enters. In addition, a BattleMech must pay the normal MPs for moving from one level (depth) to another (see **Movement Costs**).

★ LINE-OF-SIGHT ★

Line-of-sight is calculated normally. Remember to treat depth numbers as negatives. Thus, a depth of 1 is at level –1 and is 2 levels *below* a Level 1 hill. In underwater combat, if line-of-sight cannot be established between units, those units may not attack one another. The *Line-of-Sight* chart lists which units can fire at each other, and with what modifications.

REPAIR DIFFICULTY (2D6)

Damage	Completely Repaired	Partially Repaired	Effect of Partial Repair	Time Required (Minutes)
Body Segment Destroyed	11+	-	-	240
Body Segment Blown Off	9+	-	-	180
Internal Structure Damage	6+	-	-	90
Critical Hit/Life Support	7+	-	-	120
Critical Hit/Sensors	8+	5 – 7	+1 To-Hit	150
Critical Hit/Engine	7+	4 – 6	+3 heat/turn	300
Critical Hit/Gyros	9+	6 – 8	+2 to Piloting	240
Damaged Weapons or Equipment				
1 Critical Location hit	5+	-	-	100
2 Critical Locations hit	6+	-	-	150
3 Critical Locations hit	8+	-	-	200
4+ Critical Locations hit	10+	-	-	250
Critical Hit/Heat Sink	7+	4 – 6	1/2 effect	120
Other Critical Hits	5+	-	-	120
Armor Damaged	6+	3 – 5	1D6 armor lost perm.	30
Quick Ammo Reload	3+	-	-	15

UNDERWATER LINE-OF-SIGHT

Attacker	Target				
	Underwater	Surface Naval	Airborne	Ground	BattleMech at Depth 1
Underwater[1]	Yes	Yes	No	No	Yes[4]
Surface Naval	Yes	Yes	Yes	Yes	Yes[3]
Airborne	No	Yes	Yes	Yes	Yes[3]
Ground[2]	No	Yes	Yes	Yes	Yes[3]
BattleMech at depth 1	Yes[6]	Yes[5]	Yes[5]	Yes[5]	Yes[7]

[1] Includes BattleMechs at Depth 2+
[2] Includes BattleMechs at level 0+
[3] At +2 to hit (+3 for the partial cover and –1 for being in water); use the *BattleMech Punch Locations* table.
[4] At +2 to hit (+3 for the partial cover and –1 for being in water); use the *BattleMech Kick Locations* table.
[5] Can only fire torso, arm or head weapons.
[6] Can only fire leg weapons.
[7] Only legs at legs and upper body at upper body (+3 for the partial cover and –1 for being in water).

★ WEAPON ATTACKS ★

Energy weapons and torpedoes are the only weapons that may be fired underwater.

Torpedoes are maritime versions of regular short- and long-range missiles. Torpedo stats are the same as the stats of their land-based counterparts. However, torpedoes may only be fired by a unit that is in a Water Hex of Depth 1 or greater, and its target must be in a Water Hex of Depth 1 or greater. The LOS must be traced through Water Hexes of Depth 1 or greater. Units that are equipped with torpedo racks may not use normal missile ammo, and missile racks may not use torpedo ammunition. Lasers and PPCs may be fired underwater; however, their range is greatly reduced. Use the following chart for underwater ranges.

UNDERWATER WEAPON RANGES

		4	6	8
	Min.	Short	Medium	Long
ER Small Laser	0	1	2	3 – 4
ER Medium Laser	0	1 – 3	4 – 7	8 – 10
ER Large Laser (Clan)	0	1 – 5	6 – 10	11 – 16
ER Large Laser (Inner Sphere)	0	1 – 3	4 – 9	10 – 12
ER PPC	0	1 – 4	5 – 10	11 – 16
Small Pulse Laser (Clan)	0	1	2	3 – 4
Medium Pulse Laser (Clan)	0	1 – 3	4 – 5	6 – 8
Large Pulse Laser (Clan)	0	1 – 4	5 – 10	11 – 14
Small Pulse Laser (Inner Sphere)	0	1	2	NA
Medium Pulse Laser (Inner Sphere)	0	1 – 2	3	4
Large Pulse Laser (Inner Sphere)	0	1 – 2	3 – 5	6 – 7
Small Laser	0	1	2	NA
Medium Laser	0	1 – 2	3 – 4	5 – 6
Large Laser	0	1 – 3	4 – 6	7 – 9
PPC	3	1 – 4	5 – 7	8 – 10

PHYSICAL ATTACKS

Submarines and BattleMechs may sometimes make normal physical attacks, but the damage done is reduced by half. Punches have a damage value of 1 for every 20 tons that the attacker weighs, kicks have a damage value of 1 for every 10 tons, charges and rams do 1 point of damage for every 20 tons times the number of hexes charged, clubs do 1 point for every 10 tons and Death From Above does 1 point for every 20 tons, times 3, to the target and 1 point of damage for every 20 tons to the attacker.

Use the *Physical Attacks Against VTOLs* chart to see what physical attacks a BattleMech may make against submarines and surface naval vessels. Submarines may ram units, but only those at the same depth as they are.

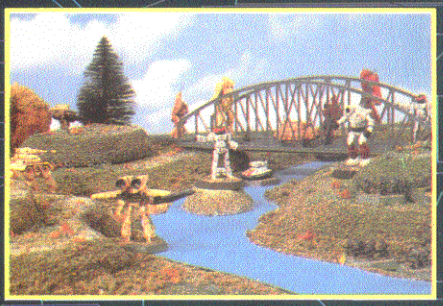
HULL INTEGRITY

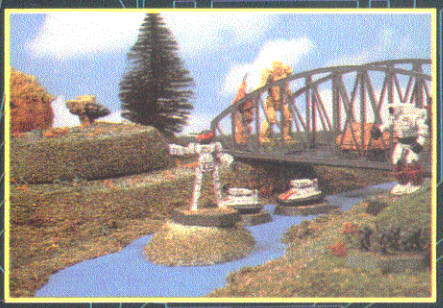
Whenever a hit has been made on an underwater unit, roll 2D6 to see if the unit's hull has been breached. If a 10+ is rolled, the integrity of that location has been lost and it fills with water. For game purposes, treat that location as destroyed. Submarines with a flooded location sink to the bottom and are destroyed. Damage is not transferred from a flooded location until that locations' internal structure is destroyed. If all of a location's armor is destroyed, that location is automatically flooded.

BATTLETECH™

MINIATURE CONVERSION

Players wishing to add more visual realism to their BattleTech game can use the following rules to convert the boardgame rules into a system for tabletop miniature play. With the benefits of real scale, tabletop miniature wargaming adds three dimensionality to the game. The gameboard becomes a convolution of hills, trees, roads, and buildings—a living landscape on which to plan strategies.





Preparing miniatures

Preparing terrain

Rules adjustments

PRIMED BATTLEMECH

WOOD BROWN APPLIED

BROWN WASH APPLIED

AUTUMN GOLD DRY BRUSH APPLIED

DETAILS ADDED

PREPARING MINIATURES

Players should start by preparing their miniatures. All of these rules assume that the players are using **Ral Partha** BattleMechs, vehicles and infantry figures.

It is strongly recommended that the miniatures be painted prior to use. Using painted miniatures adds more realism and visual enhancement to the game. It is recommended that water soluble paints be used. **Ral Partha** has an extensive line of acrylic water-based paints that can be used. These paints are available at most hobby stores, along with brushes and primers.

Miniatures can be quickly painted following these basic techniques. They do not require a steady hand or even very small brushes. Two good soft brushes—#000 and #6—are all that are needed.

Prior to painting a miniature, all flash should be filed off. If any assembly is required, it should be done now. First, make sure the pieces of the miniature fit together. Use a hobby knife or a pin file to clean the joints for a tighter fit, then apply super glue or epoxy to join the pieces together. A gap-filling super glue such as **Hot Stuff** is strongly recommended. The antenna should also be glued on to the model at this time. For a sturdy antenna mounting, drill a placement hole about 1/8" deep using a pin vise and a #71 drill bit. Finally, glue the unit to a hexagonal base. The miniature should be placed in the center of the base, facing one of the base's hex sides. Again use super glue or epoxy to join the two pieces. To fill the recession on the top of the base, use any number of fillers available at hobby shops.

The next step is to spray on a light undercoating of primer. Make sure that the miniature is completely clean and dry before applying the primer. The primer coat should be allowed to thoroughly dry before beginning to paint it. This will insure that the primer has a good bond with the metal miniature, and will reduce chipping and flaking.

After the miniature is primed, painting can begin. The color scheme needs to be chosen. For basic painting, choose one general color—brown, green, or red, for example. You will be using light, medium, and dark shades of this color to paint the miniature. For example, if brown was selected, the three shades used could be Autumn Gold, Wood Brown and Brown from the Ral Partha **BattleTech Autumn Colors** paint set.

The medium shade should first be painted all over the BattleMech, using the #6 brush. Allow your miniature to dry.

Next, a wash of the dark shade should be mixed and applied over the miniature. A wash is simply diluted paint. Mix three parts of water or thinner to one part paint. The paint should be diluted to the consistancy of ink.

The wash will gather in the crevasses and folds of the miniature, darkening its joints and bringing out details so that they can be seen better. Applying the wash over the entire miniature dulls and stains the medium shade, giving the figure a worn look. If you prefer not to cover the entire figure, a small brush can be used to wash only specific areas of the model.

Next, the miniature should be dry-brushed with the light shade. To dry-brush, simply dip a soft #6 brush into the paint, and then brush the paint off on a newspaper until it appears that there is no more paint left in the brush. Next, lightly dust the miniature with the brush. The raised portions of the miniature should be highlighted by the remaining paint in the brush.

The next step is to add details to the miniature. In general, just a few will suffice. Use a small brush for these. Cockpit canopies can be painted a light blue. A small amount of color can be added to some equipment. A wash of black paint can be used around muzzles of guns or missile tubes. Red can be added to the tips of any exposed missiles. Any antenna wires might be painted black.

Finally, the base should be painted green, and some landscaping ground cover sprinkled onto the wet paint and allowed to dry in place.

All playing pieces must be mounted on the center of a hex base. BattleMech and vehicle miniatures must have their front oriented to one of the hex sides. Infantry platoons should have nine figures (one officer and eight men with the same weapon) mounted on a hex base. BattleArmor points should have five figures mounted onto a hex base. The base should also have an ID number painted on one of the sloping hex sides.

The hex base is very important. It is used to define firing arcs and to determine hit locations, the direction of falls, and the direction that a BattleMech is displaced, in very much the same way that the hexgrid on a boardgame map is used.

PREPARING TERRAIN

In addition to painting miniatures, players will need to construct the terrain that they will be fighting on. It is recommended that the players have at least a 40" by 40" playing surface, with enough terrain on it to make the tabletop interesting.

Suggestions on how to represent various terrain features are given below.

CLEAR

For Clear terrain, the table needs only to be covered with a green felt cloth. As an added touch, spread ground cover of various shades to liven the field. Landscaping materials, such as lichen and grasses of various shapes and coarseness, can be found at any hobby or model railroading shop.

HILLS

Hills are made out of green styrofoam of 5/8" thickness. This size represents 1 level of elevation. Hills are constructed by cutting and shaping successively smaller contour levels and then stacking them on top of each other, with a result that resembles a contour map. Each contour of a hill should be cut and shaped individually. These shapes may then be stacked on one another to make hills of various sizes.

When stacking the levels together, make sure that the lower levels have sufficiently exposed ledge to allow a mounted miniature to easily stand on it. If the exposed area is not large enough for a mounted miniature to stand on it, that section represents a cliff face.

The advantage of styrofoam is the ease of cutting it to a desired shape and size. You might paint the hills green and while the hill is still wet, cover it with model railroading landscaping grasses. Green styrofoam can be found in almost any floral shop or hobby and craft store, and even in some hardware stores.

TREES

A large variety of trees can be found in hobby and model railroading shops. To create light woods, mount a group of trees on a template base, spacing them about three inches apart. Also, mount individual trees on bases two and one-half inches in diameter. This combination allows you to create a light forest in a specific shape, and to convert it into heavy woods by placing the single trees among the ones fixed to the larger template. The template can be made of any material as long as it is sturdy enough to support the trees. Paint the template the same shade of green as your Clear ground cloth. A nice touch is to add grass by painting the template and then sprinkling landscaping material over it before the paint dries.

Another way to create a wooded area is to use lichen to outline the edge of the forest, and then place individual trees to the density desired within that border. Lichen comes in a wide variety of colors, making it great for alien terrain.

WATER

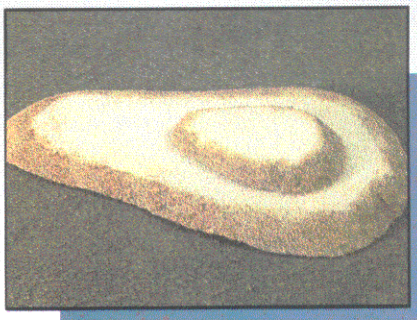
To construct rivers, streams, and lakes, the following methods may be used. One, use a sheet of thin plexiglas cut to the dimensions desired. For enhanced effect, paint the underside of the glass varied shades of blue, starting with the darkest blue first, in the center of the glass. Darker blues represent deeper water. Some model railroading suppliers have a ready-made plastic sheet of "water" that needs only to be cut to your specified shape. A simpler and less expensive method is to use dark and light blue construction paper. Either way, remember to pay close attention to depth levels so that they are clearly identified on the table.

ROADS/BRIDGES

These materials can also be found at hobby and model railroading shops. The store will have simulated road materials, ranging from gravel for dirt roads to more polished imitations of macadam and concrete. Use "Z gauge" scaled bridges, since they most closely match the scale **Ral Partha** uses for their **BattleTech** miniatures. Otherwise, masking tape and/or brown, black and gray construction paper are an easy substitute.

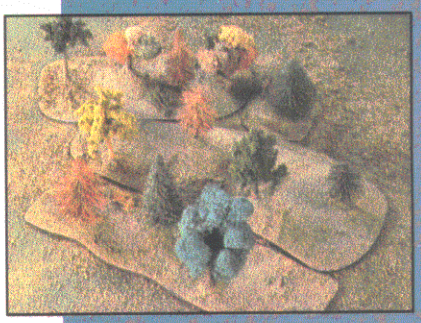
BUILDINGS

Likewise found at your local hobby and model railroad shop, we recommend products scaled for micro-armor or "Z gauge" scale model railroading products. Also, there are resin cast buildings produced especially for micro-armor gaming. Finally, there are sets that allow you to fabricate buildings in plaster to your own specifications (though this requires a bit more effort on your part). In any case, if you have BattleMechs that

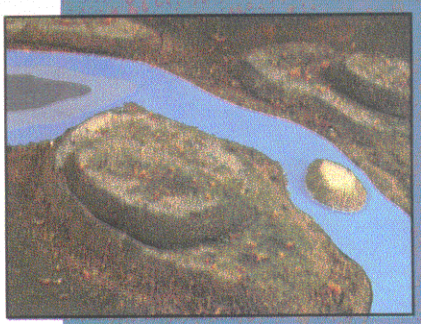


UNPAINTED HILL

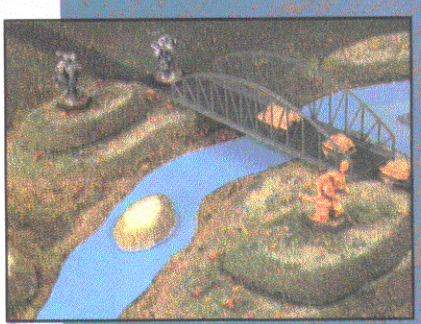
FINISHED HILL



LIGHT WOODS TEMPLATES

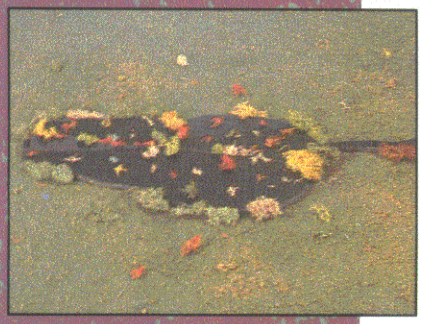


RIVER & HILLS



ROAD & BRIDGE

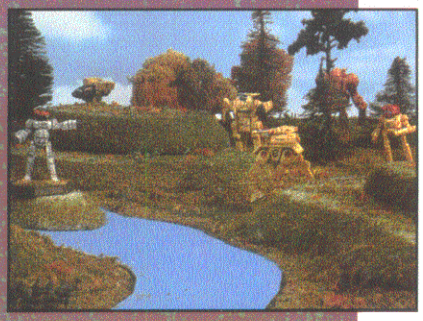
ROUGH GROUND TEMPLATE



SWAMP TEMPLATE

BATTLEMECHS IN LIGHT TREES

HATCHETMAN AND DEMOLISHER HOLDING A BRIDGE



ENGAGEMENT ON RIVER BANKS

jump a lot, flat roofs might be a useful feature. When setting up the board, pay close attention to the fact that each 5/8" of height represents a level of elevation. Also, note each building's CF on the bottom of the model.

RUBBLE

Anything you have that you don't mind destroying comes into play here. Tear up or partially burn any scrap or broken buildings you have. Woodworking tools, a soldering iron, and/or a hot knife can aid in this process, but please be careful.

ROUGH GROUND

Rough ground can be constructed by using ballast, small bits of lichen, or even twigs and soil from your backyard. In any case, the materials should be glued onto a template to define the rough area and make it easy to reuse the terrain.

SWAMP

We recommend creating a water template of green, brown, or black to represent murky water. Cover the template with small bits of lichen to indicate reeds and tufts of swamp grass. Again, in a pinch, construction paper can be used.

GRIDDED TERRAIN

Some manufacturers produce terrain that is already gridded into hexes. If using gridded terrain, you can follow the normal **BattleTech** rules in the first part of this compendium without any adjustments. You'll still probably want to use some of the terrain-making suggestions listed above to highlight the various features of your layout.

RULES ADJUSTMENTS

The following rules adjustments are necessary for battles on ungridded terrain. They are simple conversions that in no way alter the basics of the **BattleTech** rules system. They are merely an adaptation intended to create a grand field of play. *Unless otherwise noted, all standard* **BattleTech** *rules are in effect.*

Before the start of a game, players should make sure that they have tape measures and straightedges, along with dice and filled-out record sheets.

The table's terrain should be set up in whatever fashion the players desire. Landscaping grasses can be used to blend in the cracks between templates, if desired.

SCALE

In **BattleTech**, a standard hex is 30 meters across and a level of elevation is equal to 6 meters. This scale needs to be converted to inches (or centimeters). Players should use a ratio of 1 inch = 10 meters. This scale is best used if a reasonably large playing surface is available. If a small playing surface is used, a horizontal scale of 1 inch =15 meters can be substituted. Note that by using a 1 inch to 10 meters scale, the thickness of the styrofoam used in constructing the hills is equal to approximately 6 meters.

Metric measurement is also possible. Whenever these rules refer to 1 inch = 10 meters, you can use 4 cm = 10 meters. When on a 1 inch = 15 meters scale, you can use 4 cm = 15 meters. One level of elevation is 1.5 cm.

Unless otherwise noted in the rules below, when the boardgame rules refer to a set number of hexes, that number should be multiplied by 3, if the 1 inch = 10 meters scale is used. If the 1 inch = 15 meters scale is used, multiply by 2. For example, if a skid would result in a BattleMech sliding 3 hexes, it should be moved 9 inches (in the 1 inch = 10 meters scale).

In situations where a full hex is set on fire, or the terrain is converted, or is full of smoke, the players should measure a circle around a single point on the table. The radius of this circle should be either 1.5 inches (on the 1 inch = 10 meters scale) or 1 inch (on the 1 inch = 15 meters scale). In cases where an event affects both a target hex and all adjacent hexes, the radius should be 4.5 inches or 3 inches, respectively.

A miniature takes up as large an area as its base. If an effect touches a base, that figure is affected. If the effect is fire, that figure is standing in fire. If it is smoke, that figure is surrounded by smoke, making it harder for it to hit and be hit. If smoke continues for more than 1.5 inches (1 inch in 15-meter scale) beyond the base of a figure and along a proposed line-of-sight, that LOS is broken.

MOVEMENT

Moving units is no longer done by counting hexes; instead, a unit is moved a set number of inches. The unit's movement points must be converted to conform to the new scale. Using the 1 inch = 10 meters scale, multiply the unit's Walking (or Cruising) and Jumping movement points (MPs) by 3. For 1 inch = 15 meters, use a multiplier of 2. Recalculate its Running (or Flank speed) MPs based on its new Walking (or Cruising) MPs. These are the new movement points that the unit has to spend during the turn.

For example, a Marauder's *various movement points would be converted as follows using the two scales.*

MARAUDER MOVEMENT POINTS

	Marauder	Normal **BattleTech** Rules 1" = 10 m	Miniature Rules 1" = 15 m
Walking MPs	4	12	8
Running MPs	6	18	12
Jumping MPs	0	0	0

Next, the movement cost for each terrain type and physical action is converted.

Note that movement costs for entering terrain are the same as in the boardgame. However, actions such as standing up and changing elevation, whose costs reflect spending time rather than covering distances, are multiplied by 3, or 2 if using the smaller scale.

Movement is accomplished in the same way as in the boardgame. Players declare whether or not the unit is standing still, walking, running, or jumping. This gives them a set number of MPs to spend. A BattleMech or vehicle can only move directly forwards or backwards, as normal.

Facing changes for BattleMechs and vehicles are now measured by how many hexsides the unit turns. To determine this, place a straightedge along one side of the hex base and rotate the unit so that it is facing in the desired direction. Count the number of full and partial hexsides that pass the straightedge. This is the number of hexsides that the unit turned at that point in movement.

For example, the Catapult *wants to turn to the left. A straightedge is laid along the front of its hex base and the BattleMech is rotated to the left to face the desired direction. The unit has turned 90°, causing one full and one partial hexside to pass the straightedge. This maneuver costs the* Catapult *6 MP.*

To move a unit, measure from the front of its hex base. MPs are expended for each inch or fraction of an inch of terrain that the unit moves through. The unit is considered to have entered a certain type of terrain if any portion of its base enters that terrain. (If using templates for terrain, a unit enters terrain if it even partially overlaps the template for that terrain.)

A jumping unit only pays one MP per inch traveled (minimum 3 MP), regardless of the terrain that it passes over.

For example, the Warhammer *wishes to move into the center of the Light Woods template to its right. It moves four inches forward through Clear terrain (4 MP), then makes a right hand turn (3 MP) and moves 3 and 1/2 more inches forward, 2 of which are in Clear terrain (2 MP) and 1 1/2 inches in the Light Woods (4 MP). The total movement cost for this maneuver is 4 + 3 + 2 + 4, for a total of 13 MPs. Note that even though the* Warhammer *only moved through 1 1/2 inches of Light Woods terrain, it paid for a full 2 inches of movement.*

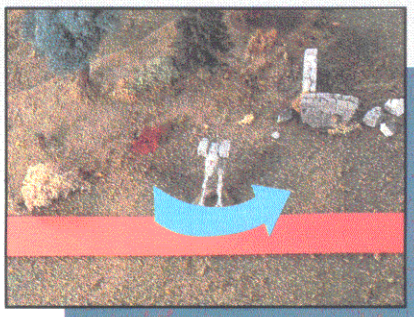
Stacking

For purposes of the miniatures game, stacking is not allowed. However, infantry units whose bases are touching a BattleMech's base may engage in anti-BattleMech attacks, as described in the **Anti-BattleMech Infantry** optional rules. Infantry units may mount a vehicle if their base touches the vehicle's base at the proper time. When dismounting, an infantry unit may place itself anywhere adjacent to its vehicle.

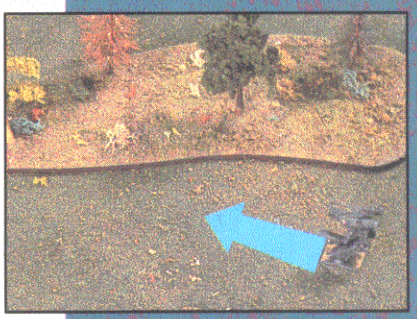
Falls

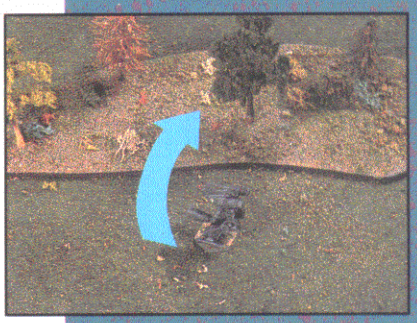
While aesthetically pleasing, it is best not to lay a prone BattleMech miniature on its side. The base that it is mounted on is needed to determine the actual location and orientation of the BattleMech for combat purposes and future movement. If players really want to have their miniatures prone, they can use a blank hex base to mark the actual location of the BattleMech.

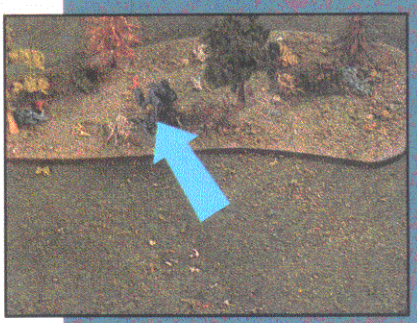
Damage from a fall is taken as normal. Remember that 5/8" of a building's height is equal to 1 level (and round to the nearest multiple of 5/8" when figuring height).

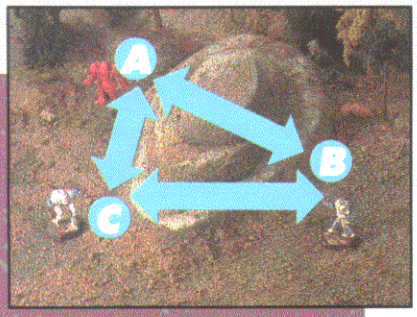

INITIAL FACING


FINAL FACING

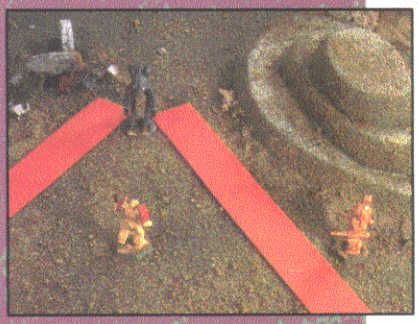

START OF MOVEMENT

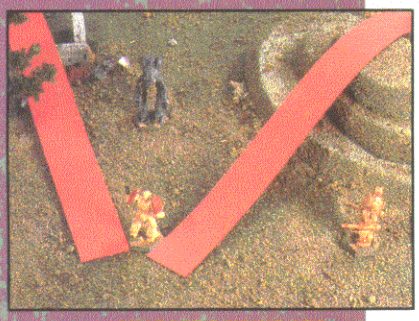

MOVEMENT TO TURNING POINT

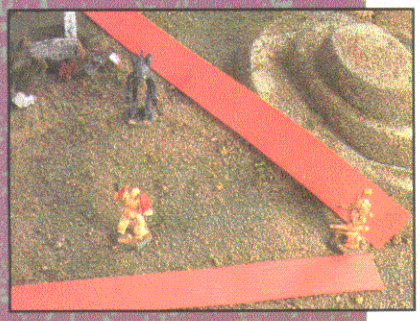

FINAL POSITION



LINE OF SIGHT


MARAUDER'S FIRING ARC


CHARGER'S FIRING ARC


WARHAMMER'S FIRING ARC


CATAPULT FIRING AT ATLAS

COMBAT

Combat is resolved in the same manner and sequence as in the **BattleTech** boardgame, unless otherwise noted below. Note that when falling, skidding, or being pushed, the orientation of a unit's base indicates the direction that it will go.

Line-of-Sight

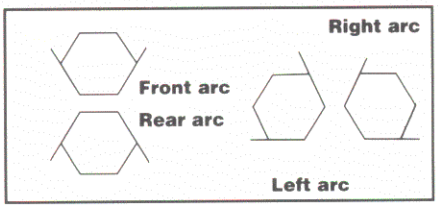
Line-of-sight is determined according to the **BattleTech** rules. Measurements should be made from the center of the attacker's base to the center of the target's base. If the LOS passes over any portion of a template or hill, that terrain lies along the LOS.

Note that each 5/8" of height that a building has is equal to one level of elevation. Each elevation contour of a hill is treated as one level. All trees are still two levels tall, and treat every 3" of woods, or portion thereof, as a hex, to determine if LOS is blocked. (Use every 2" if the scale is 1inch = 15 meters.)

BattleMechs A and B do not have a valid LOS to each other, because their LOS passes through a level 3 hill contour. B and C have a valid LOS to each other, even though their LOS passes over a level 1 hill contour. C and A also have a valid LOS to each other.

Firing Arc

Firing arcs are defined by using the unit's base. A straightedge is needed to show the field of fire—see the diagram below.



For example, the Marauder *has the* Charger *in its forward firing arc, but not the* Warhammer. *The* Warhammer *has both the* Charger *and the* Marauder *in its forward firing arc.*

Base To-Hit Number

Because of the change in scale, weapon ranges need to be converted in a similar fashion as movement. Multiply the maximum short, medium, and long ranges for all weapons by 3 to obtain the tabletop distances. (Multiply by 2 for the 1 inch = 15 meters scale.) For example, an Inner Sphere medium laser would have the following ranges: Short, up to 9"; Medium, over 9", up to 18"; Long, over 18", up to 27".

Range, like LOS, is measured from the center of the attacker's base to the center of the target's base. If the target is a building, use the center of the building. (If it is a large building, use a point 1.5" into its interior.) If the target is woods, any point on the template can be targeted. Note that if the distance is even a fraction of an inch greater than the maximum distance for a range, then the next higher range applies.

To-Hit Modifiers

Normal To-Hit modifiers are used, except a conversion is needed for woods. If the 1" = 10 meters scale is being used, apply the modifier for one hex of woods every 3" (or portion thereof). If the 1" = 15 meters scale is being used, apply the modifier for every 2" (or portion thereof).

For example, the Catapult *is firing at the* Atlas *through 4" of Light Woods. This counts as 2 Light Woods hexes, giving the* Catapult *a terrain To-Hit modifier of +2.*

Similarly, the charts below show the distances for the target's movement To-Hit modifiers. Use the appropriate chart for the scale of the game.

TARGET MOVEMENT MODIFIERS TO FIRE (1" = 10 METERS)

Inches	*Modifier*
0 – 6	None
6+ – 12	+1
12+ – 18	+2
18+ – 27	+3
27+	+4
Jump	+1

TARGET MOVEMENT MODIFIERS TO FIRE (1" = 15 METERS)

Inches	*Modifier*
0 – 4	None
4+ – 8	+1
8+ – 12	+2
12+ – 18	+3
18+	+4
Jump	+1

Note that if the distance is even a fraction of an inch greater than the maximum allowed for a modifier, the next higher modifier is used.

Attack Direction

The direction that the attack arrived from is determined normally, substituting the target's base for its hex. With a straightedge, find the hexside crossed to determine the side on which the unit takes the damage. If the straightedge crosses the joint between two sides, the defender chooses which side is hit.

For example, the Warhammer *has been hit by a large laser from the* Marauder. *The* Warhammer *will take the damage on its Right side.*

Physical Attacks

Physical attacks may only be performed if the bases of the units involved are touching one another. In all cases except pushing, units that are displaced because of physical attacks keep their bases touching the base of their attacker, and both units are moved to reflect the displacement.

BattleMechs that are successfully pushed move 3 inches in the direction of the push (2 inches if the 1" = 15 meters scale is in use).

A charge can only be carried out if the attacker retains enough MPs to occupy its target's location. If the charge is unsuccessful, the attacker is displaced to the left or right of the target, but the bases of the two units continue to touch each other. If the charge is successful, the attacker occupies the defenders location and the defender is displaced in the direction of the attack, but its base is still kept in contact with that of its attacker.

For example, the Marauder *charges the* Warhammer. *If the* Marauder *is successful, it moves into the* Warhammer*'s location and the* Warhammer *is moved back, but its base is still in contact with the* Marauder*'s. If the charge fails, the* Marauder *would move as shown.*

ARTILLERY

If off-board artillery is being used, its intended target location can be specified by writing down how many inches down and in from a designated corner of the table the round is to land. Essentially, the edges of the table are used as the axes of a normal X,Y graph.

Scattering is determined by centering a blank hex base on the intended impact point and then using the scatter diagram in the optional rules for **Artillery: Targeting**. Remember to multiply the number of hexes scattered by the appropriate scale modifier to determine how many inches astray the round goes.

In the boardgame, artillery fire attacks units in the impact hex and in adjacent hexes. The *Artillery Damage Radius* chart converts this for miniature play. Units within these ranges take the indicated damage. The attack direction is determined from the impact location of the round.

ARTILLERY DAMAGE RADIUS

	1" = 10 Meters Scale		1" = 15 Meters Scale	
Radius	**0 - 1.5"**	**1.5+ - 4.5"**	**0 - 1"**	**1+ - 3"**
Sniper	10	5	10	5
Long Tom	20	10	20	10
Thumper	5	2	5	2
Arrow IV	20	10	20	10

MINIATURE MOVEMENT COSTS

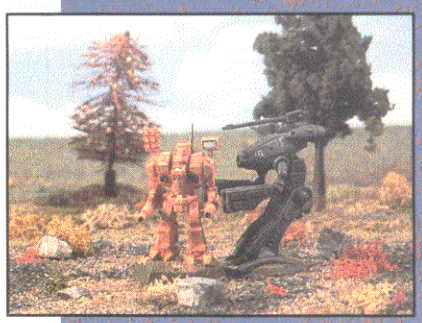
Terrain/Action	**1" = 10 meters**	**1" = 15 meters**
Clear	1 MP per inch moved	1 MP per inch moved
Road/Paved/Bridge	1 MP per inch moved	1 MP per inch moved
Rough	2 MP per inch moved	2 MP per inch moved
Light Woods	2 MP per inch moved	2 MP per inch moved
Heavy Woods	3 MP per inch moved	3 MP per inch moved
Light Building or Rubble	6 MP	4 MP
Medium Building	9 MP	6 MP
Heavy Building	12 MP	8 MP
Hardened Building	15 MP	10 MP
Water		
Depth 0	1 MP per inch moved	1 MP per inch moved
Depth 1	2 MP per inch moved	2 MP per inch moved
Depth 2	4 MP per inch moved	4 MP per inch moved
Depth 3+	4 MP per inch moved	4 MP per inch moved
Elevation Change		
Mech, VTOL, Sub	+3 MP/level	+2 MP/level
Infantry, Ground	+6 MP/level	+4 MP/level
Facing Chance	3 MP/hexside	2 MP/hexside
Dropping to the Ground	3 MP	2 MP
Standing Up	6 MP	4 MP

MARAUDER FIRING ON WARHAMMER

MARAUDER & WARHAMMER AT START OF CHARGE

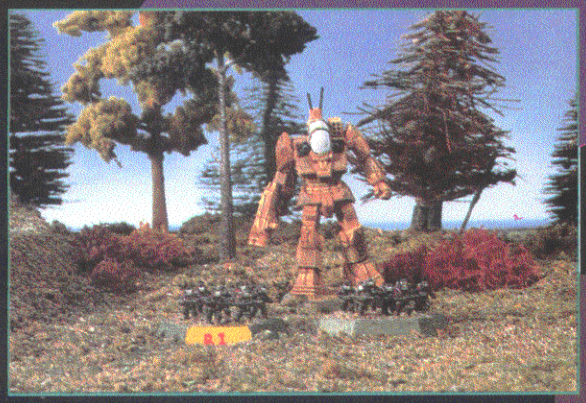
FINAL POSITIONS: SUCCESSFUL CHARGE

FINAL POSITIONS: UNSUCCESSFUL CHARGE

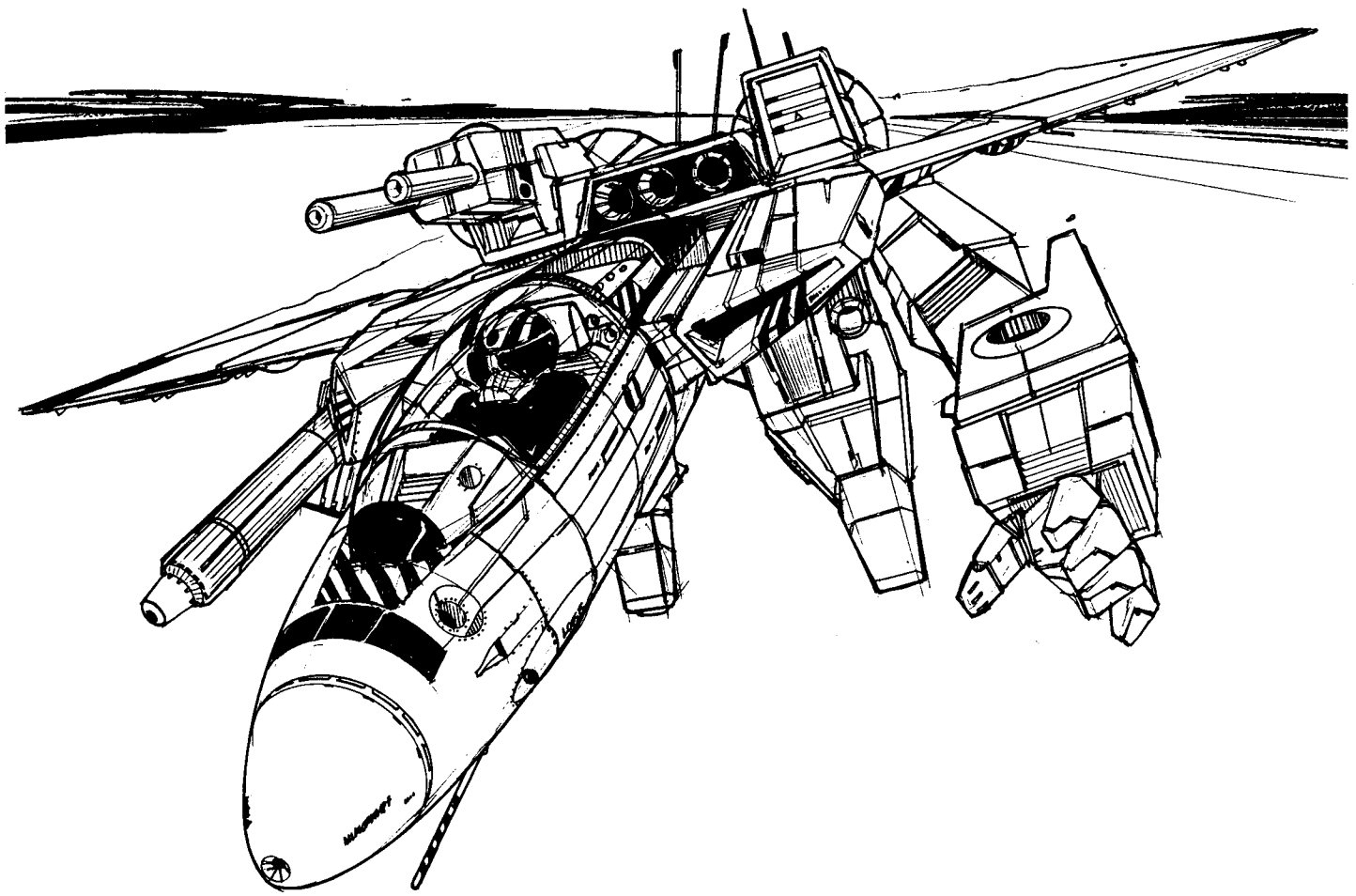


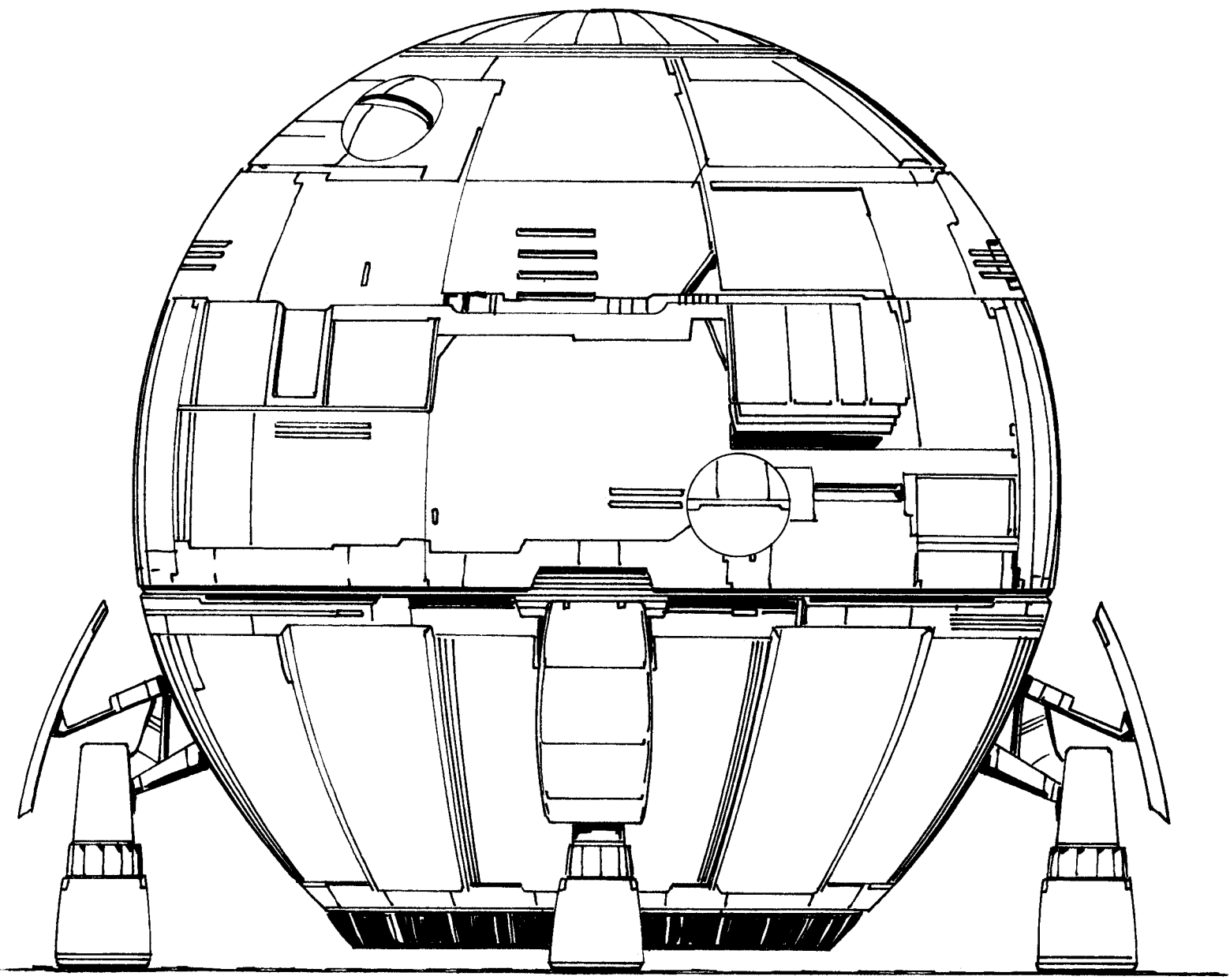
MARUDER CHARGING WARHAMMER

MINIATURE CONVERSION



AEROTECH



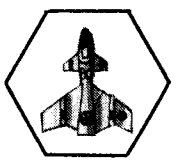


COMPONENTS

AeroTech simulates combat between AeroSpace fighters, conventional atmospheric fighters, and DropShips. Below is a description of the various combat units from the **AeroTech** field of combat, along with a description of the record sheets and maps needed to play the game.

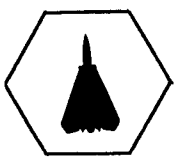
COUNTERS

AEROSPACE FIGHTERS



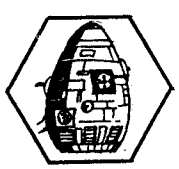
AeroSpace fighters are space-borne analogs of BattleMechs. Heavily armored and equipped with weapons every bit as deadly as a BattleMech's, these craft are equally at home in interplanetary space or the atmosphere of a planet. A single AeroSpace fighter, using its speed and massive firepower, has turned many proud BattleMech lances into heaps of smoking wreckage.

CONVENTIONAL FIGHTERS



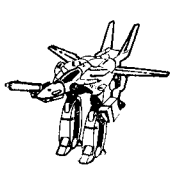
Conventional fighters see limited use in the Inner Sphere. Confined to the lower atmosphere of a planet, and requiring extensive modifications to allow them to operate on planets for which they where not built, prop- and jet turbine-driven aircraft are used almost exclusively by non-Mech garrison forces or as support for "low intensity" warfare (BattleMechs are high intensity equipment). However, when properly deployed, a force of conventional fighter aircraft can seriously disrupt a BattleMech drop or chew up an AeroSpace fighter lance. In addition, conventional recon aircraft provide a planetary commander with the information necessary to commit scarce BattleMech forces at critical locations throughout the world he is defending.

★ DROPSHIPS ★



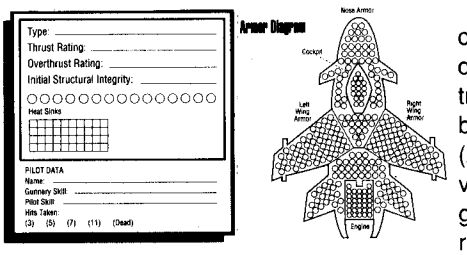
DropShips are the large, heavily-armed craft that transport BattleMechs and AeroSpace fighters from a planetary system's jump points to their target planets. Once in close orbit around its target, a DropShip can enter the atmosphere to launch its fighters or drop its BattleMechs onto the planet. There are two types of DropShips: Spheroid (shaped roughly like a ball) and Aerodyne (similar in shape to an airplane)

LAMS



Short for Land-Air-BattleMech, an LAM can change its form to become an AeroSpace fighter, a BattleMech, or a hybrid version called an Air-Land Mech (or *AirMech*). While not as powerful on a ton per ton basis as their specialized cousins, LAMs bring unmatched flexibility to the battlefield commander.

RECORD SHEETS



The Fighter Record Sheet shown in the diagram is used to keep track of the condition of both types of fighters (AeroSpace and conventional) during the game. There are two record sheets used for DropShips (one for Spheroid ships and one for Aerodyne ships) and a fourth sheet for Jumpships. LAMs use the BattleMech Record Sheet. The different sections of the Fighter Record Sheet are discussed below.

ARMOR DIAGRAM

The large diagram at the top right-hand corner of the page is the Armor Diagram. It shows the arrangement of the armor plating on the fighter. As weapon hits destroy the armor, the boxes are checked off.

FIGHTER DATA

Located in the upper left corner, this section of the Record Sheet lists all of the fighter's important statistics, including its type (AeroSpace or conventional), its Thrust and OverThrust ratings, and its structural integrity. Also included here is a set of heat sink check-off boxes.

PILOT DATA

This small section appears below the fighter data, and lists the name, skills, and condition of the fighter pilot.

VELOCITY RECORD

This large section in the lower left corner of the sheet is used to keep track of the fighter's velocity as it changes from one turn to the next. The columns represent the fighter's beginning velocity each turn, the number of thrust points spent during the turn, the fighter's ending velocity, and the amount of fuel remaining. Depending on the pilot's actions during the turn, these numbers may or may not change. Any movement restrictions should be noted next to the turn number during which that restriction will be in effect.

HEAT SCALE

A column of numbered boxes, the Heat Scale is used to keep track of the internal heat build-up in each fighter. As heat builds up, these boxes are checked off from low to high. When enough heat has built up, the comments beside specific boxes tell what effect the heat has on the fighter's operation. The Heat Scale is only used by AeroSpace fighters. Because of their flimsy structure, conventional fighters are able to dissipate any excess heat not caused by energy weapons.

EQUIPMENT DATA

The four short lists to the right of the Heat Scale show where weapons and ammunition can be stored on a fighter. The list a weapon occupies indicates which firing arc it covers. When a weapon is destroyed or all of the armor boxes have been checked off in a location, the affected weapon or location is crossed off and can no longer be used. The fuselage armor protects the rear weapons and ammunition.

MAPSHEETS

The **AeroTech** mapsheet used is a grid of six-sided areas called *hexes*. Hexes are used to regulate movement and combat, with fighters and DropShips moving from hex to hex.

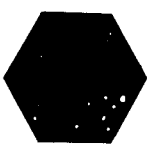
Each hex on the space side of the mapsheet—the Space Map—is roughly 6,500 kilometers across (about 4,000 miles), and each turn represents one minute.

The reverse side—the Low Altitude Map—is used for low-altitude fighter combat. Each hex on that side is roughly 500 meters across (about three-tenths of a mile) or about the same as one **BattleTech** mapsheet. Each turn at this scale is ten seconds long.

TERRAIN

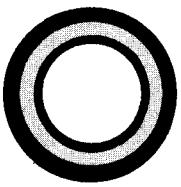
There are very few types of terrain in the air or in space. What does exist is explained below.

Open Space



These empty hexes are open space. They have no effect on anything.

Atmosphere



Most planets have some sort of atmosphere. The six atmospheric hexes around a planet make weapons fire more difficult, and movement within an atmosphere is much different from movement in space. Entering an atmospheric hex from space is a difficult operation that requires a *Piloting* Skill roll.

Gravitational Effect Hexes

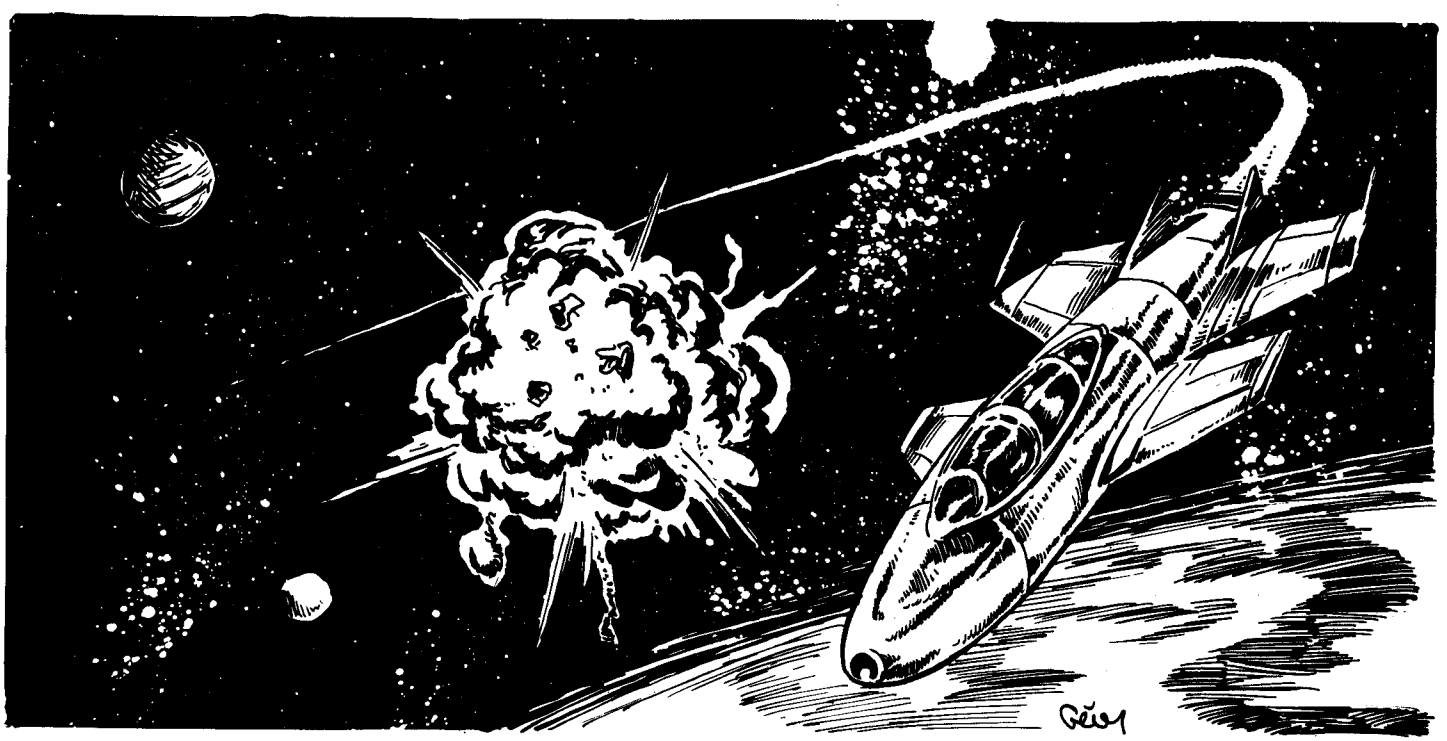
These hexes show the effects of gravity on the movement of AeroSpace craft, and contain either a gray arrow or a blue arrow. A craft ending its turn on a gray arrow hex may be pulled towards the planet by gravity. A craft moving through, or ending its turn on, a blue arrow hex may be both pulled and turned toward the planet.

Planets

Planet and moon hexes are the only type of terrain in **AeroTech** that can block line-of-sight (LOS) and weapons fire while on the Space Map. Landing on a planetary hex requires several skill rolls. If care is not taken during landing, the meeting with the earth/air interface can be fatal.

DICE

AeroTech uses two standard six-sided dice. During the game, sometimes only one die is rolled (1D6), and sometimes both are rolled (2D6), either together or in sequence.



PLAYING THE GAME

To start the game, lay out the space side of an **AeroTech** mapsheet on a table or some other surface that offers all players easy access. Next, fill out Fighter Record Sheets for each fighter involved in the battle. Players can use the statistics for the various fighter types described in **AeroTech**, **DropShips and Jumpships**, **Technical Readout: 3025**, and **Technical Readout: 2750**, or they can create their own designs using **Construction** at the back of this compendium.

Once the players have chosen sides and prepared record sheets for their forces, they must determine the objectives for each team. These may range from driving off an enemy landing force to landing a certain number of BattleMechs or DropShips on a certain planetary hex. Having decided on objectives, each group of players places its units on the mapsheet and records beginning velocities. Then, follow the sequence of play until one side or the other meets its objectives and is declared the winner.

PILOTS

The human soldiers who control AeroSpace fighters, conventional fighters, and DropShips are called pilots. Their skills play an important role in keeping a craft moving and fighting. If its pilot is killed or seriously injured, a craft is out of commission, even though actual damage to the craft may be light.

★ PILOT SKILLS ★

Two skills are important to a pilot in combat: *Piloting* and *Gunnery*. Average Inner Sphere pilots have a *Piloting* Skill level of 5 and a *Gunnery* Skill level of 4. Average Clan pilots have a *Piloting* Skill level of 4 and a *Gunnery* Skill level of 4.

Piloting Skill helps determine the outcome when a pilot attempts to push the design features of his craft, especially when entering the atmosphere. *Gunnery* Skill helps determine how easy or difficult it is to make a successful shot with the craft's weaponry. These two skills are discussed in detail in **Movement** and **Combat**.

PILOTING SKILL ROLLS

Piloting Skill rolls are resolved as in **BattleTech**. The player adds the indicated modifiers to his pilot's *Piloting* Skill level (normally 5). The resulting number is the *Piloting* Skill roll Target Number. Then the player rolls both dice.

If the roll is equal to, or greater than, the modified *Piloting* Skill Number, the action is successful and no adverse effects occur. If the roll is less than the modified *Piloting* Skill Number, then the indicated bad effect takes place.

★ GUNNERY SKILL MODIFIER ★

The *Gunnery* Skill Number is also calculated as in **BattleTech**. For every *Gunnery* Skill level above or below 4, the *Gunnery* Skill modifier to the Base To-Hit Number is increased or decreased by 1. The lower the *Gunnery* Skill level, the lower the modified To-Hit Number.

★ VARYING SKILL LEVELS ★

As an optional rule, players can roll randomly at the beginning of the game for the *Piloting* and *Gunnery* skills of every AeroSpace pilot. This will produce an interesting mixture of green and seasoned pilots. Roll one die for each of the AeroSpace pilot's *Piloting* and *Gunnery* skill, and find the results on the *AeroSpace Pilot Skills* table. If the player is using a Clan pilot, 2 should be added to the result of the *Piloting* die roll before consulting the table.

AEROSPACE PILOT SKILLS (1D6 TWICE)

Roll	Piloting Skill	Roll	Gunnery Skill
1	6	1	5
2	6	2	4
3	5	3	4
4	5	4	4
5	4	5	3
6	4	6	3
7-8	3		

SKILL IMPROVEMENT

Players may want to keep some of the pilots they have created for use in future games or campaigns, assuming that the pilots survive the current battle. If doing this, the players should keep track of the number of enemy craft destroyed by each surviving pilot. For every five craft he kills, the pilot can improve his *Piloting* Skill; or, for every ten craft he kills, he can improve his *Gunnery* Skill. Once the choice is made to improve *Gunnery* Skill, the next ten kills must go toward improving that skill. Pilots cannot trade *Piloting* Skill points for *Gunnery* Skill points. Whether he chooses *Piloting* or *Gunnery*, the player improves the skill by subtracting 1 from the current skill level.

DAMAGING A PILOT

There are four ways to damage a pilot: cockpit hits, high thrust maneuvers, internal ammunition explosions, and heat. (Conventional fighter pilots can only be damaged by cockpit hits and high thrust maneuvers). A pilot can take 5 points of damage (5 hits) before dying, but it is very possible he will be knocked unconscious long before taking that much damage. Every time a pilot is damaged, the player must roll both dice and consult the *AeroSpace Fighter Consciousness* table to see if the pilot remains conscious.

AEROSPACE FIGHTER CONSCIOUSNESS (2D6)	
Total Damage	**Consciousness Number**
0-1	3+
2	5+
3	7+
4	10+
5	11+
6	Dead

If the dice roll is equal to, or greater than, the Consciousness Number, the pilot remains conscious. If the roll is less than the Consciousness Number, the pilot is knocked unconscious, his craft cannot thrust or fire, and it will drift at its current velocity.

Cockpit Hit Damage

A pilot takes 1 point of damage whenever the cockpit of his AeroSpace or conventional fighter is hit. If the hit penetrates the cockpit armor, the pilot is automatically killed. DropShips take damage to the bridge rather than the cockpit. See **Combat** for the effects of a bridge hit.

High Thrust Maneuver Damage

Whenever a pilot applies thrust that exceeds his craft's structural integrity, two *Piloting* Skill rolls must be made: one to avoid structural integrity loss, and one to avoid blackout. The roll for structural integrity is explained in **Movement: Structural Integrity**. The Blackout roll is a *Piloting* Skill roll with the modifiers found on the *Blackout* chart.

	BLACKOUT	
Thrust Spent	**Damage to Pilot**	**Piloting Modifier**
1		–7
2		–6
3		–5
4		–4
5		–3
6		–2
7	0	–1
8	1	0
9	2	+1
10		+2
11	3	+3
12		+4
13	4	+5
14		+6
15	5	+7

The *Piloting* Skill roll is modified by both the thrust of the maneuver and the pilot's condition.

If the Blackout roll fails, the pilot is unconscious. If he has not taken any previous damage, there is no further effect. On the other hand, if he has already taken damage, he must immediately roll against his current Consciousness Number. If the roll succeeds, there is no effect and he can try to regain consciousness in the normal manner. If the roll fails, the pilot suffers another hit and must try to regain consciousness at this new number.

Ammunition Explosion Damage

An internal ammunition explosion gives an AeroSpace or DropShip pilot 1 point of damage because of the physical and electrical shocks he receives, and he must make the normal roll on the *AeroSpace Fighter Consciousness* table. Conventional fighter pilots are not affected by ammunition explosions (unless, of course, the explosion reaches them).

Excess Heat Damage

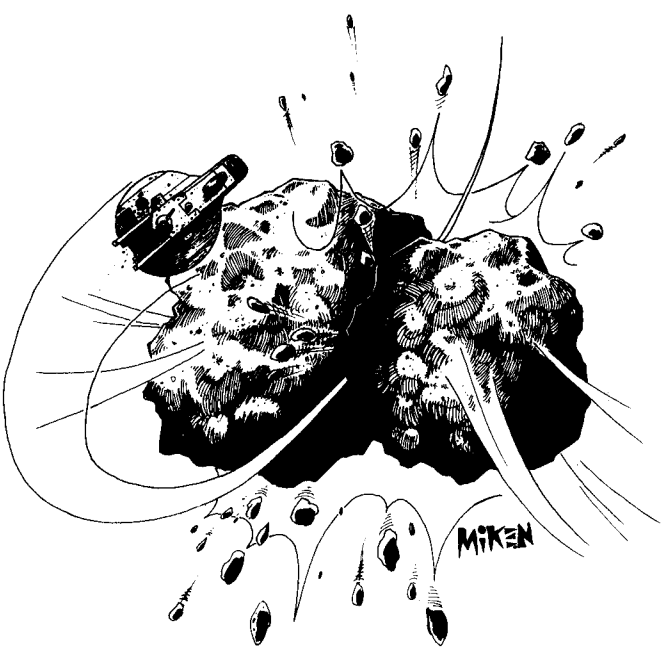
When heat builds up in an AeroSpace craft, it can affect the pilot. The Trigger Points (at 21 and 27) and Avoid Rolls are noted on the Heat Scale. If an avoid roll fails, the pilot takes 1 point of damage and must make the normal roll on the *AeroSpace Fighter Consciousness* table.

Regaining Consciousness

A pilot may attempt to regain consciousness from a blackout (even a blackout which causes damage) during the End Phase of the current turn. A pilot who is unconscious from damage, however, may not attempt to recover until the End Phase of the *next* turn.

During the End Phase, he rolls again on the *AeroSpace Fighter Consciousness* table. If this roll is successful, he regains consciousness and does not have to roll on the table unless he is hit again.

For example, a healthy pilot makes a 13 thrust maneuver in one hex during his movement. This exceeds his craft's current SI and so requires a Piloting Skill roll. His Blackout roll is figured as follows: (Piloting Skill level of 5 plus Thrust Modifier of +5 + Pilot Condition Modifier of –1 is 9). To prevent blackout, the pilot must roll a 9 or better with two dice. Failure of the roll results in Blackout, which lasts until the End Phase of the current game turn, when he can attempt a Consciousness roll.



SEQUENCE OF PLAY

INITIATIVE PHASE

1. One player from each side rolls both dice to determine his team's initiative. The team with the higher roll has the initiative throughout the turn. Ties are rerolled.

MOVEMENT PHASE

2. The team that lost the initiative chooses one craft, and moves it first.

3. The team that won the initiative moves one craft. Movement alternates between players until all craft have been moved. If, prior to any pair of movements, one team has twice as many craft left to move as the other team, that team moves two craft, rather than just one. (If one team has three times as many craft, it moves three each time, and so on.) This means the team that won the initiative moves at least one of its craft last.

ATTACK PHASE

4. The team that lost the initiative chooses a craft that will declare fire first. The player controlling that craft declares any attack he plans to make using his craft's weaponry.

5. The team that won the initiative chooses a craft that will declare fire next. The player controlling that craft declares his attacks. Declaring alternates until all fire has been declared. If, prior to any pair of declarations, one team has twice as many craft left to declare as the other team, that team declares two craft, rather than just one. (If one team has three times as many craft, it declares three each time, and so on.) Thus, the team that won the initiative declares the last attack.

6. Weapons fire is resolved one craft at a time. As all combat is considered simultaneous, the order does not matter. All attacks by one craft should be resolved before those of any other craft are resolved to more easily keep track of which weapons have fired.

7. Damage from weapons attacks takes effect. Damage is recorded as attacks are resolved, but it does not affect the craft until after *all* weapons attacks have been resolved. At that point, all damage takes effect immediately.

HEAT PHASE

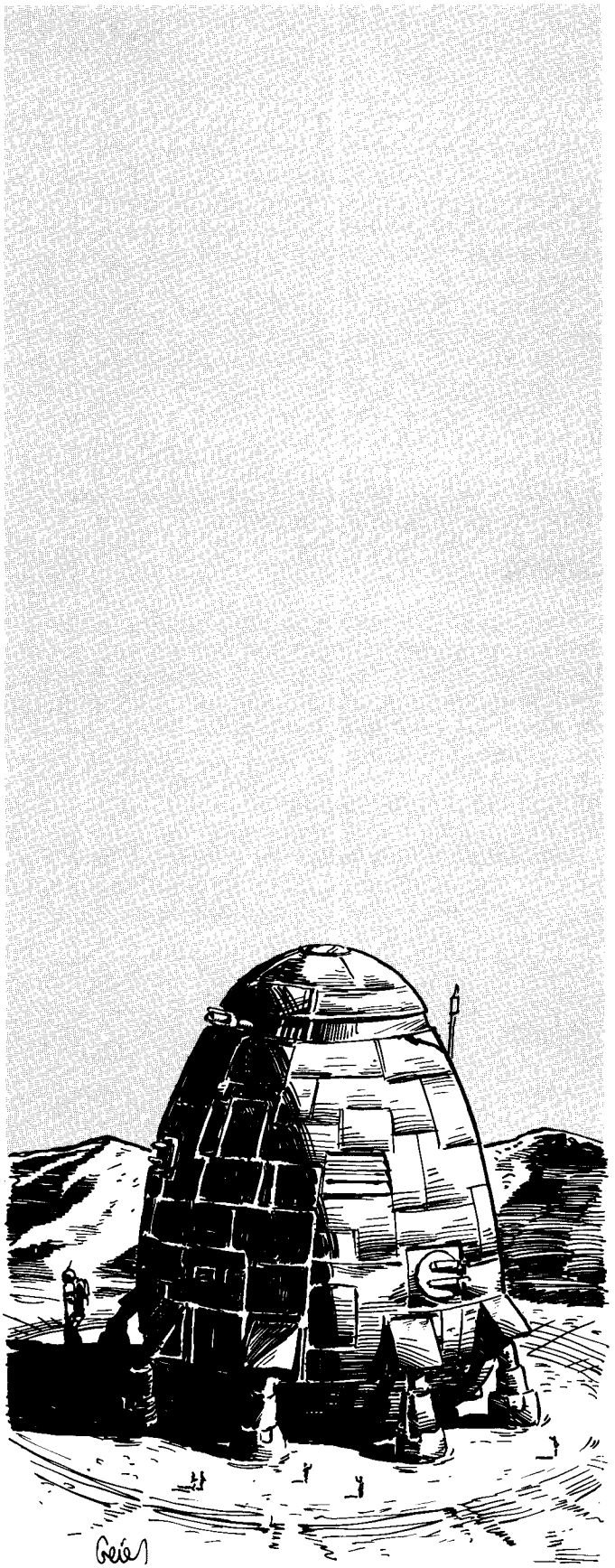
8. Players adjust the Heat Scales of their AeroSpace fighters to reflect any heat built up or lost during the turn. Any temporary or permanent damage caused by excessive internal heat goes into effect at this time.

END PHASE

9. Pilots who were wounded and fell unconscious in a previous turn roll to see if consciousness is regained. Players who have simply blacked out (without taking any damage when they did so) roll to see if consciousness is regained.

10. Players roll to see if any temporary movement or fire restrictions can be removed. Restrictions that took effect in this turn cannot be removed until the next turn.

These ten steps are repeated until only one team's craft are left, or until one team meets its scenario objectives. The team with the last surviving craft is the winner. If the last craft from each team are destroyed simultaneously, the game is a tie.



MOVEMENT

In space, there is no friction to slow down a craft. On the Space Map, an AeroSpace fighter or DropShip will travel in a straight line with no change in velocity unless some outside force acts on the craft. Gravity and thrust are the two most important forces that affect the movement of AeroSpace fighters and DropShips.

Craft change their position on the Space Map by using two different types of movement: normal Thrust and OverThrust. The only difference between these two types of movement is the number of thrust points available in that turn and the cost of those points. A craft's velocity is limited only by the size of the playing area. A craft must always move a number of hexes equal to its velocity, however. If forced off the mapsheet, the craft is out of the game. Care must be taken when traveling at high velocities because of the high thrust cost for turns.

FACING

Every hex on the map has six edges, called hexsides. In **AeroTech**, every fighter and DropShip must face one of these six hexsides. In this game, a ship's facing is considered to be the same as the direction its nose is pointing. A fighter's facing affects both its movement and its combat, and can be changed only during the Movement Phase.

TYPES OF MOVEMENT

Each vessel is rated in two important categories: Thrust and OverThrust. Combined with the craft's Structural Integrity (SI), these ratings determine the maneuverability of any fighter or DropShip.

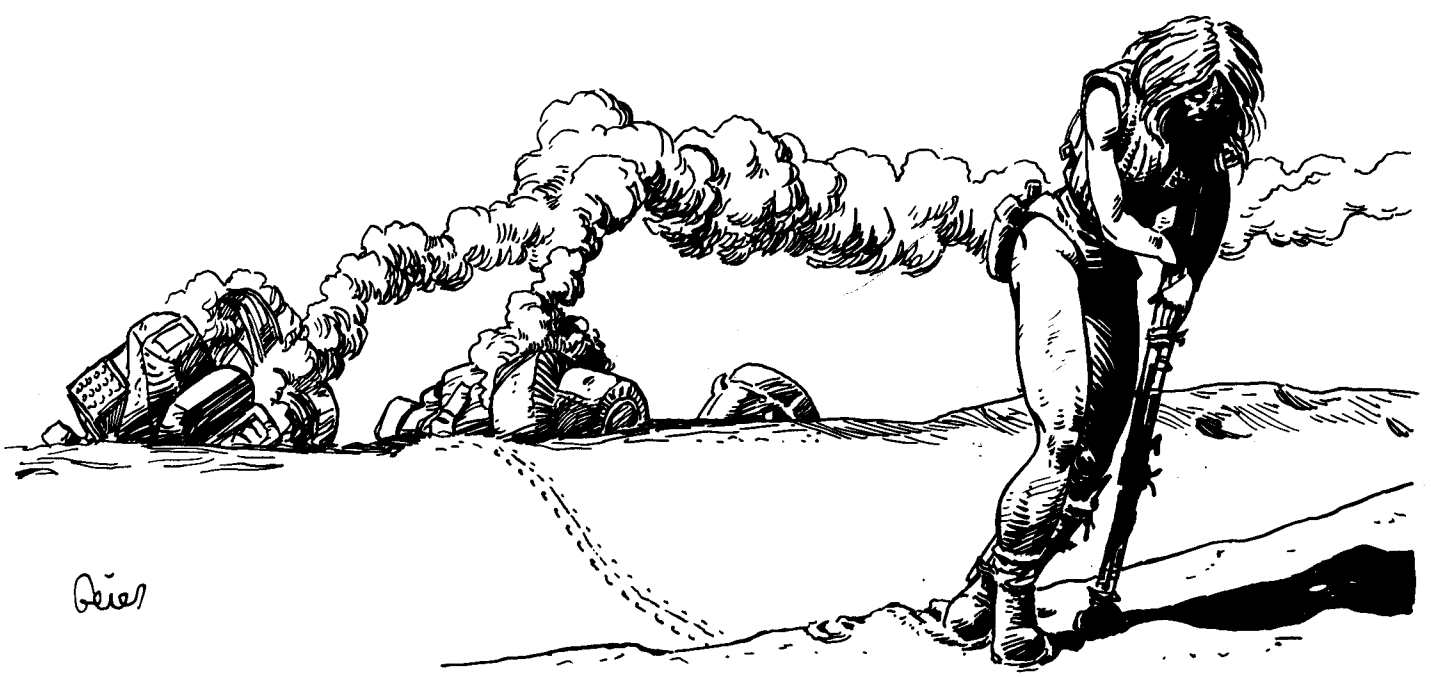
THRUST

Thrust is used to make vector changes or turns. The velocity of the vessel (i.e., the number of hexes it moves in one turn) determines the amount of thrust needed to make a 60°, or one-hexside, facing change. It costs much more to make a facing change when moving at high velocities. Each thrust point costs 1 Fuel Point. When a vessel runs out of fuel in orbit, it will continue in the direction it is facing, with no velocity or facing changes allowed. The effects of running out of fuel while in the lower atmosphere is described in the **Fuel and Withdrawal from the Low Altitude Map** optional rules.

OVERTHRUST

OverThrust is the fighter's ability to get Thrust Points above its Thrust rating, and is normally 1.5 times the Thrust rating (rounded up). Overthrust points are no different from Thrust points, except that it costs 2 Fuel Ppoints per overthrust point generated, rather than just 1. OverThrust also adds 1 Heat Point for every point of overthrust used. Throughout the rest of these rules, "Thrust Points" will also include "overthrust points," unless the rule specifically states otherwise.

For example, a fighter with a Thrust rating of 10, and thus an OverThrust rating of 15, spends 13 Thrust Points in one turn. It will cost this fighter 1 Fuel Point for each Thrust Point up to its Thrust rating, and 2 Fuel Points and 1 Heat Point for each Thrust Point above its Thrust rating, to the limit of its OverThrust rating. In this case, the total cost to the fighter is 16 Fuel Points and 3 Heat Points.



STRUCTURAL INTEGRITY (SI)

The *Structural Integrity* (SI) of a vessel is initially equal to its Thrust rating or its tonnage divided by 10 (rounded down), whichever is greater. The SI rating is a measure of how much stress and strain the craft can take when maneuvering. It is also a measure of the craft's condition. When a vessel's Structural Integrity is reduced to 0, the craft breaks up, though the wreckage may continue to drift in space.

Whenever a pilot on the Low Altitude map attempts a maneuver or series of maneuvers in one turn requiring Thrust Points higher than his craft's SI rating, he must make a *Piloting* Skill roll. This skill roll is modified by the number of Thrust Points exceeding the current Structural Integrity rating. If the roll fails, the craft loses one SI point, and completes the maneuver.

In space, this *Piloting* Skill roll is made only whenThrust Points spent in one hex exceeds the craft's current Structural Integrity. Thrust spent for acceleration or deceleration in that hex is also included.

If the first roll is required, a second *Piloting* Skill roll is also required to see if the pilot blacks out. This procedure is explained in **Pilots: High Thrust Maneuver Damage**.

For example, a fighter with an SI of 10 and a current velocity of 10 makes two facing changes (8 Thrust Points) and then accelerates 5 (5 Thrust Points), all in the same Space Map hex, for a total of 13 Thrust Points. This exceeds his current SI by 3. The first Piloting Skill roll required is at an 8 (Piloting Skill level 5 plus difference in thrust and current SI 3 is 8). The pilot must roll 8 or greater with two dice to avoid losing 1 SI point. He must also make a roll to avoid blacking out.

STACKING

While in the air, any number of friendly or enemy 'Mech cocoons, fighters, and DropShips may stack together.

VELOCITY

Movement on the Space Map is a matter of checking the craft's initial velocity to see how many hexes must be moved and how much thrust it costs to change facing by one hexside. The *Thrust Point Costs* chart describes how many Thrust Points it costs to change facing by 60° (one hexside) for each possible velocity. A craft may change facing by more than one hexside in a single hex, as long as its velocity is at least 1 and it has the Thrust (or overthrust) Points to do so. Thrust Points may also be spent to increase or decrease velocity. Any acceleration or deceleration must be done as the very first or very last part of movement. The craft may only accelerate or decelerate once per turn, and may not split any velocity change between the first and last part of the craft's movement. Also, no craft may turn in place without moving. All craft must move at least one hex forward before spending any thrust on maneuvers. This includes ships with 0 velocity, which must accelerate to at least a velocity of 1 before spending thrust to change facing.

When a craft accelerates or decelerates at the beginning of its turn, the craft's velocity for the whole turn is the new number. If a craft accelerates or decelerates at the end of its turn, only its ending velocity changes. It cannot move more or less than its beginning velocity—this final change in velocity does not affect movement in the current phase in any way.

A craft may change its velocity by as much as its current OverThrust rating.

THRUST POINT COSTS

Velocity	Thrust Point Cost per Hexside Facing Change
0	Not Allowed
1 – 5	2
6 – 10	4
11 – 15	6
16 – 20	8
21 – 25	10
26+	12

A fighter with a Thrust rating of 5, OverThrust rating of 8, and current velocity of 7 needs to make three turns in order to fire at an enemy DropShip. Checking the Thrust Point Costs chart, the pilot finds that he needs 12 Thrust points (3 turns, at 4 Thrust Points per turn) to make the turns at his current velocity. His fighter is not capable of making this series of maneuvers. However, by decelerating to 5, the cost per turn drops to 2 Thrust Points, making the maneuver possible. (Deceleration by 2, plus 3 turns at 2 Thrust Points per turn is 2 + (3 x 2) which equals 8 Thrust Points.)

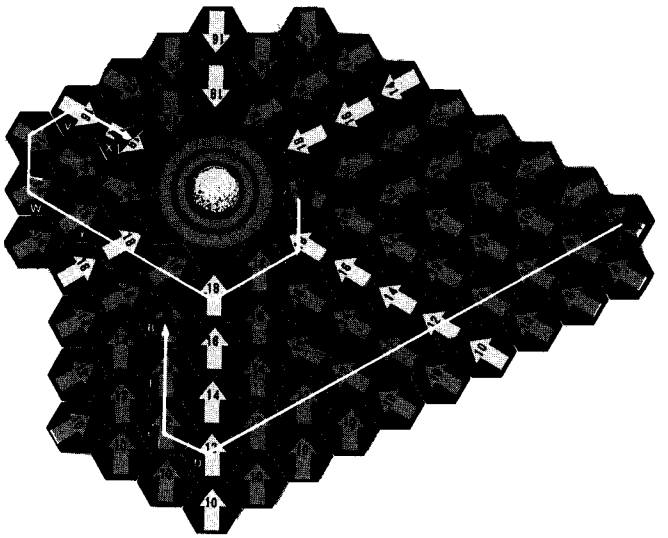
GRAVITY

Movement and maneuvers in space would be easy except for the effects of gravity. Planets and moons exert varying gravitational forces at various distances, as noted by the arrows on the Space Map. The arrows force changes in facing and other movement dislocations that pilots must either counteract or take advantage of.

GRAVITY ARROWS

There are two types of gravity arrows: gray and blue. Gray arrows take effect only when a craft *ends* its movement in a gray arrow hex. If a craft ends its movement in a gray arrow hex and its ending velocity is not higher than the number on the arrow, the craft is displaced one hex in the direction of the arrow. There is no facing change. However, if the craft's ending velocity is higher than the number of the arrow, it is not affected by the gray arrow.

Blue arrows have the same effect as gray arrows, with one addition. *Whenever* a craft enters a blue arrow hex and its velocity is not higher than the number on the arrow, it must make a forced facing change in the direction of the planet or moon. If the craft is already pointing directly at the planet or moon, there is no facing change. Thrust Points may be spent in the normal way for facing changes to counteract this gravitational effect.



For example, a fighter with an initial velocity of 10 wishes to move from Hex A to Hex B. Having plotted out his move beforehand, he begins the turn by accelerating to 11 (1 Thrust Point). He moves four hexes to Hex C. The fighter must make a facing change in Hex C because its velocity is not higher than the 12 on the blue arrow. As this would turn it to face straight at the planet, the pilot spends 6 Thrust Points to override the forced change. He continues straight to Hex D, where another facing change is required by a blue arrow. This time, the pilot lets the change happen and turns toward Hex E, spending his 10th hex of velocity to move to Hex E. If the pilot ended his turn here, the gray gravity arrow would pull him one hex toward the planet to Hex F. However, since he has accelerated to 11, he has 1 more hex of movement. To get to Hex B, the fighter must make another facing change in Hex E (at a cost of another 6 Thrust Points) and then move forward to Hex F, where the gray gravity arrow pulls the fighter to Hex B. During this turn, the fighter increased its velocity to 11 and spent 13 Thrust Points (1 + 6 + 6).

The fighter in Hex Z has an initial velocity of 7, Thrust rating of 12, OverThrust rating of 18, and Structural Integrity of 12. He wishes to move to Hex X. It would be difficult to move around the 18-arrow ring and stop in Hex X (without being pulled into the planet's upper atmosphere), so he accelerates to 9 (2 Thrust Points) and starts around the planet with a slightly different plan. By the time he gets to Hex Y, he's made two blue arrow facing changes and moved 5 of his 9 hexes. At Hex Y, he pays another 4 Thrust Points to avoid the forced facing change in that hex. He continues for his final 4 hexes, making two more facing changes (for 8 more Thrust Points) and is in Hex V at the end of his movement. The blue arrow in Hex V should turn him to face the planet directly and pull him 1 hex closer to the planet (because he is ending his movement there at a velocity of 9), but he pays yet another 4 Thrust Points to avoid this final facing change. He ends up in Hex X, with just the facing he had planned, at a total cost of 18 Thrust Points (2 + 4 + 8 + 4).

The costs: He's spent 24 Fuel Points (12 for 12 Thrust Points, plus 12 more for 6 Overthrust Points) and added 6 Heat Points (for the 6 Overthrust Points). He doesn't have to make a Piloting Skill roll for Structural Integrity because he didn't spend more Thrust Points than his SI in any one hex.

ENTERING THE ATMOSPHERE

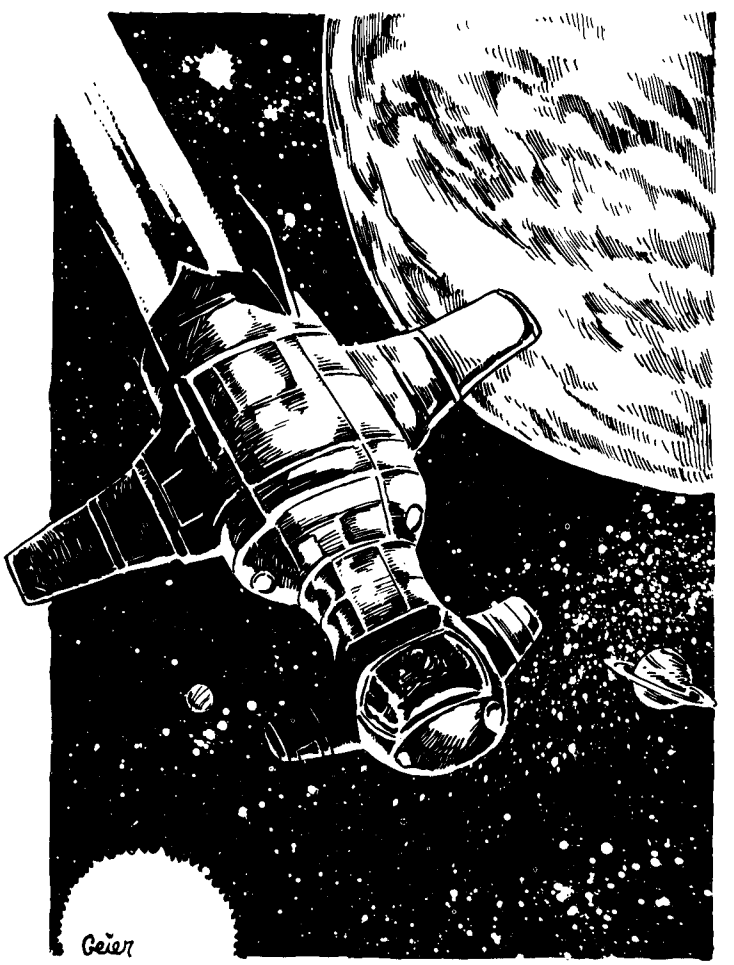
Most inhabited planets have an extensive atmosphere. The boundary between open space and the atmosphere is critical to all spacecraft. Intentionally or unintentionally crossing this boundary requires a *Piloting* Skill roll. There are two ways to enter the atmosphere: with powered flight or with a dead stick.

AeroSpace fighters with one or both wings destroyed (no armor points left) may not enter the atmosphere. Any fighter that does so is automatically destroyed.

A fighter with no nose adds an additional +2 modifier to all *Piloting* Skill rolls required in the atmosphere. This includes entry, movement restriction recovery, and landing. In addition, all of its movement rates in the atmosphere are halved.

POWERED-FLIGHT ENTRY

Powered flight is the safest way to enter an atmosphere. To make a powered-flight entry, a craft must enter the atmospheric ring of hexes. It must have spent Thrust Points to make a facing change in the 18-arrow ring, or it must now spend as many Thrust Points as it costs to make a facing change at its current velocity. (These thrust points are needed for the critical reentry attitude adjustments.) It can enter the atmosphere by being pulled one hex closer to the planet at the end of its movement, but the forced facing change which accompanies that gravitational pull does not qualify as the required facing change just described.



DEAD STICK ENTRY

A dead stick entry occurs whenever a ship enters the atmospheric ring and cannot or does not spend the required Thrust Points to make the adjustments necessary for safer entry. The *Other Modifiers* list several other reasons why an entry must be a dead stick entry.

ATMOSPHERIC ENTRY PILOTING SKILL ROLL

Whether powered or with a dead stick, a *Piloting* Skill roll is required when entering a planet's atmosphere. The *Atmospheric Entry Modifiers* chart lists possible modifiers to this roll, including a modifier for current velocity which must be applied to the roll.

ATMOSPHERIC ENTRY MODIFIERS

Current Velocity	Powered Entry	Dead Stick Entry
0	+3	+10
1 – 2	+2	+8
3 – 4	+1	+6
5 – 6	0	+4
7 – 8	+1	+2
9 – 10	+2	+4
11 – 12	+3	+6
13 – 14	+4	+8
15 – 16	+5	+10
17 – 18	+6	+12
19+	+7	+14

Other Modifiers *

Pilot unconscious or blacked out	+6
Plant shutdown	+4
No thrust points available because of damage	+4
No thrust points available because of restriction	+4
Craft out of fuel	+4
Craft suffering random movement	+3
Craft's controls are locked	+2
Craft suffering a turn restriction	+1

* If any of these modifiers apply, the *Dead Stick Entry* column is used.

If the skill roll is successful, then the craft successfully enters the atmosphere and builds up a small amount of heat. Heat build-up is equal to 10 minus (the result of the skill roll minus the skill roll target number). Its end-of-turn velocity is 0. In addition, the craft may change its facing to any direction desired.

If the skill roll fails, consult the Failed Atmospheric Entry chart. The first column (labelled *Difference*) lists the difference between the skill roll target number and the actual roll. Find this difference to use the chart.

FAILED ATMOSPHERIC ENTRY

Difference	Result
1	Entry successful. 5 points of nose damage, and add 15 Heat Points.
2	Entry successful. 10 points of nose damage, and add 20 Heat Points.
3	Entry successful. 15 points of nose damage, and add 25 Heat Points.
4	Bounced off atmosphere. 5 points of fuselage damage, and add 10 Heat Points.
5	Bounced off atmosphere. 10 points of fuselage damage, and add 12 Heat Points.
6	Bounced off atmosphere. 15 points of fuselage damage, and add 14 Heat Points.
7	Bounced off atmosphere. Lose 1 SI point, 10 fuselage points, and add 16 Heat Points.
8	Bounced off atmosphere. Lose 2 SI points, 10 fuselage points, and add 18 Heat Points.
9	Bounced off atmosphere. Lose 3 SI points, 10 fuselage points, and add 20 Heat Points.
10+	Craft burns up in entry.

A craft that has bounced off the atmosphere ends its movement in the last space hex occupied before attempting entry. The craft is facing away from the planet, and its end-of-turn velocity is 0.

Entering the atmosphere is the only time that a craft does not have to move as many hexes as its current velocity. Upon entering, the movement rules change completely, as noted below.

For example, a fighter with a velocity of 15 decides to enter the atmosphere. The pilot wisely chooses to make a powered entry and spends 6 Thrust Points to do so. He must make a Piloting Skill roll with a powered entry modifier of +5. That means he needs a roll of 10 or greater to safely enter the atmosphere. If he rolled an 11, he would end his move in the atmospheric hex he entered. His velocity would be 0, and he would have generated 9 Heat Points (10 minus the difference between the actual die roll and the target 10). If he rolled less than 10, say 5, he failed to safely enter the atmosphere and must check the Failed Atmospheric Entry chart.

To get the result from this chart, subtract the die roll from the target number; in this case 10 - 5 = 5. The 5 result means that entry failed and the fighter ends his movement in the last all-space hex of his intended movement. His facing is away from the planet, and his velocity is 0. The fighter suffers 10 points of fuselage damage and generates 12 Heat Points.

MOVEMENT AT HIGH ALTITUDE

Once a craft enters the atmosphere (and thus is at high altitude), it must end one turn there. In the next turn, it has three choices: it can return to space, remain at high altitude, or move to low altitude. (If it moves to low altitude, it moves off the Space Map and onto the Low Altitude Map.)

To return to space, turn the craft toward space and begin normal movement with a base velocity of 1. This 1 velocity is free, and may be increased normally by spending thrust points.

To remain at high altitude, the craft either spends 1 Thrust Point and remains in the same hex or moves to another atmospheric ring hex at a cost of 2 Thrust Points per hex. Craft at high altitude may fire at, and be fired upon by, any other craft in space or at high altitude (assuming a line-of-sight exists). Facing changes do not cost thrust points at high altitude.

It takes one turn to move from high altitude to low altitude. During that turn, the descending craft cannot attack or be attacked. Once at low altitude, the craft can fire at other low altitude craft, strafe or dive-bomb ground targets, or land. It cannot fire at or be fired upon by any craft in space or at high altitude. Craft at low altitude are placed on the Low Altitude Map until they land or return to high altitude.

A craft suffering random movement at high altitude ends its turn facing in a random direction. The dive-bomb scatter diagram (in **Ground Targets**) should be used to determine the new facing, with the "1" direction facing directly away from the planet. A craft that spends no thrust to maintain its position at high altitude automatically descends to low altitude.

MOVEMENT AT LOW ALTITUDE

Once a craft reaches low altitude, its movement is followed on the Low Altitude Map. Friction and drag play a large part in lower atmospheric movement. At low altitude, a fighter must spend 1 Thrust Point per hex moved. Normal facing changes are free, but a one-hexside facing change is only allowed at certain intervals; the necessary interval of straight movement is specified on the *Low Altitude Turns* chart. The chart's figures are based on velocity, with the result that a craft has a tighter turning arc the slower it moves. A craft may not make any facing changes without travelling the required number of hexes, nor may a craft ever make a two-hexside facing change. (These restrictions apply only to normal facing changes, not to **Special Maneuvers**.)

Since conventional aircraft need an atmosphere in which to operate their engines, they may only move on the Low Altitude Map. Conventional aircraft are much more maneuverable than their AeroSpace counterparts. Therefore, conventional aircraft have smaller turning arcs and may employ special maneuvers that are not available to AeroSpace fighters.

DropShips may not move or fire while on the Low Altitude Map. If a DropShip enters the Low Altitude Map, it must land or return to high altitude the next turn.

A craft that moves 0 or runs out of fuel must try to land.

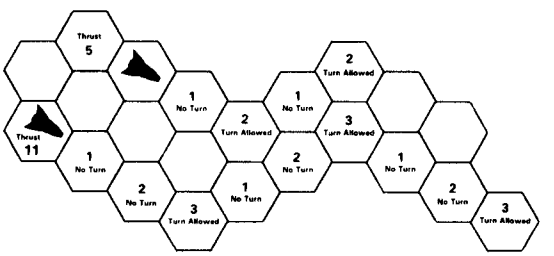
There are many more different forces acting on a craft in an atmosphere. Therefore, players must make SI rolls for every turn in which the total thrust spent during the whole turn exceeds the craft's *current* SI. (This is different from movement in space, where the skill roll is required only if total thrust spent in a single *hex* exceeds current SI.) A pilot who blacks out during flight at low altitude must recover on his first attempt, or his craft will crash during the next turn.

A craft that suffers random movement damage at low altitude (see the *Atmospheric Control Surface Critical Hits* table) crashes to the ground and is destroyed.

LOW ALTITUDE TURNS

Velocity	Minimum Number of Hexes of Straight Movement (Aero Fighter)	(Conv. Fighter)
1 – 3	1	1
4 – 6	2	1
7 – 10	3	2
11 – 15	4	3
16+	5	4

For example, an AeroSpace fighter with a velocity of 5 must move two hexes forward before making a turn, but that turn will be free. A conventional fighter with a velocity of 5 must move only 1 hex forward before turning.



★ SPECIAL MANEUVERS ★

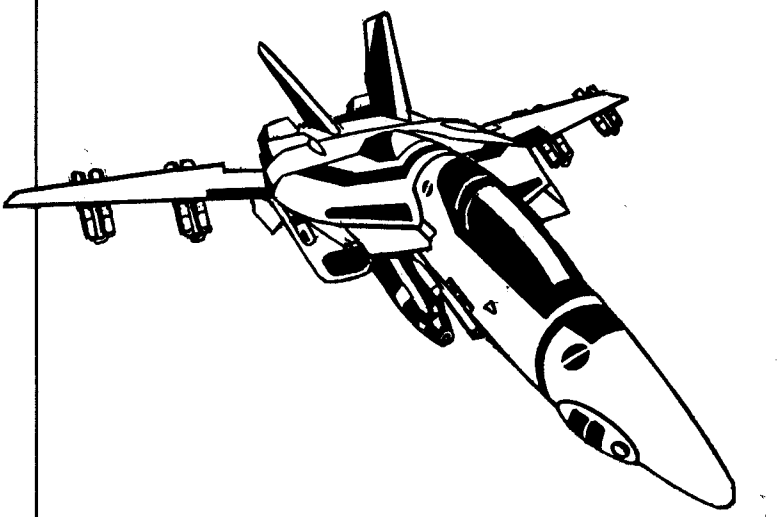
In addition to free facing changes, the atmosphere also makes several acrobatic maneuvers possible. The **Special Maneuvers** diagrams show these maneuvers, their thrust cost, and the result of a failed maneuver. They can be attempted at any time during a fighter's movement. Attempting any of these maneuvers requires a *Piloting* Skill roll, which is modified by the difficulty of the maneuver. A successful skill roll results in the fighter moving as shown by the solid lines in the diagram. A failed roll results in the movement indicated by the dotted lines.

AeroSpace fighters may only attempt Special Maneuvers 1 through 11. Conventional aircraft may attempt any of the maneuvers but 15; only VTOL aircraft may attempt Special Maneuver 15. Special Maneuvers 14 and 15 allow a craft to cover less ground than its current velocity normally requires, by spending more thrust to move fewer hexes.

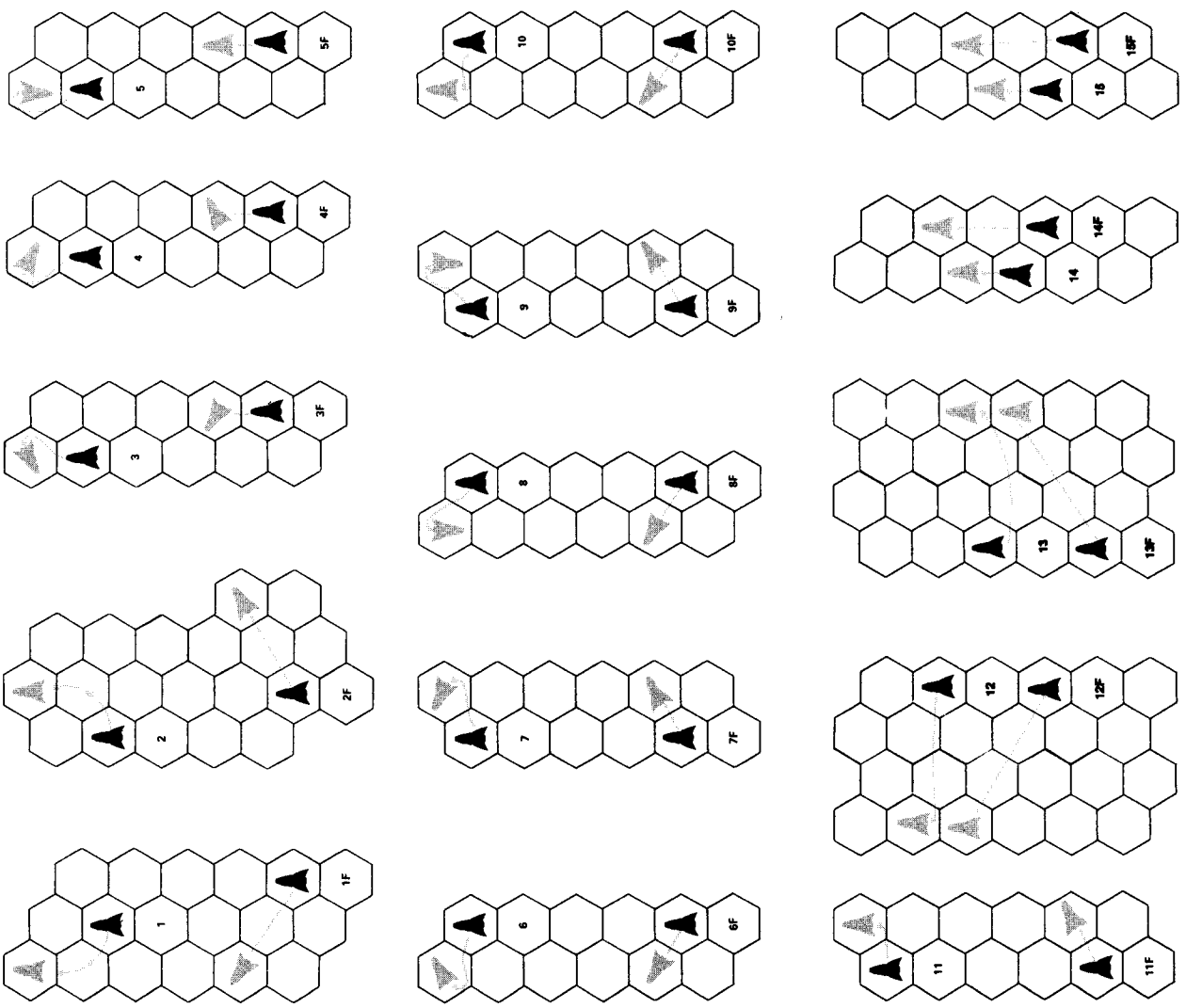
Special Maneuvers 3 and 7 may not be attempted by a craft with a no-left-turn restriction. Maneuvers 4 and 6 may not be attempted by a craft with a no-right-turn restriction. Maneuvers 5 and 8 may not be attempted by a craft with both a no-left-turn and a no-right-turn restriction.

SPECIAL MANEUVERS

Maneuver	Thrust Required (Aero. Fighter)	Thrust Required (Conv. Fighter)	Skill Roll Modifier
1	4	3	+2
2	4	3	+2
3	3	2	+1
4	3	2	+1
5	3	2	+1
6	4	3	+2
7	4	3	+2
8	3	2	+2
9	3	2	+2
10	2	1	0
11	2	1	0
12	NA	4	+1
13	NA	4	+1
14	NA	3	+1
15 (VTOL)	NA	4	+1



SPECIAL MANEUVERS



MOVEMENT TO HIGH ALTITUDE

In addition to the above maneuvers, an AeroSpace fighter or DropShip may elect to return to high altitude from the Low Altitude Map. To do this, a fighter must declare at the beginning of its Movement Phase that it is doing so and spend 1 Thrust Point. The fighter is not moved during the turn and may not make any attacks that turn (it is considered to be pointing directly upwards on it tail, though it does retain its current facing for combat purposes). However, it may be attacked by enemy craft as usual. In the End Phase of the turn the fighter is removed from the Low Altitude Map and placed on any high altitude hex of the Space Map.

LANDING

A craft may land only if it has spent at least one complete turn (10 seconds) at low altitude. The fighter may move only one Low Altitude Hex in the turn in which it attempts to land. It must make a successful *Piloting* Skill roll to land safely. The *Piloting* Skill roll is modified by several factors, as noted in the *Reduced Structural Integrity Modifiers* and *Other Landing Modifiers* charts.

OTHER LANDING MODIFIERS

Effect	Modifier
Craft Condition Modifiers	
Craft under movement restriction	+4
Craft's nose armor is destroyed	+2
Craft has lost 1/2 of thrust capability	+2
No thrust is available (fighter or aerodyne DropShip)	+4
No thrust is available (spheroid DropShip)	+8
Terrain Modifiers	
Craft landing on manned, friendly airfield	–2
Craft landing on unmanned, friendly airfield	–1
Craft landing on road or other paved surface	0
Craft landing on unfriendly airfield	+1
Craft landing in unpaved Clear Hex	+2
Craft landing in Water Hex	+3
Craft landing in Building Hex	+3
Craft landing in Light Woods Hex	+4
Craft landing in Heavy Woods Hex	+5

If the *Piloting* Skill roll is successful, the craft lands safely. If the skill roll fails, consult the *Failed Landing Results* chart. The first column (labelled *Difference*) lists the difference between the Skill Roll Target Number and the actual roll. Find this difference to use the chart. If any BattleMechs survive a DropShip crash, they take 1D6 + 6 turns to exit the ship.

If the landing terrain is not known, the *Random Landing Terrain* table can be used. There is a +4 modifier on this table if the planet is the home world of the craft.

REDUCED STRUCTURAL INTEGRITY MODIFIERS

Starting SI	Current SI																
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
1	0																
2	5	0															
3	7	3	0														
4	8	5	3	0													
5	8	6	4	2	0												
6	8	7	5	3	2	0											
7	9	7	6	4	3	2	0										
8	9	8	6	5	4	3	2	0									
9	9	8	7	6	5	4	3	2	0								
10	9	8	7	6	5	4	3	2	1	0							
11	10	9	8	6	6	5	4	3	2	1	0						
12	10	9	8	7	6	5	4	3	2	2	1	0					
13	10	9	8	7	6	5	4	3	3	2	2	1	0				
14	11	10	9	7	7	6	5	4	3	2	2	2	1	0			
15	11	10	9	8	7	6	5	4	3	3	2	2	1	1	0		
16	11	10	9	8	7	6	5	4	4	3	3	2	2	1	1	0	
17	12	11	10	9	8	7	6	5	4	3	3	3	2	2	1	1	0

To find the Reduced SI modifier for the *Piloting* Skill roll to land, cross-reference the craft's starting and current Structural Integrity values, and read off the number.

FAILED LANDING RESULTS

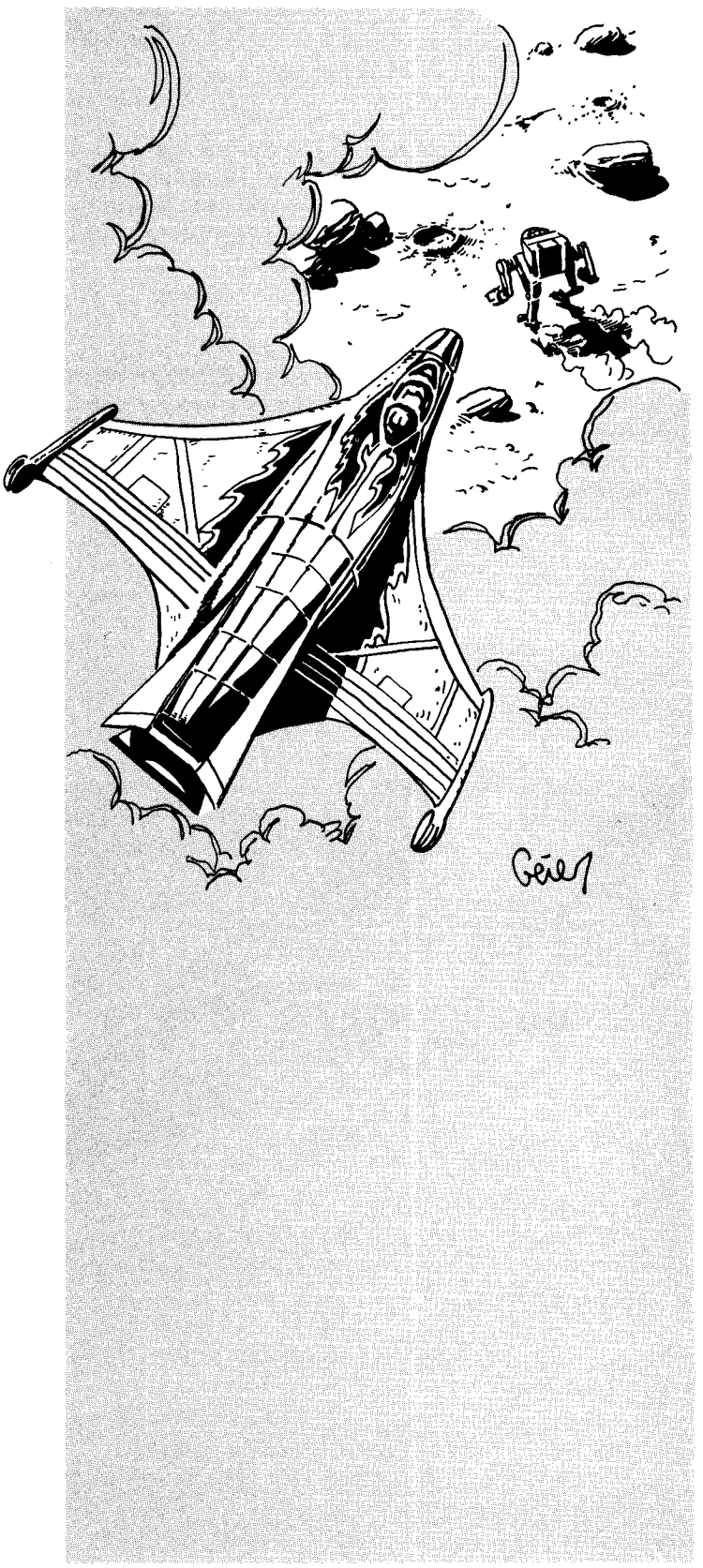
Difference	Effect
1	Nose landing gear collapses. 10 points of nose damage. *
2	Landing gear crushed; 10 points of nose damage and 10 points of wing or side damage (choose wing or side randomly). One door destroyed on DropShip. *
3	Landing gear crushed; 20 points of nose damage and 15 points of wing or side damage (choose wing or side randomly). Two doors destroyed on DropShip. *
4	Crash. Ship destroyed. Pilot escapes with no damage. If DropShip, all BattleMechs are O.K.
5	Crash. Ship destroyed. Pilot takes 1 hit. If DropShip, roll 2 dice for each BattleMech. If result is a 2, 3, 11, or 12, the BattleMech is destroyed.
6	Crash. Ship destroyed. Pilot takes 3 hits. If DropShip, roll 2 dice for each BattleMech. If result is a 2 – 4 or 10 – 12, the BattleMech is destroyed.
7	Crash. Ship destroyed. Pilot takes 4 hits. If DropShip, roll 2 dice for each BattleMech. If result is a 2 – 5 or 9 – 12, the BattleMech is destroyed.
8+	Crash. Craft explodes on impact. No survivors.

* On spheroid DropShips, apply damage to aft rather than nose.

RANDOM LANDING TERRAIN (2D6)

Roll	Terrain Type
2 – 3	Heavy Woods
4 – 5	Light Woods
6	Elevated terrain
7	Water
8	Open terrain
9 – 10	Road or other concrete surface
11	Unmanned airfield
12+	Manned airfield

For example, a fighter with an initial SI of 10 and a current SI of 7 wants to land immediately. The best spot is a Clear field. After spending one turn at low altitude, the pilot can attempt the landing. The Piloting Skill Number is 5 + 3 (SI modifier) + 2 (terrain modifier) = 10. If a 10 or better is rolled, the fighter lands successfully. If, for example, a 6 is rolled, the player would have to consult the Failed Landing Results chart. The Difference equals the Target Number (10) minus the actual roll (6). In this case, a 4 results. The chart says that the pilot crashed and completely destroyed his fighter during the landing; but that he escaped unharmed.

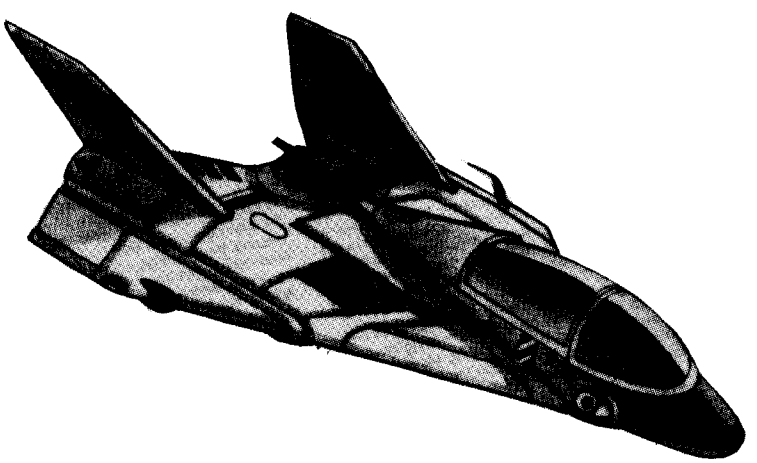


COMBAT

The object of any battle is to prevent the enemy from obtaining his objective. In most cases, this is accomplished by destroying the enemy. In **AeroTech**, the combatants are usually fighters and DropShips, with occasional ground targets and dropping BattleMechs coming into play.

WEAPONS FIRE

Weapon attacks first inflict damage on a craft's armor. When its armor is gone, the structural integrity and internal components of the craft take damage. When the structural integrity is reduced to 0, the craft has been destroyed. Each weapon can only attack one target in a turn (see **Strafing** and **Dive-Bombing** for exceptions).



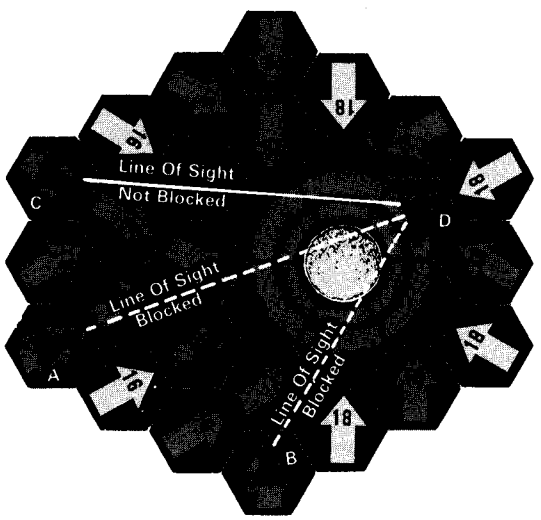
Once a successful attack has been made, find the damage location and record the damage.

Construction and **BattleTech: Combat** describe the assortment of energy weapons, ballistic weapons, and missile launchers available to an **AeroTech** craft. Every weapon has its own short, medium, and long range, its own damage effects, and its own heat generation rating. Some have ammunition requirements. The characteristics of each weapon are listed in the *Weapons and Equipment* charts, in **Construction**.

LINE-OF-SIGHT

Line-of-sight rules are very simple because there are only three types of terrain on the Space Map: open space, atmospheric hexes, and planets and moons. Only planets and moons block line-of-sight (LOS); craft cannot block LOS.

Whenever an imaginary line drawn from the center of the attacker's hex to the center of the target's hex intersects or touches the edge of a planet or moon hex, LOS is blocked and no weapons fire is allowed.



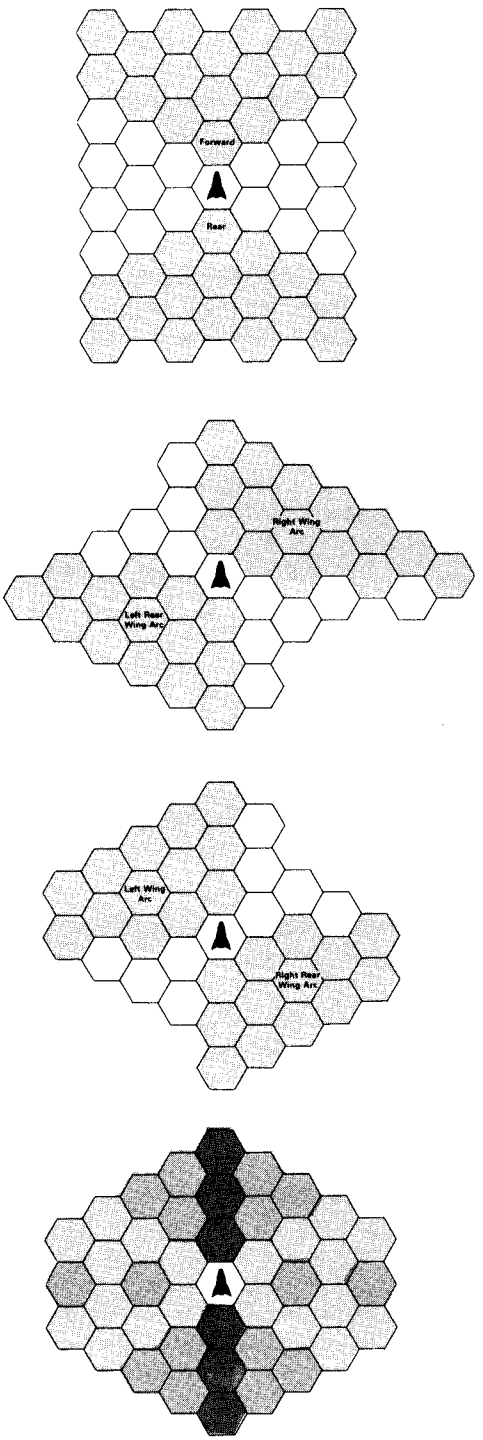
For example, if a fighter in Hex A wants to fire at a target in Hex D, an LOS check would have to be made. In this case, the imaginary line drawn from the center of Hex A to the center of Hex D clearly intersects the planet and LOS is blocked.

The LOS for the fighter in Hex B firing at the target in Hex D is also blocked, as the imaginary line runs along the side of the planet hex.

The fighter in Hex C has a clear line-of-sight to Hex D, as the imaginary line comes close to the planet hex but does not intersect, run along, or touch it.

FIRING ARCS

There are six basic firing arcs, as is shown in the following diagram. Only DropShips have rear-right and rear-left firing arcs. Because all weapons are rigidly mounted (there are no turrets), they can only fire at targets in their designated firing arcs.



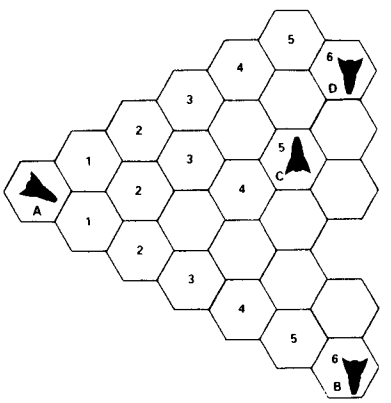
RANGE

Range is the distance between the attacking craft and its target. It is also the distance a weapon can fire. Range is determined by counting the number of hexes from the firing craft to its target, including the target's hex. Begin at the hex next to the attacker along the line-of-sight, and follow the shortest path to the target. The range has an effect on how easy or difficult it is to hit the target, with distant targets generally being harder to hit.

The scale on the Low Altitude Map is much larger than the scale on the Space Map. However, a weapon has the same ranges (in hexes) on both maps. (Atmospheric conditions greatly affect weapon fire, drastically cutting a weapon's range while on the Low Altitude Map.)

If target and attacker are in the same hex, the range is 1.

The ranges for all weapons are listed in the *Weapons and Equipment* charts. A weapon's maximum range is usually divided into thirds for its short, medium, and long ranges.



The ranges from the attacker in Hex A to the targets in Hexes B and D are both 6, and to the target in Hex C is 5.

TO-HIT PROCEDURES

A craft can fire if it is determined that a target is within range and there is a clear line-of-sight to it.

The first step is to determine the Base To-Hit Number of the craft's weaponry, which is based on its range. If the target is concealed by atmospheric hexes or the attacker's craft has been damaged, the Base To-Hit Number is modified.

The player then rolls two dice for each weapon to see if it hit the target. If the result is greater than the To-Hit Number, the weapon has hit its target.

Base To-Hit Number

The Base To-Hit Number for all weapons depends on the range. For each weapon a player intends to fire, he must consult the *Weapons and Equipment* charts to determine whether the range is short, medium, or long. Then consult the *Base To-Hit Numbers* chart to find the Base To-Hit Number.

The Base To-Hit Number is higher in **AeroTech** than in **BattleTech**, because the targets are often thousands of kilometers away.

BASE TO-HIT NUMBERS	
Range	**Base To-Hit Number**
Short	6
Medium	8
Long	10

To-Hit Modifiers

All applicable modifiers are now applied to the Base To-Hit Number; modifiers are cumulative.

★ *Gunnery Skill Modifier* ★

The Base To-Hit Number is modified by the Pilot's *Gunnery* Skill. For every *Gunnery* Skill level above or below 4, the Base To-Hit Number is increased or decreased by 1. The lower the *Gunnery* Skill level, the lower the modified To-Hit Number.

Atmospheric Modifiers

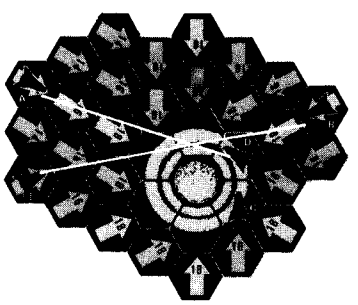
On the Space Map, whenever a craft fires into, out of, or through an atmospheric hex, the pilot must take into account atmospheric effects:

- There is a +2 modifier for firing into or out of an atmospheric hex.
- There is a +1 modifier for firing *through* an atmospheric hex (+1 per hex).
- However, there is *no* modifier for firing out of one atmospheric hex into an adjacent atmospheric hex, or for firing at a target in the attacker's hex.

Just as LOS is blocked if it intersects or touches the edge of a planet or moon hex, LOS is through an atmospheric hex if it intersects or touches the edge of that hex.

Craft at high altitude or in space cannot exchange fire with craft at low altitude.

There is no atmospheric modifier on the Low Altitude Map.



In this example, the fighter in Hex D has a +2 To-Hit Modifier when firing at Hex B (because it is firing out of an atmospheric hex). The fighter in Hex B has the same modifier when firing at Hex D. If the fighter in Hex D fires at Hex A, the total To-Hit Modifier is +3 (+2 because it is firing out of an atmospheric hex and +1 for each atmospheric fired through). Combat between Hex C and Hex D has no atmospheric modifier because they are in adjacent atmospheric hexes.

Combat between Hexes B and E has a +2 To-Hit Modifier (+1 for each atmospheric hex crossed by the line-of-sight).

Minimum Range Modifier

Some weapons, like particle beam projectors, autocannons, and long-range missiles, are designed for targeting at long ranges. When these weapons are used at close-range targets, they lose considerable effectiveness. This minimum effective range is listed in the *Minimum* column of the *Weapons and Equipment* charts. The number given is the range at which the weapon becomes less effective than normal—at that range, the To-Hit Number is modified by +1. For every hex closer, the modifier is increased by 1 more, so that the Range Modifier for some weapons is greater at close ranges than at maximum range.

Ground Attack Modifier

There is a –3 To-Hit Modifier for all fighter and DropShip attacks made on a fighter that is strafing or dive-bombing a ground unit in the turn.

Multiple Targets

Each weapon may fire only once per turn. However, a fighter with more than one weapon may fire at more than one target in a single turn. If it does so, it must specify one target as its primary target. Hitting any target other than the primary target is more difficult. There is a +1 To-Hit modifier for any shot at any other target during the turn. This modifier is not cumulative—the modifier for the third and fourth targets is still only +1.

DropShips ignore the multiple target modifier.

Heat and Damage Modifiers

Combat damage and heat build-up can modify a craft's To-Hit Number. These effects are discussed later in this chapter and in **Heat**.

Modified To-Hit Number

The modified To-Hit Number is the Base To-Hit Number plus all modifiers listed above that apply. If the modified To-Hit Number is 13 or greater, the shot automatically misses. If a player finds that an intended shot would result in an automatic miss, he can abort the attack, without suffering heat build-up or ammo expenditure. The weapon can be used to attack another target in the same turn.

TO-HIT ROLL

The To-Hit roll is made with 2D6. If the number rolled is equal to, or greater than, the modified To-Hit Number, the shot is successful.

Missile Hits

When a missile launcher attack is successful, the damage depends on how many of the fired missiles actually reached the target. During the 31st century, missile guidance technology for tactical combat is extremely primitive and not at all dependable.

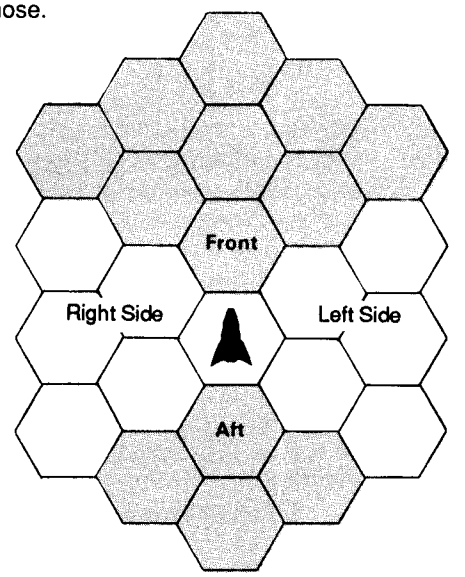
With a missile launcher attack, the modified To-Hit Number is calculated and the To-Hit roll is made, just as for other weapons, but the combat procedure has one extra step. If a missile launcher attack hits its target, the attacking player must then roll two dice and consult the *Missile Hits* table to find out how many missiles hit.

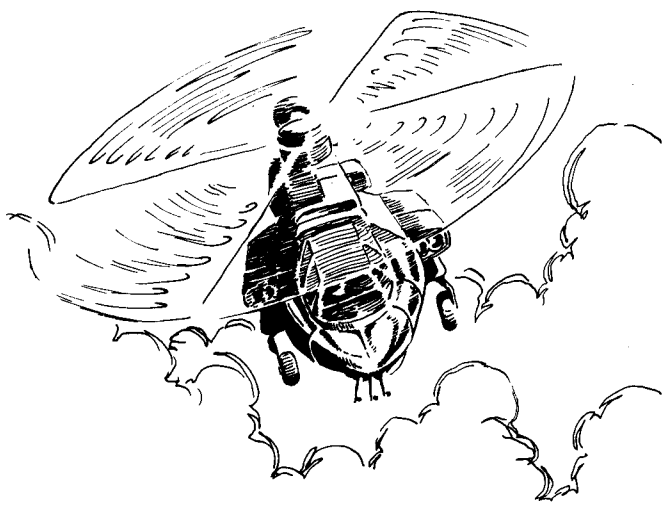
Find the number of missiles fired on the top row of the table. Cross reference this number with the roll. The result is the number of missiles that actually hit the target. Note that some advanced Clan and Inner Sphere weapon systems modify the roll. Also, anti-missile systems might reduce the number of missiles that hit. See **Construction: Advanced Equipment** for details.

Roll	MISSILE HITS (2D6) Number of Missiles Fired						
	2	4	5	6	10	15	20
2	1	1	1	2	3	5	6
3	1	2	2	2	3	5	6
4	1	2	2	3	4	6	9
5	1	2	3	3	6	9	12
6	1	2	3	4	6	9	12
7	1	3	3	4	6	9	12
8	2	3	3	4	6	9	12
9	2	3	4	5	8	12	16
10	2	3	4	5	8	12	16
11	2	4	5	6	10	15	20
12	2	4	5	6	10	15	20

ATTACK DIRECTION

When a weapon or missile hits, the attacker must determine whether he hit the nose, aft (fuselage), left, or right side of the target. Lay a straightedge from the center of the attacker's hex to the center of the target's hex. Find the hexside crossed by the straightedge on the accompanying diagram to find the side of the craft hit by the fire. If the straightedge crosses the joint between two sides, the defender chooses which side is hit by the attack. If firing at a target in the attacker's hex, the attack is directed at the target's nose.





★ DETERMINING HIT LOCATION ★

To determine the exact location of the hit, the attacker rolls both dice and consults the applicable column of the appropriate *Hit Locations* table for each weapon and short-range missile that hits. Use the *Fighter/Aerodyne Hit Locations* table for all fighters and aerodyne-shaped DropShips. Use the *Spheroid Hit Locations* table for all spheroid-shaped DropShips.

Long-range missiles are a special case. Divide the long-range missiles that hit into 5-point *clusters*: i.e., form as many 5-point groups as possible, gathering any remaining points into one smaller group, and determine a hit location for each cluster. (For example, with 13 points of damage, 5-point clusters result in two 5-point hits and one 3-point hit.)

FIGHTER/AERODYNE HIT LOCATIONS (2D6)

Roll	Nose	Aft/Fuselage	Left/Right Side
2	Cockpit/Bridge	Engine (Control)	Cockpit/Bridge
3	Nose (Weapon)	Fuselage (Control)	Wing (Weapon)
4	Fuselage	Fuselage (Heat Sink)	Engine (Heat Sink)
5	Right Wing	Right Wing	Fuselage (Bomb)
6	Nose	Engine	Wing
7	Nose	Fuselage (Heat Sink)	Fuselage (Door)
8	Nose	Engine	Wing
9	Left Wing	Left Wing	Nose
10	Fuselage (Bomb)	Fuselage (Heat Sink)	Engine (Heat Sink)
11	Nose (Weapon)	Fuselage (Control)	Wing (Weapon)
12	Cockpit/Bridge	Engine (Critical)	Engine (Critical)

SPHEROID HIT LOCATIONS (2D6)

Roll	Nose	Aft	Left/Right Side
2	Bridge	Engine (Critical)	Bridge
3	Nose (Weapon)	Fuselage	Front Side (Weapon)
4	Fuselage	Fuselage (Heat Sink)	Engine (Heat Sink)
5	Front Right	Rear Right	Fuselage
6	Nose	Engine	Front Side
7	Nose	Fuselage (Heat Sink)	Fuselage (Door)
8	Nose	Engine	Rear Side
9	Front Left	Rear Left	Nose
10	Fuselage	Fuselage (Heat Sink)	Engine (Heat Sink)
11	Nose (Weapon)	Fuselage (Gear)	Rear Side (Weapon)
12	Bridge	Engine (Critical)	Engine (Critical)

Table Explanations

Mark damage off of the designated location. Extra effects are noted below. If the craft doesn't have the equipment affected by the extra effect, there is no extra effect.

Bomb. The heaviest undamaged bomb carried by the fighter is destroyed (but the movement penalty for carrying the bomb is still in effect). This bomb cannot be ejected until the craft lands.

Cockpit/Bridge or *Bridge.* Roll on the *Cockpit/Bridge Critical Hits* table. Mark damage for DropShips against the nose. If a fighter's cockpit armor is completely destroyed, the pilot is killed.

Control. Roll on the *Atmospheric Control Surface Critical Hits* table and take the resulting movement restriction.

Critical. Roll on the *Engine Critical Hits* table.

Door. Roll 1D6; on a result of 1 or 2, a door has been damaged, and no BattleMech may leave by that door until groundside repairs are completed. This damage subtracts one from the number of BattleMechs that may be dropped in one turn.

Front. If a weapon location is hit, it is the front (non-rear) weapon location on the indicated side.

Fuselage. If a DropShip's fuselage takes 10 or more points of damage from a single hit, a compartment of the ship has been holed. If the ship is travelling in a vacuum, then explosive decompression results. To determine if any personnel are caught in the compartment, roll 2D6. If the result is 7+, then no one is caught. If the result is 6 or less, roll 1D6/2 (round up) to determine the number of personnel caught. Personnel without spacesuits die. See **DropShips and JumpShips** for a more detailed system of dealing with decompression.

Gear. Part of the ship's landing gear is destroyed. This will affect all landings and lift-offs.

Heat Sink. The craft loses 1 heat sink.

Rear. If a weapon location is hit, it is the rear weapon location on the indicated side.

Weapon. The craft loses 1 weapon from the damage location. If no weapons remain in that location, there is no extra effect. The defending player chooses the weapon to be destroyed.

COCKPIT/BRIDGE CRITICAL HITS (2D6)

Roll	Effect
2	Cockpit or bridge destroyed. If cockpit, pilot killed. Automatic decompression if the vessel is operating in a vacuum. If in space, craft continues moving straight at current velocity. If at high or low altitude, craft must attempt to land as soon as possible.
3	Thruster out until fixed after the battle. Roll on *Atmospheric Control Surface Critical Hits* table.
4	Computer damaged; +1 To-Hit Modifier until fixed after the battle.
5	Thruster controls damaged. Roll on *Atmospheric Control Surface Critical Hits* table.
6	Fire control damaged; +2 To-Hit Modifier until fixed after the battle.
7	Gunnery circuitry damaged; +1 To-Hit Modifier until fixed after the battle.
8	Radar system damaged; +2 To-Hit Modifier until fixed after the battle.
9	Fire control damaged; +1 To-Hit Modifier until fixed after the battle. Also, roll on *Atmospheric Control Surface Critical Hits* table.
10	Thruster damaged; +1 To-Hit Modifier until fixed after the battle. Also, roll on *Atmospheric Control Surface Critical Hits* table.
11	Computer out until fixed after the battle. Roll on *Atmospheric Control Surface Critical Hits* table.
12	Cockpit or bridge power system out until fixed after the battle. If in space, craft continues travelling straight at current velocity. If at high or low altitude, craft must attempt to land as soon as possible.

ENGINE CRITICAL HITS (2D6)

Roll	Effect
2	Engine explodes. Craft takes 1D6 + 1 points of Structural Integrity damage and 8D6 points of damage to the fuselage armor. No maneuvering allowed. If in space, craft continues travelling straight at current velocity. If at high or low altitude, craft must attempt to land as soon as possible.
3	Drive hit. Craft loses one-half of current Thrust until fixed after the battle.
4	Drive hit. Craft loses one-third of current Thrust until fixed after the battle.
5	Drive hit. Craft loses one-quarter of current Thrust until fixed after the battle.
6	Fuel hit. Craft loses 15 Fuel Points.
7	Fuel hit. Craft loses 10 Fuel Points.
8	Fuel hit. Craft loses 15 Fuel Points.
9	Engine shielding hit; +5 Heat Points per turn.
10	Engine shielding hit; +5 Heat Points per turn. Roll on *Atmospheric Control Surface Critical Hits* table.
11	Engine shielding hit; +10 Heat Points per turn. Roll on *Atmospheric Control Surface Critical Hits* table.
12	Engine explodes. Craft destroyed.

Thrust losses are rounded up and must always be at least 1 point. When an engine can no longer produce thrust, the craft must move straight at its current velocity (if in space) or must attempt to land in random terrain (if at high or low altitude). It may not fire its weapons or drop bombs.

ATMOSPHERIC CONTROL SURFACE CRITICAL HITS (2D6)

Roll	Effect
2	Random movement. Velocity increases by current Thrust rating.
3	Random movement. Velocity increases by thrust spent in current turn.
4	No left turns.
5	Random movement. Velocity increases by thrust spent in current turn.
6	No left turns.
7	Controls lock. No left or right turns.
8	No right turns.
9	Random movement. Velocity increases by thrust spent in current turn.
10	No right turns.
11	Random movement. Velocity increases by thrust spent in current turn.
12	Random movement. Velocity increases by current Thrust rating.

Control surface hits take effect at the beginning of the next turn and last until cancelled by a successful *Piloting* Skill roll made during the End Phase.

If a random movement result is rolled for a craft at low altitude, the craft automatically crashes and is destroyed.

RANDOM MOVEMENTS (2D6)

Roll	Effect
2	Hard left
3	Soft left
4	Hard left
5	Soft left
6	Straight
7	Straight
8	Straight
9	Soft right
10	Hard right
11	Soft right
12	Hard right

Hard. Forward one hex, 120° (2-hexside) turn.
Soft. Forward one hex, 60° (1-hexside) turn.
Straight. Forward one hex.

A *Piloting* Skill roll to maintain Structural Integrity must be made if a random movement, or a combination of the movement and other thrust expenditures, exceeds the SI of the craft. Even though the pilot applied no thrust for the random movement, use the maneuver's Thrust rating at the current velocity when determining if an SI roll should be made, and to (help) determine the modifier for the roll.

DAMAGE VALUE

The damage for every weapon is listed in the *Weapons and Equipment* charts. Missiles do the same amount of damage for each missile at any range, but the number of missiles that hit determines the total damage done. Long-range missiles have a damage value of 1, and short-range missiles a damage value of 2 for each missile that hits.

RECORDING DAMAGE

Every time a weapon hits, a hit location is determined and an armor box in that location is crossed off for every point of damage inflicted. When all of the armor boxes at a location have been crossed off, that location is completely destroyed. Further damage is transferred to the fuselage.

All weapons and ammunition in a destroyed location are lost. In addition, the Structural Integrity of the craft has been severely weakened. For each location that has lost all of its armor, mark off 2 SI boxes.

Transferring Damage

Damage transferred to the fuselage (but not damage taken directly by the fuselage) is doubled; every point of transferred damage becomes 2 points of fuselage damage. For example, if a craft's wing armor is gone and that wing takes a 10-point hit, 20 points of damage (10 x 2) is marked off the fuselage armor. When all of the fuselage armor is destroyed, damage is transferred directly to the craft's Structural Integrity boxes (still doubled, if it was first transferred to the fuselage).

When the engine armor is completely destroyed, every additional hit is marked off of the fuselage at double the damage (as with the transfer of damage from other locations). In addition, however, one roll must be made on the *Engine Critical Hits* table for each weapon that hit the engine in the turn it was destroyed.

AMMUNITION EXPENDITURES

Missile launchers and ballistic weapons possess limited amounts of ammunition. The Record Sheet for each craft should indicate the number of times a given weapon can fire before it is out of ammunition. (The *Weapon and Equipment* charts list how many shots are available for each weapon in a ton of ammunition.) The player keeps a tally on the Record Sheet, making a check mark every time the weapon is fired. When the number of check marks equals the amount of ammunition carried, the weapon is out of ammunition and may not be used for the rest of the game. Each weapon may only be fired once per turn.

DROPSHIP COMBAT

DropShips carry an enormous amount of firepower and enough heat sinks to effectively use it. Purists can keep track of weapons individually. For quicker play, an abstract system can be used. The abstract system condenses all of a DropShip's weaponry in each location into a set of 10-point fire factors. (Round to the nearest multiple of 10; round 5 down.) In combat, the DropShip shoots as many fire factors as desired, resolving each 10-point shot individually. Any shot that hits does 10 Damage Points to one location. Each fire factor builds up 7 points of heat.

For example, the right (forward) side of a Union Class DropShip has a PPC, two AC/5s, two LRM 20s, a large laser, and two medium lasers, for a total of 78 potential points (10 + 5 + 5 + 20 + 20 + 8 + 5 + 5). This rounds to 80, so for every turn of combat, this DropShip can fire eight 10-point shots, each shot costing 7 Heat Points.

The DropShip's statistics give the firing arcs for each fire factor. The range for DropShip fire factors are as follows:

DROPSHIP FIRE FACTOR RANGES

Short	1 – 6 hexes
Medium	7 – 12 hexes
Long	13 – 18 hexes

Each time a damage result calls for the DropShip to lose a weapon in that location, it loses one 10-point fire factor, instead.

Each DropShip carries enough fuel to travel from the jump point to the target planet, engage in combat, and return to the jump point.

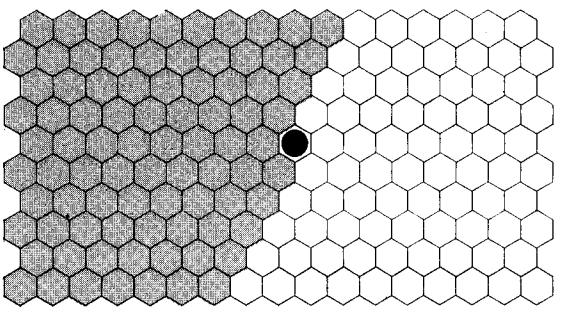
★ GROUNDED DROPSHIP COMBAT ★

DropShips that have landed on the surface of a planet may use their weapons to engage ground targets. For targeting and line-of-sight purposes, treat a grounded DropShip as a Level 4 building. For combat purposes, all of the DropShip's weapons are considered to be mounted at Level 4 (i.e., if the ship can see the target all weapons that have it in their firing arc can shoot at it).

Firing Arc

On the ground, most DropShips have different firing arcs than when they are in space. The exception to this is the aerodyne-shaped DropShip, whose firing arcs and damage arcs are identical whether on the ground or in space. The aerodyne's only problem is that it cannot fire at any targets located within the hex that it occupies while grounded.

Spheroid DropShips sit upright, with their nose arcs facing up into the sky and their aft arcs facing down into the ground. The only weapons that can fire at most ground targets are weapons mounted on the right and left sides. Nose-mounted weapons can be fired while the vessel is on the ground, but can fire only at airborne targets on the Low Altitude Map. Aft-mounted weapons can fire at ground targets, but only at targets within the same hex as the DropShip.

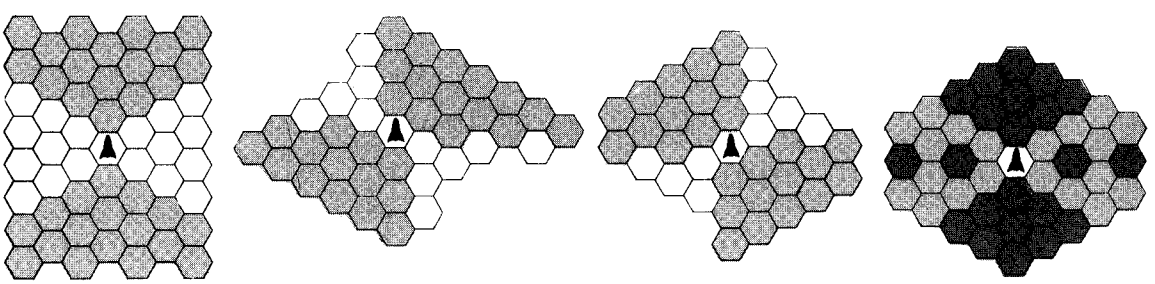


All right-side and right-rear firing weapons fire into the right arc. All left-side and left-rear firing weapons fire into the left arc. The above diagram illustrates the placement of these arcs.

Dropship Damage

DropShips on the ground take damage in the same way they do while in flight. The main difference is that they do not have to be concerned with velocities, maintaining flight, or explosive decompression. Each spheroid DropShip has two damage arcs, illustrated in the diagram below. The gamemaster must determine the orientation of these arcs before the start of combat. Both arcs are considered side arcs, so any hit on a spheroid DropShip from a ground attacker is rolled on the *Left/Right Side* column of the *Spheroid Hit Locations* table. Aerodyne DropShips use their normal hit location arcs.

In addition, a player with a unit in the same hex as a spheroid DropShip may fire at its aft arc instead.



Drive Exhaust Blast

DropShip drives spew out a tremendous amount of super-hot plasma, which inflicts a tremendous amount of damage on anything close to it.

For spheroid vessels, any object within three hexes of the landing or launching DropShip's hex is completely destroyed. Any equipment hit by the blast is unsalvageable. Objects from 4 to 6 hexes away from the DropShip take 10 Heat Points, and any personnel not inside a building or another unit are killed.

For aerodyne vessels, any object in the launching vessel's aft arc and within two hexes of the ship is destroyed. Any other objects within five hexes and inside the ship's aft arc take 10 Heat Points. Any personnel not inside a building or another unit are killed.

GROUND TARGETS

When a fighter is at low altitude, he may attack other low altitude craft or ground targets, but never both in the same turn. Each hex on the Low Altitude Map is roughly equivalent to a 22" x 27" **BattleTech** mapsheet. In order to attack a ground hex, a fighter must move straight for two Low Altitude Hexes immediately prior to ending his movement in the Low Altitude Hex which is over the **BattleTech** mapsheet. There are two types of ground attack: strafing and dive-bombing. DropShips may not strafe or dive-bomb ground targets.

STRAFING

When a fighter ends its turn in a Low Altitude hex containing a **BattleTech** battlefield, he may announce a strafing attack during the Attack Phase. This is the only attack he may make during the turn. After all ground forces have completed their movement, the fighter chooses a three-hex-wide row as his strafing area. This set of hexrows must run parallel to the fighter's direction of low altitude flight. Only weapons with a maximum range of 4 or more can hit a ground target during a strafing run. Every ground target within the strafing row (friend and foe) is attacked by the strafing craft's forward-firing energy weapons. Forward-firing ballistic and missile weapons are targeted at individual units. The Base To-Hit Number is 8, modified by:

- the pilot's *Gunnery* Skill (+1/level over 4; -1/level under 4),
- the condition of the strafing craft, and
- **BattleTech** target movement and target's terrain modifiers (except partial cover; there are no partial cover benefits).

The damage that each of the strafing craft's forward-firing energy weapons (with ranges of 4 or more) can cause are added together to determine its energy strafing factor, which is the amount of damage inflicted on each target hit. This damage is grouped into 5-point clusters; roll once on the *Strafing Damage to BattleMechs* table (if the target is a BattleMech) or the appropriate hit locations table (if not a BattleMech) for each 5-point cluster.

The attacking fighter may also target one unit in the strafing row for each of the craft's forward-firing non-energy weapons (with ranges of 4 or more). The selection of the attacked unit or units is up to the attacking player.

A ground target can be any BattleMech, vehicle, infantry unit, or building. Units inside buildings are protected from direct fire during a strafing attack, but the building can be attacked. Units hidden inside the building will suffer the consequences of that attack as per **BattleTech: Buildings**.

Strafing is a very powerful ground attack, and should heavily influence the outcome of any ground battle. It is up to defending fighters to prevent such attacks.

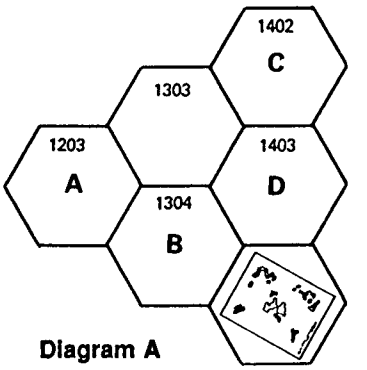


Diagram A

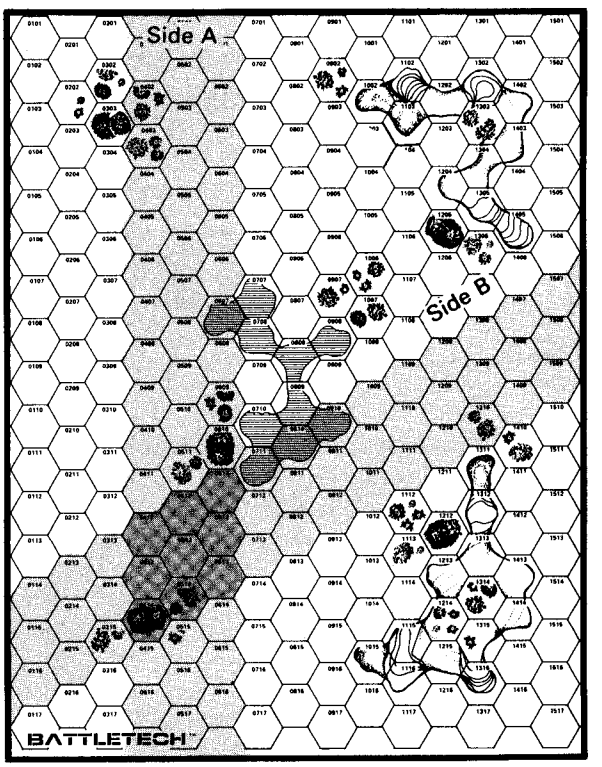


*Diagram A shows the orientation of the **BattleTech** mapsheet in relation to the Low Altitude Map. A fighter approaching the **BattleTech** mapsheet hex along the A-B hexrow of the Low Altitude Map would be able to choose any three-hex-wide row of hexes that begins on side A of the **BattleTech** mapsheet. One such strafing row has been shaded. Every object in the shaded area, be it BattleMech, vehicle, building, or infantry unit, is a target for the energy weapon portion of the strafing attack. The player can also allocate his non-energy forward-firing weapons to selectively attack specific targets in that row.*

*A fighter approaching the **BattleTech** mapsheet hex along the C-D hexrow will pick its strafing row beginning on side B. An example has been shaded.*

STRAFING DAMAGE TO BATTLEMECHS (2D6)

Roll	Left Side	Front/Back	Right Side
2	Head	Head	Head
3	Left Torso (Critical)	Center Torso (Critical)	Right Torso (Critical)
4	Left Arm	Right Leg	Right Arm
5	Left Arm	Right Arm	Right Arm
6	Left Leg	Right Torso	Right Leg
7	Left Torso	Center Torso	Right Torso
8	Center Torso	Left Torso	Center Torso
9	Right Torso	Left Arm	Left Torso
10	Right Arm	Left Leg	Left Arm
11	Left Torso (Critical)	Center Torso (Critical)	Right Torso (Critical)
12	Head	Head	Head

(Use the appropriate vehicle hit locations table for attacks against vehicles.)

DIVE-BOMBING

Most fighters are equipped with bomb racks. Bombs can be dropped into any hex of the ground combat area if the fighter ends its movement for the turn over that area (i.e., if the Low Altitude Hex that the fighter currently occupies also contains the ground battle). The To-Hit Number for a dive-bomb attack is 6, modified by the pilot's *Gunnery* Skill (+1/level over 4; -1/level under 4) and the condition of his craft. A fighter may drop as many of its bombs in the target hex as it likes, but each bomb attack is resolved separately. If a bomb hits, all objects in the target hex suffer the rated damage of the bomb. All adjacent hexes suffer one-half that much damage.

The total damage is grouped into 10-point clusters and allocated normally against the target's front side. (Bombs attack the back side of prone BattleMechs.) Bomb damage affects all targets in the damage area. This includes BattleMechs, vehicles, infantry, and buildings. It also includes units inside buildings.

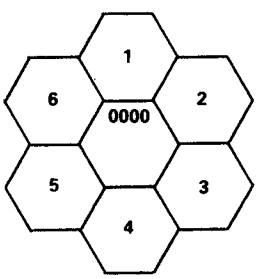
When a dive-bomb attack misses, the bomb must hit the ground somewhere. The *Bomb Scatter* table is used to find the distance of the impact hex from the target hex. To determine the direction of the miss, roll one die and consult the *Scatter Diagram*. The bomb explodes and does normal damage in the scattered hex and those hexes adjacent to it.

Fighters can drop as many bombs as desired during the Attack Phase (which corresponds to the **BattleTech** Weapon Attack Phase). If more than one bomb is dropped during a dive-bomb attack, separate To-Hit rolls are made for each individual bomb. Each bomb so dropped must have the same ground target hex.

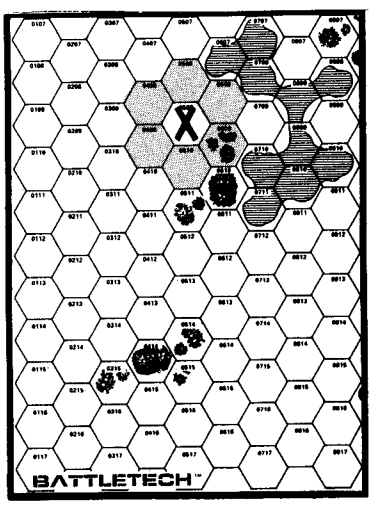
A fighter can continue to make as many dive-bomb attacks in a game as it likes, as long as it still has bombs to drop and still conforms to the other **AeroTech** rules.

BOMB SCATTER (2D6)

Roll	Effect
2	Bomb jams on rack. Will not drop for rest of game
3	5 hexes off target
4	4 hexes off target
5	3 hexes off target
6	2 hexes off target
7	1 hex off target
8	2 hexes off target
9	3 hexes off target
10	4 hexes off target
11	5 hexes off target
12	Bomb jams on rack. No remaining bomb on craft will drop for rest of game.



Scatter Diagram



The diagram shows the area of effect of a dive-bomb attack. Hex X is the intended impact hex. If the attack is successful, all objects in the impact hex take damage equal to the full rating of the bomb. Objects in all adjacent hexes (shaded here) suffer damage equal to one-half of the bomb's rating. If the dive-bomb attack misses, the Bomb Scatter *table and Scatter Diagram are used to find the actual impact hex.*

To determine the location of the scattered impact hex, roll 2 dice and check the Bomb Scatter *table. This usually tells how many hexes away the impact hex will be (though it can also indicate a jammed bomb). Next, roll one die and check the Scatter Diagram. This shows the direction of the impact hex from the intended hex. If, for example, a dive-bomb attack on Hex 0509 (Hex X) missed, the Bomb Scatter roll was a 5 (3 hexes off target), and the Scatter Diagram roll was a 4, then the location of the actual impact hex is 0512. All objects, friend or foe, in 0512 and all adjacent hexes, are hit by the bomb.*

Thrust Loss

When fighters carry heavy bomb loads, they lose maneuverability. This means that as long as a bomb is attached to the fighter, the fighter will lose thrust according to the *Thrust Lost to Bombs* chart.

THRUST LOST TO BOMBS

Bomb Rating	Thrust Points Lost
10	0.2
20	0.4
40	0.8
60	1.2
80	1.6
100	2.0

Bomb loads can be mixed and matched as players desire. When calculating the current thrust loss to bomb weight, all final fractions are rounded up. A fighter may load as many bombs as desired as long he has one full thrust point left for his fighter.

For example, a fighter with a Thrust rating of 10 chooses to carry three 100-, two 40-, and one 10-damage point bombs. The total thrust lost with this full load would be 8 Thrust Points [(3 x 2 for the 100 pointers) + (2 x .8 for the 40 pointers) + (1 x .2 for the 20 pointer) so that 6 + 1.6 + .2 is 7.8, rounded up to 8 Thrust Points]. That means the fighter would have a Thrust rating of 2 and an OverThrust rating of 3 with the full load. When the first 100-point bomb is dropped, the Thrust rating rises to 4. The Thrust rating will continue to rise as the payload is dropped.

RETURN FIRE

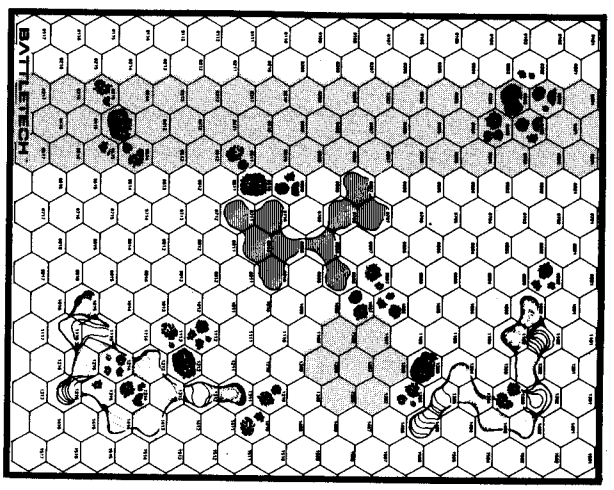
A fighter that makes a ground attack is vulnerable to return fire from ground units, as are other fighters that fly over enemy-occupied hexes. Any unit on a **BattleTech** ground map may fire at a craft that *ends* its turn over that map. This fighter does not have to have made a ground attack during that turn. The Base To-Hit Number is 10, regardless of the weapon fired, and is modified by the attacker's *Gunnery* Skill (+1/level over 4; –1/level under 4) and movement. A VTOL or LAM in flight has an additional –1 modifier, and an attacker in the fighter's strafing row or dive-bomb target hexes has an additional –4 modifier.

A unit that fires at a fighter may not make an attack against any other unit. Any weapon with a range of 6 or more may fire, regardless of the actual ground hex range to the fighter. The side hit on the fighter is determined on the *Fighter Damage From Ground Fire* table. Use the first column if the attacker was in the fighter's target area (strafing row or dive-bombing target hex) this turn. Use the second column otherwise, including for fire at a craft that didn't strafe or dive-bomb this turn. A specific damage location is then rolled on the *Fighter/Aerodyne Hit Locations* table. All fire from an individual unit hits the fighter in the same side (i.e. nose, right, left, or rear).

FIGHTER DAMAGE FROM GROUND FIRE (1D6)

Roll	Attacker in Target Area	Attacker Not in Target Area
1	Nose	Nose
2	Nose	Nose
3	Nose	Left/Right
4	Left	Left/Right
5	Right	Left/Right
6	Rear	Rear

When an AeroSpace fighter makes a ground attack, it becomes more vulnerable to attack from other fighters. There is a -3 To-Hit Modifier for all fighter attacks against a fighter who is attacking a ground target.



In this example, a fighter is strafing the shaded row of hexes. Any ground unit occupying a shaded hex and firing at the fighter receives the –4 To-Hit Modifier. Any unit firing at the fighter from outside of the shaded hexrows does not receive this modifier.

The same is true for dive-bomb attacks. Any ground unit in the intended target area (shown shaded here) receives the –4 To-Hit Modifier. All others (including those in other hexes actually hit by a bomb) do not.

HEAT

Like BattleMechs, AeroSpace fighters and DropShips have problems with heat. In space, radiation is the only way to dissipate heat generated by the craft's electronics, weapons fire, and overthrust. To help eliminate heat, all AeroSpace fighters and DropShips are fitted with extensive arrays of heat sinks.

Even so, a high rate of activity usually produces more heat than the craft can quickly dissipate. As a craft's internal heat increases, its movement can become erratic and its weapons fire less accurate. If its internal heat reaches too high a level, ammunition carried by the fighter may explode. Its fusion reactor may shut down, causing the craft to drift in space until the heat level is reduced. The pilot may even suffer damage.

HEAT POINTS

The number of Heat Points built up by an AeroSpace fighter or DropShip determines its internal heat. The greater the number of Heat Points, the greater the internal heat. The player keeps track of heat build-up on his record sheet, marking off boxes in the column labelled *Heat Scale*. The Heat Scale runs from 0 to 30. As a craft's internal heat reaches various points on the Heat Scale, it will suffer the adverse effects described on the scale.

Conventional aircraft do not incur heat build-up. However, when constructed, these aircraft need to have sufficient heat sinks to fire all of their energy weapons simultaneously. If, due to combat damage, a conventional aircraft has fewer heat sinks than necessary to operate all of its functioning energy weapons, the player must "turn off" enough weapons to comply with the heat sink rule. A weapon cannot be turned back on unless another weapon is destroyed, leaving enough heat sinks free to dissipate its heat build-up.

HEAT BUILD-UP

Different activities build up heat at different rates. A good pilot balances the tactical value of a certain activity against the heat it will add to his ship or fighter. The *Heat Points* chart gives the number of heat points built up by various activities.

HEAT POINTS

Activity	Heat Points
Weapon Fire	See *Weapon and Equipment* charts
OverThrust	1 Heat Point per Overthrust Point
Atmospheric Entry	
Successful	10 minus (*Piloting* Skill roll minus Target Number)
Unsuccessful	See *Failed Atmospheric Entry* chart
Engine Critical Hit	See *Engine Critical Hits* table
Heat Sinks	–1 heat point per heat sink; –2 per double heat sink

RECORDING HEAT BUILD-UP

During the Heat Phase near the end of every turn, each player adds up the Heat Points that his AeroSpace fighter or DropShip built up. He then subtracts the heat dissipated by his craft's heat sinks. Any remaining Heat Points are added to the Heat Scale on the Record Sheet. If, however, the craft dissipated more heat than it built up for the turn, the difference is subtracted from its Heat Scale. It is a good idea to use a pencil on the Heat Scale, because the heat can go up and down many times during the game.

EFFECTS OF HEAT

As a result of internal heat, the craft functions less efficiently. It moves erratically, fires less accurately, and is in danger of exploding its ammunition, or even of shutting down. Some of these effects are permanent and cannot be removed, even if the craft dissipates the built-up heat. Some will be removed when the internal heat goes down.

Some effects may be avoided by making a successful *avoid roll*. An avoid roll is a roll against a target number specified by the potential event. If the roll is equal to, or higher than, the target number, the event has been avoided. If two or more similar Trigger Points have been reached, only the effect of the highest point is checked against and (if the roll fails) applied. For example, at both 5 and 10 on the Heat Scale, random movement is possible. If the Heat Scale is at 12, only one roll is made to avoid random movement, trying for the 6+ specified at 10 points.

All heat effects are explained below.

Movement Effects

High heat levels can cause the craft's navigation and piloting computers to overheat and malfunction. Due to this malfunction, the craft will move randomly until the pilot either causes the heat to drop or makes a successful avoid roll. A more severe malfunction can cause random movement and freeze the thrust controls, preventing any deceleration to decrease the effect of the random movement.

This effect is possible when the Heat Scale reaches 5, 10, 15, 20, and 25 points. In any turn where the heat level remains at or above a trigger point, the player must roll two dice to determine if he has avoided the computer malfunction. If the dice roll is equal to, or greater than, the avoid number (5+, 6+, 8+, or 10+), the craft's piloting computers function normally. If not, the player must roll on the *Atmospheric Control Surfaces Critical Hits* table at the beginning of his next Movement Phase and immediately apply the result. As noted at that table, this result can only be undone with a successful *Piloting* Skill roll during a subsequent End Phase. Several failed avoid rolls in succession, coupled with failed *Piloting* Skill rolls when attempting to undo each effect, can quickly put a craft out of the fight.

If the heat level remains at or above the trigger point during the next turn, the pilot must make another avoid roll.

Weapons Attack Effects

These occur at 8, 13, 17, and 24 on the Heat Scale. There is no avoid roll for them. Add the highest number given to the Base To-Hit Number. If the worst of these effects is +2 To-Hit, add 2 to the Base To-Hit Number as long as the heat is at or above this point on the scale. The effect is not cumulative and is removed when the heat point level drops below the number that triggered the effect.

Engine Shutdown

At excessively high temperatures, the magnetic jar containing the fusion reaction becomes unstable and may explode. As a safety measure, the fusion reactor shuts down automatically. This can occur at or above 14, 18, 22, 26, and 30 on the scale. Until the pilot restarts the reactor, the craft may not create any thrust, fire any weapons, or drop any bombs.

The pilot may be able to avoid shutdown by overriding the fusion reactor's safety shutdown procedure, as indicated by the avoid number given with the effect. If the avoid roll is successful, shutdown is avoided at least until the next turn. If the heat level remains at or above one of the trigger points during the next turn, the pilot must make another avoid roll.

As the heat level rises, the avoid number also rises, making it more difficult to avoid a reactor shutdown. At 30, the craft shuts down automatically; there is no avoid roll possible.

If a craft shuts down in space, it will drift at its current velocity and direction. If the craft is at high or low altitude, it must attempt to land as soon as possible in random terrain. Though it is no longer generating any heat, the craft's heat sinks are still working to dissipate its built-up heat. The heat will drop every turn that the reactor remains shut down, giving the pilot a chance to restart the reactor. During the Heat Phase of each turn after his craft shut down, he rolls two dice. If his roll is equal to or greater than the current avoid number (which gets lower as the heat drops), the pilot has restarted the reactor. When the heat drops below 14 on the Heat Scale, the reactor restarts automatically, even if the pilot is not functioning.

If a shutdown fighter enters the atmosphere, it is in significant trouble. There is a +4 modifier to the Atmospheric Entry *Piloting* Skill roll, which is made with the *Dead Stick Entry* modifier.

Ammunition Explosion

AeroTech ammunition explosions are handled just like they are in **BattleTech**. For every turn after reaching an explosion threshold (at 19, 23, and 28), the ammunition with the most destructive ammo rack explodes. An ammo rack is defined as the damage that one turn's worth of shots will do. Thus, a rack of machine gun ammo has a value of 2, an A/C 10's value is 10, an LRM 15 has a value of 15 and an SRM 6 has a value of 12. When there are two equivalent racks, the pilot can choose which ammo will explode.

All of the appropriate ammo type explodes at a force equal to the ammo's damage value times the shots remaining. In the case of missiles, the ammo explodes with a force equal to the *number* of missiles remaining times their damage value. Thus one ton of AC/10 ammo explodes with a force of 100. A full ton of LRM 20s explodes with a force of 120 (20 x 6 x 1).

The pilot may avoid this effect by the pure luck of a successful avoid roll. To determine whether an ammunition explosion is avoided in a turn when the heat level is above the trigger point, the player rolls two dice. If the dice roll is equal to, or greater than, the Avoid Number (4+, 6+, etc.), no explosion occurs.

An ammunition explosion always hurts the pilot, as described in **Damaging a Pilot**.

Pilot Damage

For every turn that the heat level is at or above one of these trigger points (at 21 and 27), the pilot must make a successful avoid roll or suffer 1 point of damage (1 hit). This possibility remains in effect as long as the heat remains at or above the trigger point.

If the pilot does suffer damage, he must then make a Consciousness roll and suffer the consequences if he fails it (see **Damaging a Pilot**).

HEAT SCALE

Heat Points	Effect
0	-
1	-
2	-
3	-
4	-
5	Random Movement, avoid on 5+
6	-
7	-
8	+1 To-Hit modifier
9	-
10	Random Movement, avoid on 6+
11	-
12	-
13	+2 To-Hit modifier
14	Shutdown, avoid on 4+
15	Random Movement, No Thrust, avoid on 6+
16	-
17	+3 To-Hit modifier
18	Shutdown, avoid on 6+
19	Ammunition Explosion, avoid on 4+
20	Random Movement, No Thrust, avoid on 8+
21	Pilot Damage, avoid on 6+
22	Shutdown, avoid on 8+
23	Ammunition Explosion, avoid on 6+
24	+4 To-Hit modifier
25	Random Movement, No Thrust, avoid on 10+
26	Shutdown, avoid on 10+
27	Pilot Damage, avoid on 9+
28	Ammunition Explosion, avoid on 8+
29	-
30	Automatic Shutdown

AEROSPACE FIGHTER LAUNCH & BATTLEMECH DROPS

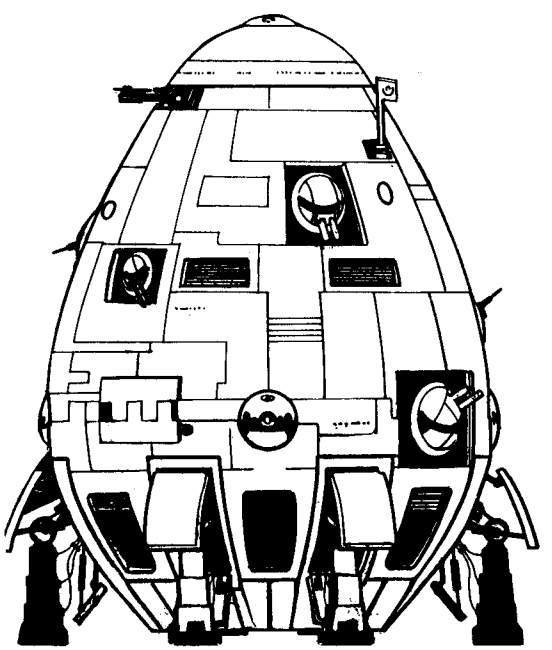
FIGHTER LAUNCHING

A DropShip can launch AeroSpace fighters in space at any time, but it requires special equipment to remove or replace a fighter after the DropShip has landed. All fighter launch operations are normally done in space, as fighter launch is not possible when the DropShip is at low altitude.

Fighters are launched during the Movement Phase. To launch a fighter, a DropShip must be in space (or high altitude) and can have spent no thrust during its movement. Instead, as part of they normal alternating movement sequence, the player announces that the DropShip has launched a fighter. The fighter counter is placed in either front hex adjacent to the DropShip, and may be moved normally next turn. The fighter's initial velocity is 0. A DropShip may launch as many fighters in one turn as it has functioning fighter doors.

FIGHTER REFUELING

To refuel in space, a fighter must match velocity and facing with a friendly DropShip. When both craft end their movement in the same hex, moving at the same velocity and with the same facing, refueling can begin. During that turn and the next turn, neither craft may spend any thrust or fire weapons. In the End Phase of the next turn, the pilot of the fighter must make a *Piloting* Skill roll. If the roll succeeds, the fighter is completely refueled and may move normally next turn. If the roll fails, refueling operations are not yet complete. The pilot must wait another turn and then make another Skill roll. If the fighter or DropShip spends thrust before a successful roll, no refueling has taken place.



★ FIGHTER RECOVERY ★

To recover a fighter, the DropShip and fighter must end a turn in the same hex, with the same velocity and facing, as with refueling. If either the fighter or DropShip is suffering random movement, recovery is not possible. A DropShip must have a functioning door to attempt recovery.

During the next turn, the fighter pilot must make a *Piloting* Skill roll with the following modifiers. If the roll succeeds, the fighter has been recovered. If the *Piloting* Skill roll fails, the *Failed Recoveries* chart must be consulted. The first column (labelled *Difference*) lists the difference between the skill roll target number and the actual roll. Find this difference to use the chart.

RECOVERY MODIFIERS

Fighter Condition	Modifier
Craft under movement restriction	+3
Craft has lost 1/2 thrust ability	+2
Craft has lost all thrust ability	+4
Craft moving randomly	not possible

DropShip Condition
Same modifiers as for fighter.

FAILED RECOVERIES

Difference	Effect
1	Recovery successful; 10 points of nose damage (fighter).
2	Recovery successful; 15 points of nose damage (fighter). 10 points of side damage (DropShip).
3	Recovery successful; 20 points of nose damage (fighter); 15 points of side damage (DropShip). Fighter is not able to launch during rest of game.
4	Recovery fails; 25 points of nose damage and 15 points of side damage (fighter).
5	Recovery fails. Fighter nose armor destroyed; 25 points of side damage (DropShip).
6	Recovery fails; 30 points of side damage (fighter). Fighter jammed in door, will take 6+ 1D6 turns to free. No atmospheric entry possible until fighter is removed.
7+	Recovery fails. Fighter damages DropShip door. DropShip may not enter atmosphere until repairs are completed. Completion time: 6+2D6 turns. Fighter destroyed. DropShip takes 35 points of side damage.

If, during a failed recovery, a craft's engine is destroyed, it may no longer fire energy weapons, and it may only fire one shot from each other weapon during the rest of the game.

If a DropShip's bridge is destroyed, it may not spend thrust or fire weapons, but it may launch fighters and BattleMechs. Any such launches take place as the last part of movement. Fighters launched in this manner may not move or fire until the next turn.

BATTLEMECH DROPS

A BattleMech can leave a DropShip at three points: in space, at high altitude, or on the ground after the DropShip has landed.

BATTLEMECH DROP PROCEDURE

In order to accurately drop BattleMechs, a DropShip must remain stationary over the drop site for two full turns (not including the turn during which the DropShip first moved into the drop hex). At high altitude, the DropShip can hold station by spending 1 Thrust Point. In space, the DropShip must face away from the planet, and then spend thrust to offset the pull of gravity. At the end of the Movement Phase of the second stationary turn, the ship may eject as many BattleMechs as it has functioning doors.

The target hex for a drop is always a specific hex on the Low Altitude Map, even if the DropShip was in space or at high altitude when it made the drop. A DropShip must be within 2 Space Map Hexes of a planet to make a drop on that planet.

If for some reason a DropShip cannot remain stationary over the drop hex, BattleMechs may be dropped, but will automatically scatter. Use the *Bomb Scatter* table and the *Scatter Diagram* to determine to which Low Altitude Hex each scattered BattleMech will fall, based on its intended location. (A roll of 2 or 12 on the *Bomb Scatter* table results in a drop 6 hexes off-target.) Roll separately for each BattleMech.

For example, a Union *Class DropShip is on a mission to the Kurita planet of* New Wessex. *It has passed through the space fighter battle and is setting up for the BattleMech drop. On game turn 5, the DropShip ends its turn in the drop hex. The craft must stay in that hex for turn 6 and 7. At the end of the Movement Phase of turn 7, the DropShip may eject as many BattleMechs as it has functioning doors. If the DropShip stays stationary during turn 8, another load of BattleMechs may be dropped. During the stationary turns, the DropShip may fire any or all of its weapons but may not move or change its facing.*

MOVEMENT OF DROPPED BATTLEMECHS TO SURFACE

A BattleMech takes one turn to move from the space hex it's DropShip is in to the high altitude hex, and one full turn to move from the high altitude hex to the Low Altitude Map. The BattleMech then spends one turn on the Low Altitude Map, and in the following turn can land on a **BattleTech** ground map from low altitude. No other movement is possible.

After being dropped in space at the end of the Movement Phase of turn 7, the BattleMech remains in the drop hex until the end of turn 8's Movement Phase, when it is moved to the appropriate high altitude hex. At the end of 9's Movement Phase, the BattleMech is moved to the targeted hex of the Low Altitude Map. It remains there until the end of turn 11's Movement Phase, when it can land on the drop target ***BattleTech*** *mapsheet.*

ATTACKS AGAINST DESCENDING BATTLEMECHS

BattleMechs ejecting out of DropShips are enclosed in a cocoon that serves as a heat shield and, once shed in the lower atmosphere, as chaff to confuse enemy detection equipment. Because of this, descending BattleMechs may not engage in any attacks against fighters or DropShips. However, the descending BattleMechs are now fair targets for enemy fighters and DropShips. (But remember that DropShips cannot make attacks while at low altitude.)

To-Hit rolls by fighters and DropShips are made as normal **AeroTech** attacks, but damage is resolved according to **BattleTech** rules, with the attack direction being determined as if the BattleMech counter's head were the front side of the BattleMech.

★ LANDING ★

After a BattleMech has been dropped and is nearing the surface of the planet, its pilot must make two *Piloting* Skill rolls: one to see if he can control his descent, and the other to see if he can control his landing. If both skill rolls are successful, the BattleMech lands successfully with no damage.

BattleMech Descent Roll

This initial *Piloting* Skill roll has an automatic modifier of +2, along with any other modifiers that apply from the *BattleMech Descent Modifiers* chart. If the roll fails, consult the *Failed Descent Rolls* chart for effects and modifiers to the Landing roll. The first column (labelled *Difference*) lists the difference between the skill roll target number and the actual roll. Find this difference to use the chart.

Scattered BattleMechs use the *Bomb Scatter* table and the *Scatter Diagram* to determine final landing location. (A roll of 2 or 12 on the *Bomb Scatter* table results in a drop 6 hexes off-target.)

BATTLEMECH DESCENT MODIFIERS

Effect	Modifier
Automatic Modifier	+2
Per 10 points of damage suffered during descent (round up)	+1
Per Gyro Critical	+4
Per Head Hit	+2

FAILED DESCENT ROLLS

Difference	Effect
1-2	Scatter
3	Scatter, +1 to Landing Roll
4	Scatter, +2 to Landing Roll
5	Scatter, +3 to Landing Roll
6	Scatter, +4 to Landing Roll
7+	BattleMech hits the ground and is completely destroyed. Nothing is salvageable.

Landing Roll

When landing, a BattleMech must make a *Piloting* Skill roll modified by any damage suffered during the descent and by the terrain where it is landing. If the roll fails, consult the *Failed Landing Rolls* chart. The first column (labelled *Difference*) lists the difference between the skill roll target number and the actual roll. Find this difference to use the chart.

LANDING ROLL MODIFIERS

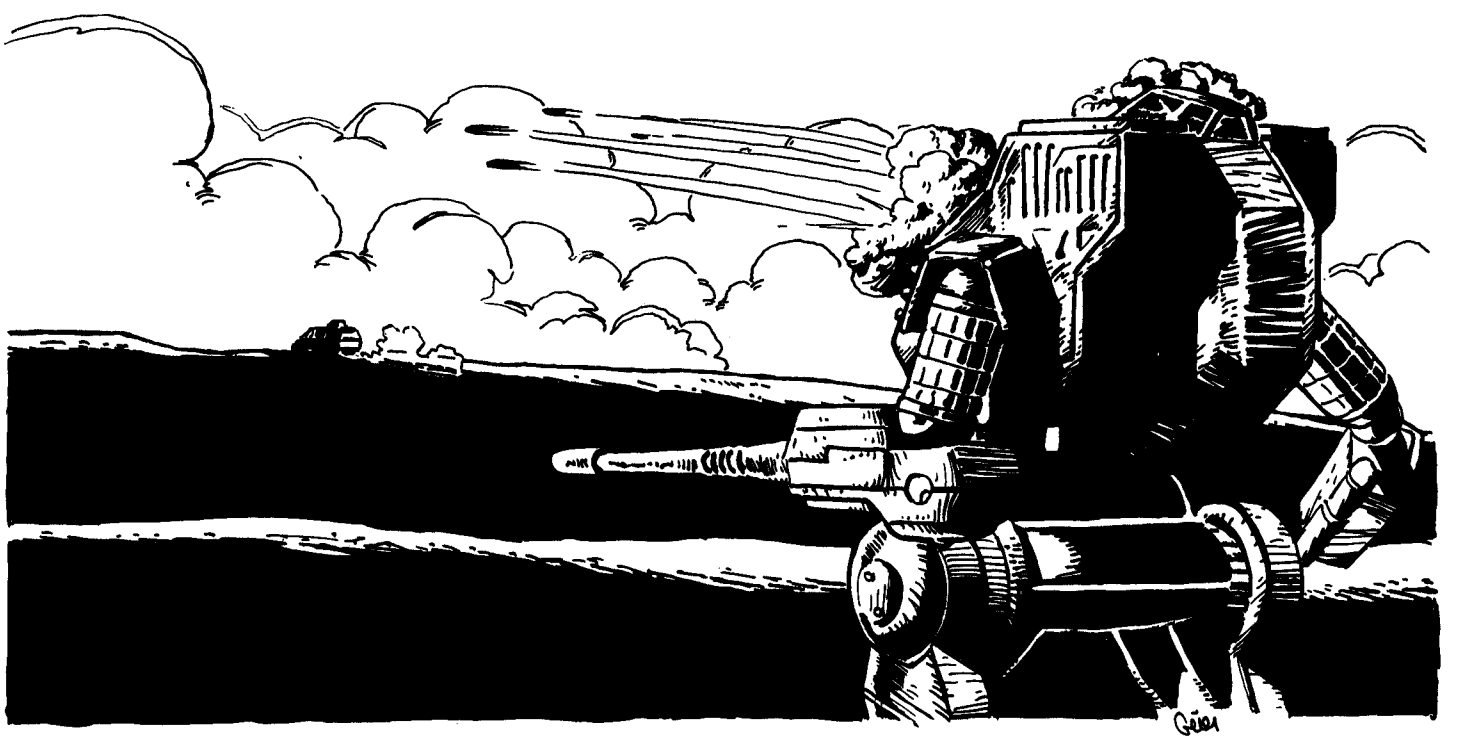
Effect	Modifier
Per leg/foot actuator destroyed	+1
Per Hip Critical Hit	+2
Per Missing Leg (if so, disregard previous two modifiers)	+5
Per Gyro Hit	+4
Per Head Hit	+2
Landing Hex Terrain	
Light Woods	+1
Heavy Woods	+2
Rubble	+2
Rough	+2
Water Depth 1+	+2
Building	+1

FAILED LANDING ROLLS

Difference	Effect
1-2	Level 1 fall
3	Level 2 fall
4	Level 3 fall
5	Level 4 fall
6	Level 5 fall
7	Level 6 fall
8+	BattleMech destroyed

This falling damage uses the normal *BattleMech Hit Locations* table.

BattleMechs land at the end of a ground combat Movement Phase. During the turn that it lands, a BattleMech may not fire, but functions normally thereafter.



LAND-AIR BATTLEMECHS

Land-Air BattleMechs, or LAMs, are jacks-of-all-trades and masters of none. In the middle of a battle, these fighting machines can change their configuration to that of a BattleMech, a fighter, or a hybrid mode with some of the advantages of both. LAMs serve as highly-mobile recon and light strike units for the Star League's armies. Never produced in great numbers, even fewer are manufactured and assembled now. The standard configurations are variations of the basic *Wasp*, *Stinger*, and *Phoenix Hawk* designs. Though lightly-armored, these highly-mobile BattleMechs are equipped with enough firepower that opposing forces simply cannot ignore them.

CONVERSIONS

It takes one full turn for an LAM to convert from one mode to another. They may move and make attacks during this turn, but with the restrictions listed below. Also, certain critical hits will prevent conversion.

CAPABILITIES

BATTLEMECH MODE

While in BattleMech mode, an LAM is treated as a normal BattleMech for combat and movement purposes.

★ AIRMECH MODE ★

Movement

When on the ground, an AirMech moves as a regular BattleMech, but with reduced movement rates. Its Walking rate is one-third of its BattleMech rates (round up). Figure its Running rate from its Walking rate. On the other hand, its Jump rate is multiplied by 3. Most importantly, no heat is built up by an AirMech from jumping or flying.

Two additional movement actions are required by AirMechs that jump or fly: launching and landing. Each costs 2 MP. Landing after a jump or a flight also requires a normal *Piloting* Skill roll. There is a –4 modifier to these rolls, in addition to all other modifiers, if the LAM has taken no crucial leg damage. However, when landing, if it has taken any damage to its legs that would modify a regular BattleMech's *Piloting* Skill roll, the –4 modifier is disregarded.

With the above modifications, a jump for an AirMech is handled in the same manner as a jump for a BattleMech.

An AirMech does not have to land at the end of its turn. It can continue to fly at its jump rate for as long as it is capable of flight. The LAM is now treated as a VTOL with all of the VTOL's movement and elevation rules (its beginning height is 1 level higher than its beginning terrain).

If flying, an LAM must move into at least six hexes each turn. If it does not do so, it must land that turn. Vertical elevation changes do not count toward this requirement. An AirMech cannot move backward in flight.

Combat

When on the ground, an AirMech fires as a normal BattleMech with all appropriate modifiers. When flying, an LAM is treated as a jumping BattleMech, both for target and attacker To-Hit Modifiers. When firing at an AirMech on the ground, it is a normal target. When it is flying, it has a –1 To-Hit Modifier on attacks against ground-attacking fighters.

Damage

When an LAM changes from BattleMech to AirMech mode, its side torsos convert into wings. When an AirMech is hit by weapons fire, the regular *BattleMech Hit Locations* table is used. When the side torso/wing armor is destroyed, the AirMech can no longer fly, but it may jump at its normal range. If the side torso/wing is destroyed while in flight, the LAM falls and crashes as per the

RESTRICTIONS WHILE CONVERTING

Conversion Type	Movement Restriction	Combat Restriction
BattleMech to AirMech	1/2 normal BattleMech movement	+3 To-Hit modifier
AirMech to BattleMech	1/2 normal AirMech movement	+3 To-Hit modifier
AirMech to Fighter	Normal AirMech movement	Not allowed
Fighter to AirMech	Normal Fighter movement	Not allowed

CRITICAL HIT CONVERSION RESTRICTIONS

Critical Hit	Conversion Disallowed
Gyro or Hip	BattleMech to AirMech; AirMech to BattleMech
Shoulder or Upper Arm Actuator	AirMech to Fighter
Upper or Lower Leg Actuator	No conversions allowed

Crashing rules for VTOLs. In addition, the AirMech will skid one-half of the horizontal distance moved during the turn of the fall. The AirMech will suffer one-half normal falling damage for each hex of the skid, and any obstacle is considered to have been charged by the skidding AirMech. **Skidding** is explained in further detail in **BattleTech**.

Damage to all other locations of an AirMech is as for a normal BattleMech.

FIGHTER MODE

An AirMech can convert into an AeroSpace fighter. The conversion takes one turn and can be done in flight. During the conversion turn, it cannot fire and its movement points are those of its AirMech mode.

Movement

An LAM fighter acts in all respects like a standard AeroSpace fighter. Its Thrust and OverThrust ratings are equal to its Walking and Running ratings. It has 30 points of fuel at the beginning of the game.

Combat

An LAM fighter's combat capabilities are equal to those it has as a BattleMech. Arm weapons become wing weapons, leg-mounted weapons now fire to the rear, and all torso weapons now fire forward.

Damage

The *Damage Locations* chart shows the correspondance between fighter and BattleMech damage locations.

DAMAGE LOCATIONS

Fighter Location	BattleMech Location
Cockpit	Head
Nose	Arms
Wings	Side Torsoes
Fuselage	Center Torso
Engine	Legs

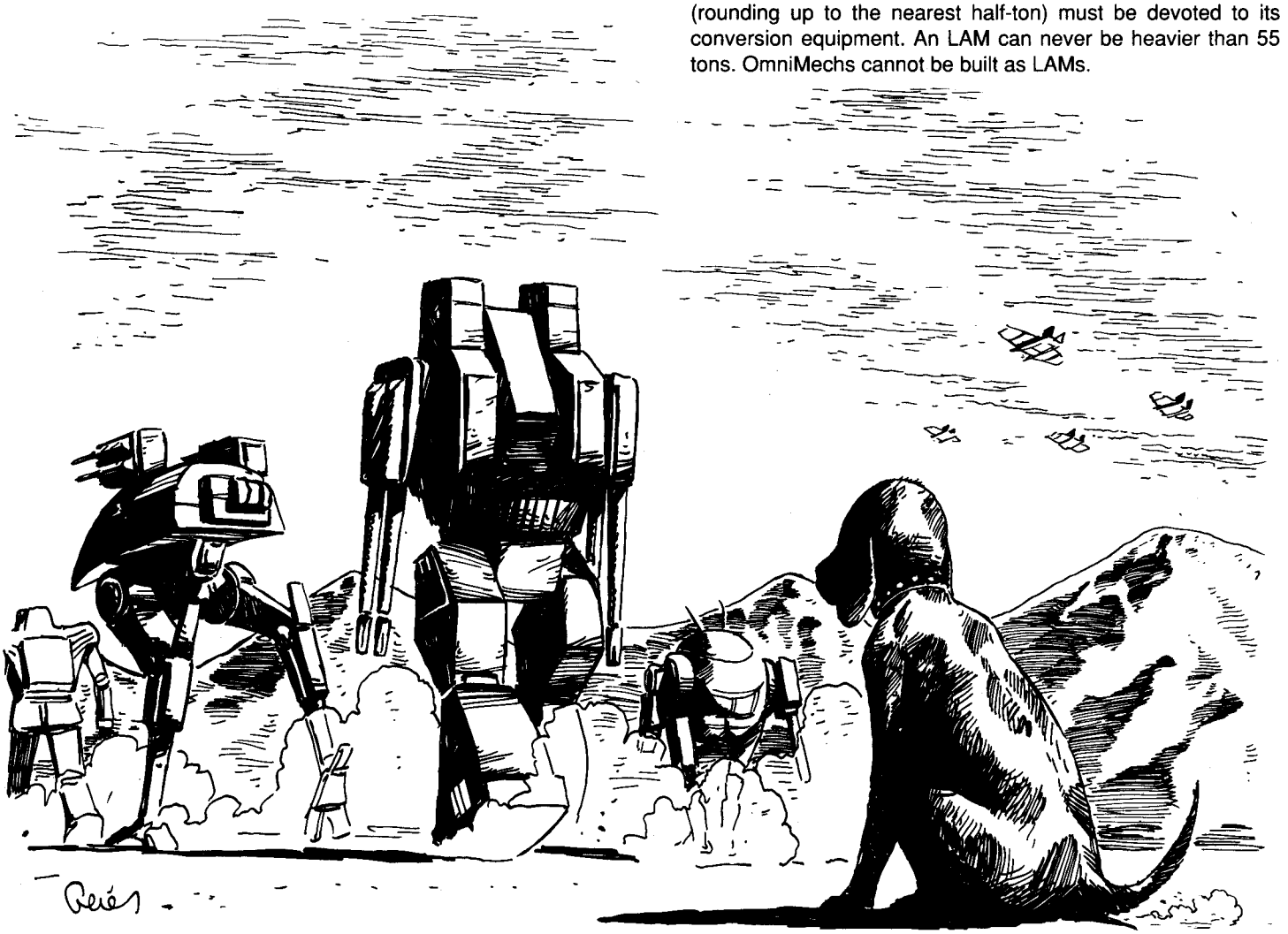
When the LAM's armor is penetrated, damage passes on to internal structure. When the center torso's internal structure is destroyed, the LAM, in whatever mode, is destroyed.

A LAM's SI is equal to one less than its tonnage divided by 10 ([tonnage/10] minus 1) or its Thrust rating, whichever is greater.

LAMs may not carry bombs.

★ LAM CONSTRUCTION ★

The only addition to the BattleMech construction rules when constructing an LAM is that 10 percent of the LAM's total weight (rounding up to the nearest half-ton) must be devoted to its conversion equipment. An LAM can never be heavier than 55 tons. OmniMechs cannot be built as LAMs.



OUTFITTING AN OMNIFIGHTER

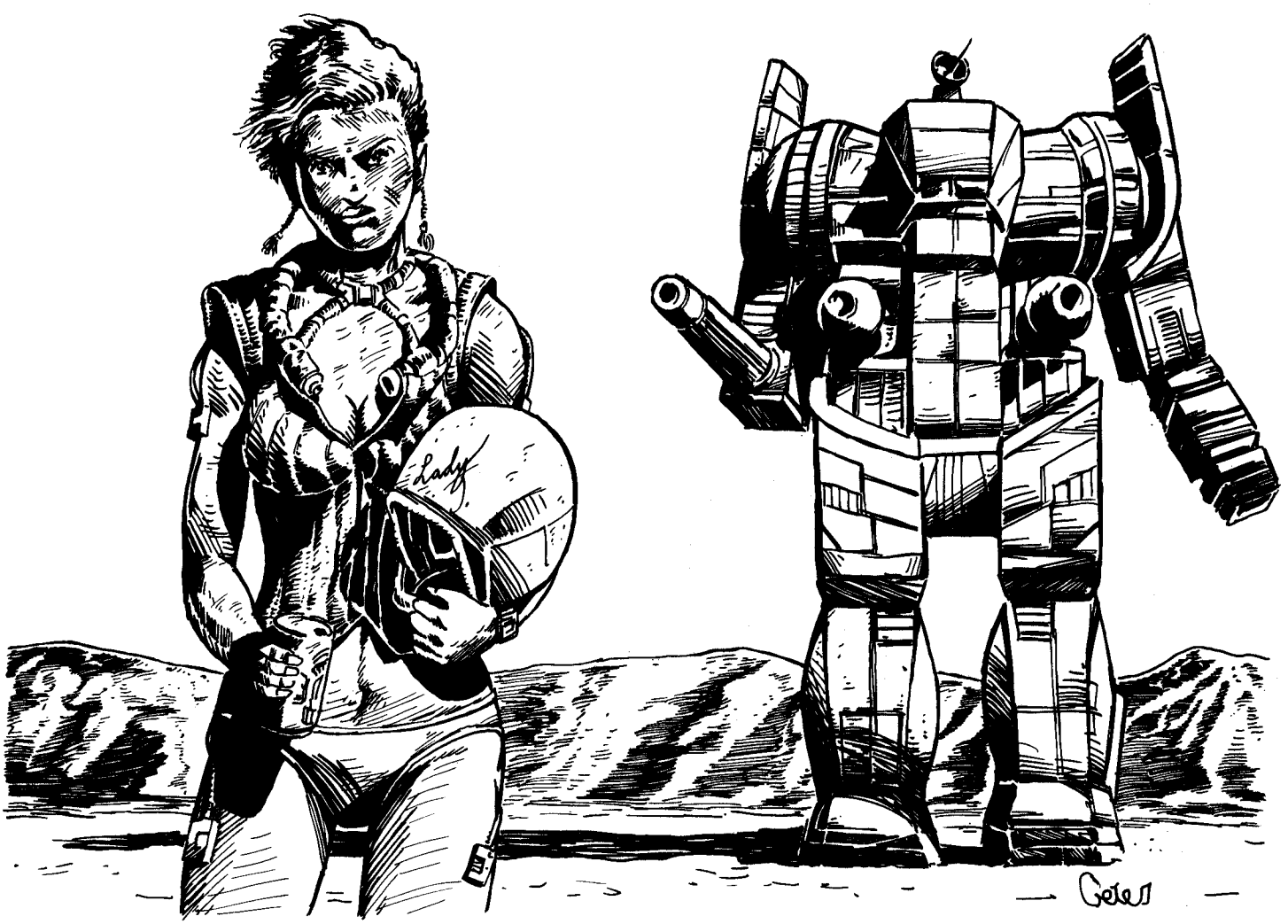
Omnifighters are very similar to OmniMechs. Pods containing various weapons, heat sinks, and other electronic equipment (whose total weight doesn't exceed the Omnifighter's available pod tonnage) can be mounted prior to the start of a game. When filling out the Fighter Record Sheet, blanks in the lower right corner are filled only with listings for weapons and ammunition. Heat sinks, electronics, and other special systems are not noted on the record sheet.

Extra fuel can be mounted in the form of pods, increasing the available Thrust Points. This fuel is always consumed before any internal fuel is used.

Any pod or group of pods may be dropped from the Omnifighter prior to the start of any Attack Phase. This reduces the overall tonnage of the fighter, thus increasing its performance characteristics. When a pod is dropped, recalculate the Omnifighter's new Thrust by taking the engine rating and dividing it by the total tonnage actually present (rounding fractions down) and adding two to the result.

(Engine Rating/New Tonnage) + 2 is New Thrust Rating

This is the new Thrust rating for the fighter. OverThrust is also recalculated, using the new Thrust rating.



OPTIONAL RULES

ABSTRACT BATTLEMECH LANDING SYSTEM

Some players may not want to spend a large amount of time determining the exact location and condition of dropped BattleMechs. This is a quicker, abstract system that can be used instead.

For each 10 points of damage (round up) suffered by a BattleMech during descent, roll damage effects on the *Abstract Descent Damage* table.

ABSTRACT DESCENT DAMAGE (2D6)

Roll	Modifier (critical damage)
2	+3 (gyro critical)
3	+2 (random critical)
4	+1
5	+1
6	+1
7	+1
8	+1
9	+1
10	+1
11	+2 (random critical)
12	Head hit; BattleMech destroyed

The numbered results are cumulative modifiers to a BattleMech Descent roll. (If a random critical hit is rolled, randomly select a slot on the BattleMech's *Critical Hit Tables* that is hit.) If the roll fails, the BattleMech is destroyed. If the roll succeeds, check the *Abstract Landing Terrain* table to determine in what type of terrain the BattleMech will land.

ABSTRACT LANDING TERRAIN (1D6)

Roll	Terrain Type
1 – 3	Clear
4	Rough
5	Light Woods
6	Heavy Woods

A Landing roll should now be made with modifiers from the *Landing Roll Modifiers* chart. If the roll succeeds, the BattleMech lands safely. If the roll fails, the BattleMech is destroyed.

FUEL AND WITHDRAWAL FROM THE LOW ALTITUDE MAP

The Thrust Points that a fighter has are its combat reserve when operating in the lower atmosphere. Once these points have been used up, the craft starts expending the fuel it needs to return to its home base and thus increases the probability that it will be forced to crash land short of home. To simulate this effect, a player can use the following rules.

A fighter may continue to fight on the Low Altitude Map, even if it has expended all of its Thrust Points. However, its maximum thrust is no more than half of its normal Thrust rating. (OverThrust is not allowed.)

Once the craft has exited the Low Altitude Map, a roll is made to determine whether or not it reaches its airfield, and then a roll is made to see if it successfully lands.

To see if the craft has reached its landing field, a modified *Piloting* Skill roll is made. There is a +1 modifier for each 5 extra thrust points used (round up). A successful roll means that the craft reached its landing field. An unsuccessful roll means that the craft must put down somewhere other than its intended airfield.

A craft that reaches its intended airfield (either by a successful *Piloting* Skill roll, or by exiting the map without expending extra Thrust Points) may land safely with no further rolls required.

A craft that fails to reach its intended airfield must attempt to make an emergency landing elsewhere. It must make a *Piloting* Skill roll, using the procedures and modifiers found in **Movement: Landing**. It has no thrust available (+4 to the roll). To determine the terrain, use the *Random Landing Terrain* table.

TAILING

A fighter that has positioned itself on the tail of its opponent has a tremendous advantage. In game terms, a fighter that is tailing an enemy fighter always wins the initiative over its opponent (i.e., it will be able to move after the tailed fighter moves). The majority of maneuvering in combat is to achieve a tailing position.

A fighter is tailing an enemy fighter if:

- the enemy craft is in its forward firing arc, and
- it is in the rear firing arc of the enemy craft.

When there are more than two craft fighting, it is possible for a chain of fighters to be tailing each other. Movement proceeds along the chain from front to back. However, it is possible for a chain to close on itself, i.e., A is tailing B, who is tailing C, who is tailing D, who is tailing A. In this case, make a normal initiative roll. The winning player decides where the head of the chain starts.

★ INFERNO BOMBS ★

Normal bombs contain high explosives and inflict damage through fragmentation and concussion. Another type of bomb, the inferno bomb, does no explosive damage, but automatically starts fires and creates heat. Except for their damage effects, these super-napalm bombs are similar to 10-point bombs. They raise the heat levels of all objects in the impact hex by 10 Heat Points, and automatically start a fire in that hex. Any infantry unit in the impact hex is automatically destroyed. (Units inside a building avoid these effects on a 2-dice roll of 6+; underwater units are not affected.)

BattleMechs in adjacent hexes have their heat levels raised by 5 Heat Points, and a fire starts in the hex on a 2D6 roll of 6 or greater. Infantry in adjacent hexes are destroyed unless they make an avoid roll of 8 or greater.

Any BattleMech or vehicle in the affected area has been splattered with a burning gel. Unless the BattleMech can immerse itself in water of Depth 1+, the above heat effects will last for three turns, as per the **Infernos** optional rules. For the next three turns, vehicles hit with the gel must roll to avoid being destroyed, as per **Infernos**.

JUMPSHIP COMBAT

There are times when the presence of a JumpShip in combat is unavoidable. While anyone involved in an attack on a JumpShip should be aware of the serious consequences (such as demotion or refusal of passage aboard any JumpShip or DropShip), there are times when the need to attack outweighs any other considerations. If this is the case, use the following *JumpShip Hit Locations* table. JumpShips use the Aerodyne DropShip Record Sheet.

Full rules for Jumpship travel and operations are included in FASA's **DropShips and JumpShips** sourcebook.

JUMPSHIP HIT LOCATIONS (2D6)

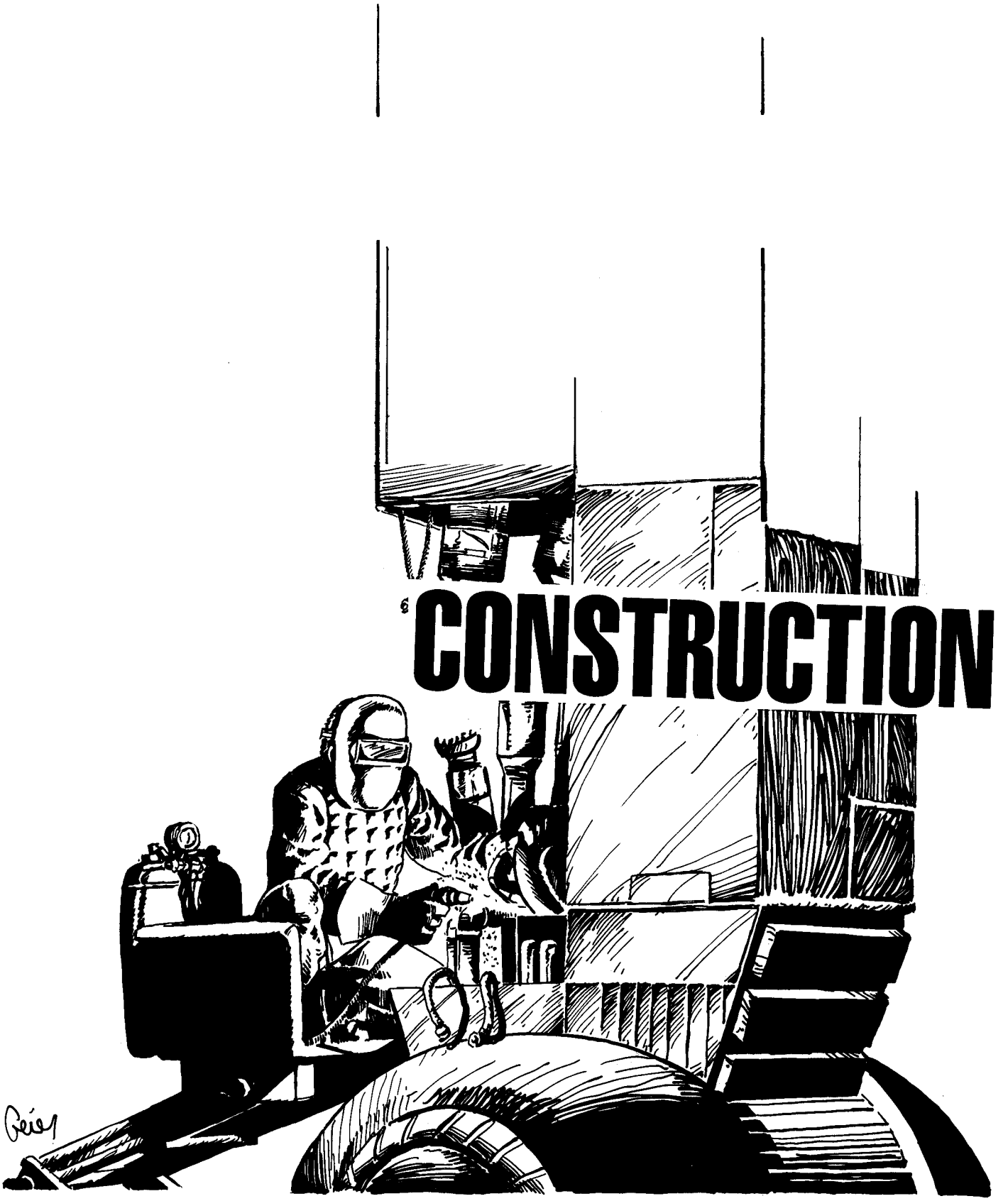
Roll	Nose	Aft	Left/Right Side
2	Bridge	Station (Critical)	Bridge
3	Command Right	JumpSail	Engine-Side
4	Command Right	DropShip/K-F Drive	Command Side
5	Command Right	Engine Right	K-F Drive
6	DropShip/K-F Drive	Engine Right	Cargo-Side
7	Nose	JumpSail/Station	DropShip/K-F Drive
8	DropShip/K-F Drive	Engine Left	Cargo-Side/Heat Sink
9	Command Left	Engine Left	K-F Drive
10	Command Left	DropShip/K-F Drive	JumpSail
11	Command Left	JumpSail	Engine-Side/Heat Sink
12	Bridge	Station (Critical)	Station (Critical)

Table Explanations

JumpSail. Each time the sail takes a hit, it takes a single point of damage, regardless of how much damage the weapon hit could inflict. If the sail is furled, then re-roll.

DropShip/K-F Drive. If any DropShips are carried, then the weapons fire hits one of them. If more than one is present, choose the affected ship at random. If no DropShips are present, the weapon fire affects the K-F drive, in which case the armored casing of the Kearny-Fuchida drive is hit. If any damage penetrates, then the hit inflicts a single point of damage on the drive itself, regardless of the hit's potential. The hit affects the drive's liquid helium tankage.

Fuselage. If the ship's fuselage takes more than 5 points of damage from any single hit, a compartment of the ship has been holed. Explosive decompression results. Roll 3D6. The result is the number of turns the Jumpship has before it is no longer operational.



CONSTRUCTION


EARTHWERKS LTD
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CLEARANCE 7765
CLASSIFIED
EXPERIMENTAL
PROTOTYPE 827
FRONT VIEW

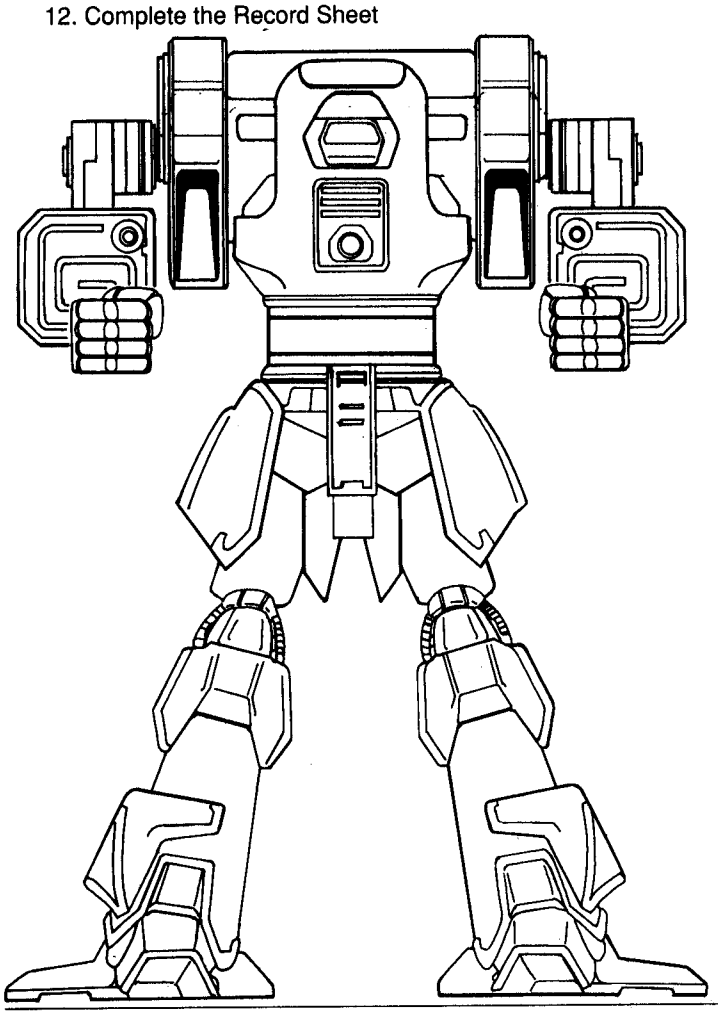
CONSTRUCTION

★ BATTLEMECH CONSTRUCTION ★

The follow system makes it possible for players to construct their own BattleMechs using any legal mix of speed, armor, and weaponry they desire. They can then pit their designs against others on the battlefield.

In order to design a BattleMech, a player will need a piece of scratch paper, a pen, the appropriate *Weapons and Equipment* chart (Inner Sphere or Clan), and an unused BattleMech Record Sheet. Proceed in this order:

1. Determine Technology Base
2. Choose Tonnage
3. Determine Engine Rating
4. Add Control Components
5. Allocate Tonnage for Internal Structure
6. Determine Jump Capability
7. Add Extra Heat Sinks
8. Add Armor
9. Add Weapons, Ammunition, and other Equipment
10. Complete Critical Hit Tables
11. Allocate Armor Values
12. Complete the Record Sheet



★ 1. DETERMINE TECHNOLOGY BASE ★

There are two available technology bases, Inner Sphere and Clan. Clan technology tends to be lighter, more compact, and able to generate less heat than their Inner Sphere counterparts. If a player uses Clan technology, he must also choose whether the BattleMech that he is designing is an OmniMech or a standard BattleMech.

Once the technology base is chosen, the player should be sure to use the appropriate *Weapons and Equipment* charts for his BattleMech.

2. CHOOSE TONNAGE

BattleMechs weigh between 10 and 100 tons (in increments of 5 tons). Within these limits, any tonnage may be chosen. Record the BattleMech tonnage at the top of the sheet of scratch paper. The total weight of the BattleMech's engine, weapons, armor, and other components may not exceed this figure.

★ 3. DETERMINE ENGINE RATING ★

A BattleMech's engine rating is determined by its weight and desired speed. Multiply the BattleMech's tonnage by its desired Walking speed. The resulting number is its engine rating.

Tonnage x Desired Walking Speed = Engine Rating

The *Fusion Engines* chart lists the tonnage requirements for engine ratings from 10 to 400. On the scratch paper, subtract the weight of the engine itself from the total tonnage of your BattleMech. The remaining tonnage is available for other components and systems. Note that a player may select an XL version of the engine if he wishes.

4. ADD CONTROL COMPONENTS

Every BattleMech must have a cockpit containing the MechWarrior's control station, life-support system, and electronic sensors. All BattleMech cockpits weigh 3 tons, regardless of the BattleMech's overall tonnage. Subtract 3 tons from the BattleMech's remaining tonnage.

In addition to its cockpit, every BattleMech must be equipped with a powerful gyroscope to keep it upright and able to move. The exact size of a BattleMech's gyroscope depends on its engine rating. Divide the BattleMech's engine rating by 100 (rounding up). The resulting number is the weight of the gyroscope (in tons). Subtract this figure from the tonnage remaining.

5. ALLOCATE TONNAGE FOR INTERNAL STRUCTURE

Ten percent of every BattleMech's total weight allowance is taken up by its internal structure. The *Internal Structure* chart shows the number of tons needed by every BattleMech of a given weight. It also shows the number and allocation of the BattleMech's Internal Structure boxes. The head's internal structure isn't listed on the chart; all BattleMech heads have 3 Internal Structure boxes.

Use the Internal Structure Diagram on the Record Sheet to record the number of boxes in each hit location, by marking out any excess boxes.

INTERNAL STRUCTURE

Total Tonnage	IS Tons Required	CT Torso	L/R Torso	Each Arm	Each Leg	
10	1	4	3	1	2	16
15	1.5	5	4	2	3	23
20	2.0	6	5	3	4	30
25	2.5	8	6	4	6	40
30	3.0	10	7	5	7	48
35	3.5	11	8	6	8	55
40	4.0	12	10	6	10	64
45	4.5	14	11	7	11	72
50	5.0	16	12	8	12	80
55	5.5	18	13	9	13	88
60	6.0	20	14	10	14	96
65	6.5	21	15	10	15	101
70	7.0	22	15	11	15	104
75	7.5	23	16	12	16	111
80	8.0	25	17	13	17	119
85	8.5	27	18	14	18	127
90	9.0	29	19	15	19	135
95	9.5	30	20	16	20	142
100	10.0	31	21	17	21	149

Endo Steel technology is also available. If Endo Steel is selected, the Internal Structure weight requirement is cut in half. Note that selecting Endo Steel requires the player to fill critical slots on the BattleMech's *Critical Hit Table*.

6. DETERMINE JUMP CAPACITY

BattleMechs may be equipped with jump jets in their legs and/or backs to allow jump movement. The weight of the jump jets depends on the weight of the BattleMech and the Jump MPs desired. A BattleMech cannot be constructed with Jump MPs greater than its Walking MPs. The *Jump Jet Weights* chart gives these costs.

JUMP JET WEIGHTS

BattleMech Tonnage	Jump Jet Weight
10 – 55	.5 tons/Jump MP
60 – 85	1.0 tons/Jump MP
90 – 100	2.0 tons/Jump MP

Subtract the total weight of the BattleMech's jump jets from the remaining tonnage. Allocate a critical slot for each jump jet, on either a leg or torso location, for its exhaust port.

★ 7. ADD EXTRA HIT SINKS ★

Heat sinks dissipate heat produced by movement, weapons fire, and so on. Every BattleMech's comes with 10 free heat sinks. Most BattleMechs will need more than 10 extra heat sinks to get rid of excess heat. Extra heat sinks can be acquired at the cost of 1 ton per heat sink.

Either double or normal heat sinks may be selected (see **Double Heat Sinks**). A BattleMech may not carry a mixture of normal and double heat sinks. If double heat sinks are selected, the 10 free heat sinks that come with the engine are also double sinks. If normal heat sinks are selected, the 10 free heat sinks that come with the engine are normal heat sinks.

8. ADD ARMOR

Armor helps protect the BattleMech's internal structure and critical components. Armor can be normal or Ferro-Fibrous. For each ton of normal armor selected, the BattleMech has 16 Armor Points. Ferro-Fibrous armor increases these armor values—see **Advanced Equipment: Ferro-Fibrous Armor**. Note that carrying Ferro-Fibrous armor requires the player to fill in critical slots on the BattleMech's *Critical Hit Table*.

Determine the total number of Armor Points the BattleMech will carry. These points will be allocated among the BattleMech's locations in Step 10. Armor can only be added in 1/2 or 1 ton lots.

★ 9. ADD WEAPONS, AMMUNITION, AND OTHER EQUIPMENT ★

Every weapon or piece of equipment placed on a BattleMech weighs a certain amount, as listed on the *Weapons and Equipment* charts. Select the weapons and equipment that the newly-designed BattleMech will carry. At least one ton (1/2 ton for MGs) of ammo must be purchased for each class of missile launcher or ballistic weapon (except one-shot weapons, which can have no additional ammo). This purchase provides a varying number of shots, depending on the launcher or weapon. Each ton of ammo occupies 1 critical slot. Note that certain pieces of equipment must be slotted in specific locations on the BattleMech's *Critical Hit Table*.

OmniMechs do not mount weapons at this stage. Instead, they allocate a specific tonnage to weapons and equipment pods. At the start of a game, a player with an OmniMech can then add weapons and equipment up to this allocated tonnage and available critical slots.

★ 10. COMPLETE CRITICAL HIT TABLES ★

The Record Sheet contains *Critical Hit* tables for every part of the BattleMech's body. These hit tables are already partially filled in. In this step, the player will allocate the BattleMech's additional heat sinks, jump jets, and weapons to different parts of its body, and place them in a slot on the *Critical Hit* table for that location. Remember that certain weapons take up more than one critical slot on the tables.

Fill in critical slots for Endo Steel, Ferro-Fibrous armor and XL engines, as noted in their descriptive sections.

Only a portion of the BattleMech's heat sinks have to be allocated to critical slots. The number that does not have to be

allocated is equal to the engine rating divided by 25 (rounding down). These heat sinks are assumed to be an integral part of the engine and are only destroyed if the engine is totally destroyed. For example, a BattleMech with a 210-rated engine has purchased an extra 5 heat sinks. Eight of these sinks (210/25) do not have to be allocated. The other 7 [10 (free) + 5 (extra) minus 8 (unallocated)] must be allocated to critical slots.

The number of blank slots remaining on the table for a given location acts as a limit on the number of weapons and other equipment that may be placed there. Many weapons take up more than one space, as shown on the *Weapons and Equipment* charts. For example, the center torso has no more than 2 slots left empty on its *Critical Hit* table, but a PPC takes up 3 spaces. Therefore, a PPC cannot be placed in the BattleMech's center torso. To free up slots, a player may elect to remove one or more arm actuators. Note that this means that the BattleMech will have difficulties in making certain types of physical and weapons attacks, as explained in the **BattleTech: Combat** chapter.

The critical slots for AC/20 type weapons, Arrow IV missile systems, and artillery weapons (Long Tom, Thumper, and Sniper) can be split between adjacent locations. All other weapons and equipment must have all of their critical slots in a single location.

Each ton of ammunition occupies 1 critical slot. That slot does not have to be in the same location as the weapon which uses the ammo. (Although MG ammo can be acquired in half-ton lots, a critical slot can accommodate a full ton of MG ammo.)

★ 11. ALLOCATE ARMOR VALUES ★

Divide the total Armor Value carried by the BattleMech (its points of armor) among the 11 different locations shown on the Armor Diagram.

The exact Armor Value used to protect a given area is left to the player's discretion, but the Armor Value in a location may not be more than twice the number of internal structure boxes in that location, regardless of whether the armor is standard or Ferro-Fibrous. For example, if a BattleMech has 10 IS boxes in its left arm, then the left arm's armor value can be no more than than 20. The only exception is that all BattleMechs can have an Armor Value of up to 9 on their heads.

It is important to notice that the center, left, and right torso locations have both front and rear armor. The armor allocated to the front of a torso location cannot be used to protect the rear of that location, and vice versa. The total armor allocated to the front and rear of a torso location cannot be greater than twice the location's internal structure.

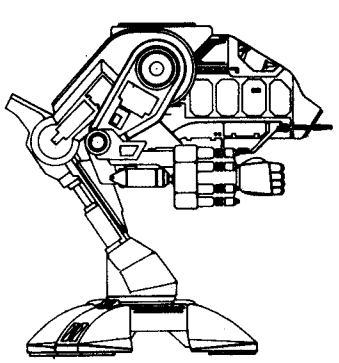
Use the Armor Diagram on the Record Sheet to indicate the Armor Value carried on each part of the BattleMech's body. Block out any excess boxes in the same way you filled out the Internal Structure Diagram.

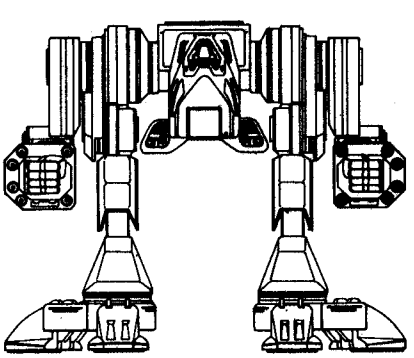
12. COMPLETE THE RECORD SHEET

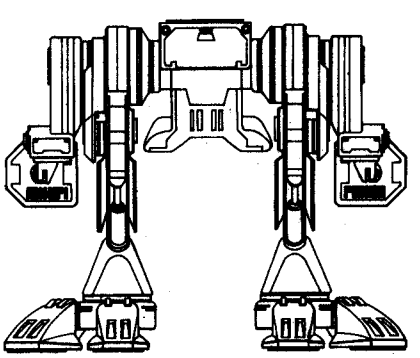
Complete the Record Sheet by listing the BattleMech's 'Mech Data and Warrior Data.

FUSION ENGINES

Rating	Manufacturer	Tonnage	Rating	Manufacturer	Tonnage
10	Omni	0.5	205	Vlar	8.5
15	GM	0.5	210	GM	9.0
20	Pitban	0.5	215	Core Tek	9.5
25	Omni	0.5	220	DAV	10.0
30	Nissan	1.0	225	VOX	10.0
35	VOX	1.0	230	Leenex	10.5
40	GM	1.0	235	GM	11.0
45	GM	1.0	240	Pitban	11.5
50	DAV	1.5	245	Magna	12.0
55	VOX	1.5	250	Magna	12.5
60	Leenex	1.5	255	Strand	13.0
65	Nissan	2.0	260	Magna	13.5
70	Omni	2.0	265	Vlar	14.0
75	GM	2.0	270	GM	14.5
80	VOX	2.5	275	Core Tek	15.5
85	DAV	2.5	280	Vox	16.0
90	DAV	3.0	285	Pitban	16.5
95	Nissan	3.0	290	Omni	17.5
100	Hermes	3.0	295	GM	18.0
105	DAV	3.5	300	Vlar	19.0
110	GM	3.5	305	GM	19.5
115	GM	4.0	310	Magna	20.5
120	GM	4.0	315	GM	21.5
125	Vlar	4.0	320	Pitban	22.5
130	Magna	4.5	325	VOX	23.5
135	Hermes	4.5	330	VOX	24.5
140	Leenex	5.0	335	Leenex	25.5
145	Omni	5.0	340	VOX	27.0
150	GM	5.5	345	Vlar	28.5
155	GM	5.5	350	Magna	29.5
160	LTV	6.0	355	LTV	31.5
165	VOX	6.0	360	Hermes	33.0
170	DAV	6.0	365	Hermes	34.5
175	Omni	7.0	370	Magna	36.5
180	GM	7.0	375	GM	38.5
185	GM	7.5	380	GM	41.0
190	DAV	7.5	385	LTV	43.5
195	Nissan	8.0	390	Magna	46.0
200	Nissan	8.5	395	Hermes	49.0
			400	LTV	52.5







CLAN WEAPONS & EQUIPMENT

CLAN WEAPONS & EQUIPMENT

Type	Heat	Damage	Minimum	Short	Medium	Long	Tonnage	Critical	Ammo
Energy Weapons									
ER Laser (Large)	12	10	-	1 – 8	9 – 15	16 – 25	4	1	-
ER Laser (Medium)	5	7	-	1 – 5	6 – 10	11 – 15	1	1	-
ER Laser (Small)	2	5	-	1 – 2	3 – 4	5 – 6	.5	1	-
ER PPC	15	15	-	1 – 7	8 – 14	15 – 23	6	2	-
Flamer	3	2	-	1	2	3	.5	1	-
Pulse Laser (Large)	10	10	-	1 – 6	7 – 14	15 – 20	6	2	-
Pulse Laser (Medium)	4	7	-	1 – 4	5 – 8	9 – 12	2	1	-
Pulse Laser (Small)	2	3	-	1 – 2	3 – 4	5 – 6	1	1	-
Flamer (Vehicle)	3	2	-	1	2	3	.5	1	20
Ballistic Weapons									
Anti-Missile System	1	*	-	-	-	-	.5	1	24
Gauss Rifle	1	15	2	1 – 7	8 – 15	16 – 22	12	6	8
LB 2-X AC	1	2	4	1 – 10	11 – 20	21 – 30	5	3	45
LB 5-X AC	1	5	3	1 – 8	9 – 15	16 – 24	7	4	20
LB 10-X AC	2	10	-	1 – 6	7 – 12	13 – 18	10	5	10
LB 20-X AC	6	20	-	1 – 4	5 – 8	9 – 12	12	9	5
Machine Gun	0	2	-	1	2	3	.25	1	200
Ultra AC/2	1	2	2	1 – 9	10 – 18	19 – 27	5	2	45
Ultra AC/5	1	5	-	1 – 7	8 – 14	15 – 21	7	3	20
Ultra AC/10	3	10	-	1 – 6	7 – 12	13 – 18	10	4	10
Ultra AC/20	7	20	-	1 – 4	5 – 8	9 – 12	12	8	5
Missile Weapons									
LRM-5	2	1/missile	-	1 – 7	8 – 14	15 – 21	1	1	24
LRM-10	4	1/missile	-	1 – 7	8 – 14	15 – 21	2.5	1	12
LRM-15	5	1/missile	-	1 – 7	8 – 14	15 – 21	3.5	2	8
LRM-20	6	1/missile	-	1 – 7	8 – 14	15 – 21	5	4	6
Narc Missile Beacon	0	NA	-	1 – 4	5 – 8	9 – 12	2	1	6
SRM-2	2	2/missile	-	1 – 3	4 – 6	7 – 9	.5	1	50
SRM-4	3	2/missile	-	1 – 3	4 – 6	7 – 9	1	1	25
SRM-6	4	2/missile	-	1 – 3	4 – 6	7 – 9	1.5	1	15
Streak SRM-2	2	*	-	1 – 4	5 – 8	9 – 12	1	1	50
Streak SRM-4	3	*	-	1 – 4	5 – 8	9 – 12	2	1	25
Streak SRM-6	4	*	-	1 – 4	5 – 8	9 – 12	3	2	15
Artillery Weapons *						*Max*			
Arrow IV System	10	20/10*	-	-	-	6 Boards	12	12	5
TAG	0	*	-	1 – 5	6 – 9	10-15	1	1	-
Long Tom	20	20/10	-	-	-	20 Bds.	30	30	5
Sniper	10	10/5	-	-	-	12 Bds.	20	20	10
Thumper	6	5/2	-	-	-	14 Bds.	15	15	20
Other Equipment *									
Active Probe	-	-	-	-	-	5	1	1	-
Anti-Personnel Pod	0	*	-	-	-	-	.5	1	-
Artemis IV FCS	-	-	-	-	-	-	1	1	-
CASE	-	-	-	-	-	-	0	0	-
Double Heat Sink	-	-	-	-	-	-	1	2	-
ECM Suite	-	-	-	-	-	6	1	1	-
MASC	-	-	-	-	-	-	**	**	-
TAG (for Arrow IV)	0	*	-	1 – 5	6 – 9	10 – 15	1	1	-
Targeting Computer	-	-	-	-	-	-	*	*	-

* See special rules for this equipment.
** (Mech Tonnage)/25*

INNER SPHERE WEAPONS AND EQUIPMENT

INNER SPHERE WEAPONS AND EQUIPMENT

Type	Heat	Damage	Minimum	Short	Medium	Long	Tonnage	Critical	Ammo
Energy Weapons									
ER Large Laser	12	8	-	1 – 7	8 – 14	15 – 19	5	2	-
ER PPC	15	10	-	1 – 7	8 – 14	15 – 23	7	3	-
Flamer	3	2	-	1	2	3	1	1	-
Large Laser	8	8	-	1 – 5	6 – 10	11 – 15	5	2	-
Medium Laser	3	5	-	1 – 3	4 – 6	7 – 9	1	1	-
Small Laser	1	3	-	1	2	3	.5	1	-
PPC	10	10	3	1 – 6	7 – 12	13 – 18	7	3	-
Pulse Laser (Large)	10	9	-	1 – 3	4 – 7	8 – 10	7	2	-
Pulse Laser (Medium)	4	6	-	1 – 2	3 – 4	5 – 6	2	1	-
Pulse Laser (Small)	2	3	-	1	2	3	1	1	-
Flamer (Vehicle)	3	2	-	1	2	3	.5	1	20
Ballistic Weapons									
Anti-Missile System	1	*	-	-	-	-	.5	1	12
Autocannon/2	1	2	4	1 – 8	9 – 16	17 – 24	6	1	45
Autocannon/5	1	5	3	1 – 6	7 – 12	13 – 18	8	4	20
Autocannon/10	3	10	-	1 – 5	6 – 10	11 – 15	12	7	10
Autocannon/20	7	20	-	1 – 3	4 – 6	7 – 9	14	10	5
Gauss Rifle	1	15	2	1 – 7	8 – 15	16 – 22	15	7	8
LB 10-X AC	2	10	-	1 – 6	7 – 12	13 – 18	11	6	10
Machine Gun	0	2	-	1	2	3	.5	1	200
Ultra AC/5	1	5	2	1 – 6	7 – 13	14 – 20	9	5	20
Missile Weapons									
LRM-5	2	1/missile	6	1 – 7	8 – 14	15 – 21	2	1	24
LRM -10	4	1/missile	6	1 – 7	8 – 14	15 – 21	5	2	12
LRM-15	5	1/missile	6	1 – 7	8 – 14	15 – 21	7	3	8
LRM-20	6	1/missile	6	1 – 7	8 – 14	15 – 21	10	5	6
Narc Missile Beacon	0	-	-	1 – 3	4 – 6	7 – 9	3	2	6
SRM-2	2	2/missile	-	1 – 3	4 – 6	7 – 9	1	1	50
SRM-4	3	2/missile	-	1 – 3	4 – 6	7 – 9	2	1	25
SRM-6	4	2/missile	-	1 – 3	4 – 6	7 – 9	3	2	15
Streak SRM-2	2*	*	-	1 – 3	4 – 6	7 – 9	1.5	1	50
Artillery Weapons *						*Max*			
Arrow IV System	10	20/10*	-	-	-	5 Boards	15	15	5
TAG	0	*	-	1 – 5	6 – 9	10 – 15	1	1	-
Long Tom	20	20/10	-	-	-	20 Bds.	30	30	5
Sniper	10	10/5	-	-	-	12 Bds.	20	20	10
Thumper	6	5/2	-	-	-	14 Bds.	15	15	20
Other Equipment									
Artemis IV FCS	-	-	-	-	-	-	-	1	1
Beagle Active Probe	-	-	-	-	-	-	4	1.5	2
CASE	-	-	-	-	-	-	.5	1	-
C^3 Computer	-	-	-	-	-	-	5	5	-
Slave	-	-	-	-	-	-	1	1	-
Double Heat Sink	-	-	-	-	-	-	1	3	-
Guardian ECM Suite	-	-	-	-	-	6	1.5	2	-
MASC	-	-	-	-	-	-	**	**	-
TAG (for Arrow IV)	0	*	-	1 – 5	6 – 9	10 – 15	1	1	-

* See special rules for this equipment.
** (Mech Tonnage)/20*

ADVANCED EQUIPMENT

Except where otherwise indicated, the new equipment discussed below is usable only in BattleMechs or AeroSpace fighters, not in ordinary vehicles. Both the Clans and the Inner Sphere have access to most of the technology discussed here, but the Clan versions are generally lighter and more compact, hence considerably more efficient.

★ ANTI-MISSILE SYSTEM ★

The anti-missile system is a rapid-fire, point-defense machine gun capable of tracking, engaging, and destroying incoming missiles. While very effective, the system's primary drawback is its high ammunition consumption. Both Clan and Inner Sphere anti-missile systems suffer from this handicap, though the Clans use flechette ammunition, increasing the number of rounds that can be stored in an ammo bin.

When a flight of missiles engages any BattleMech or vehicle equipped with an anti-missile system, the system automatically engages the salvo before a To-Hit roll is made for the missiles. The defending player rolls 1D6 if the BattleMech is using an Inner Sphere system, or 2D6 if the system is Clan-built. The result of this roll is the number of missiles shot down. The defender makes another 1D6 roll and multiplies the result by 2 to determine how much anti-missile ammunition was spent shooting down the attacking missiles. If this roll expends more ammunition than was actually available, the system is out of ammunition. As long as there was at least one shot available to fire, though, the result obtained against the missiles stands.

After the anti-missile fire is resolved, surviving missiles make their attack normally. Use the surviving number to determine which column to use on the *Missile Hits* table, rounding to the nearest entry. If the number of surviving missiles falls exactly between two entries, use the smaller of the two. For instance, an LRM 10 flight reduced to 9 missiles would still use the 10 column, but it would use the 6 column if it were reduced to 8 missiles. A flight reduced to one missile always uses the 2 column. A flight cannot hit with more missiles than it had after the anti-missile attack, regardless of the table results.

The anti-missile system can be used only once per turn, and it cannot be used against any target other than missiles. It also cannot shoot down missiles aimed at any other target. The anti-missile system cannot be used against Thunder-FASCAM, or Swarm LRMs, but can be used against a Narc beacon missile.

Treat anti-missile system ammo as machine gun ammo for explosion purposes.

ANTI-PERSONNEL PODS

A-Pods are directional mines installed on the lower legs of a BattleMech where infantry must attack if they plan to plant explosives on the sensitive actuator mechanisms. When an A-Pod is triggered, it blasts a cloud of shrapnel over an effective radius of roughly 15 meters, with a devastating effect on troops unfortunate enough to be in the open at the moment of the explosion.

A-Pods may only be mounted in the legs. They are one-shot weapons, usable only once per game.

When infantry uses anti-Mech or point-blank shots from hiding (see optional rules for **Anti-BattleMech Infantry** and **Hidden Units**), a BattleMech with an A-Pod can detonate it before the To-Hit roll is made. If an A-Pod is triggered, any unarmored infantry platoon in the same hex as the BattleMech takes 1D6—1 point of damage before resolving its own attack. (This is an exception to the rule prohibiting weapons fire against units in the same hex.) Regardless of the damage caused, the A-Pod is expended. A-Pods cannot hurt BattleArmor.

Unexpended A-Pods that take a critical hit do not explode like ammo. They are simply rendered inoperative. A-Pods are only available to Clan BattleMechs.

ARROW IV MISSILE ARTILLERY SYSTEM

The Arrow IV is a stand-alone missile system designed to deliver long-range salvos as a supplement to conventional artillery pieces, such as the Long Tom, Thumper, and Sniper. The main advantage of the Arrow IV is its relatively light weight compared to other artillery. However, the cost of its munitions is very high.

There are two basic types of Arrow IV missiles. The more common and less expensive is the standard area saturation missile. This attacks an area, doing high explosive damage to any object within a 45-meter blast radius.

The second type of Arrow missile is a homing missile, which homes in on a target designated by a spotting unit on the battlefield that carries target acquisition gear (TAG). The homing missile does only a small amount of collateral damage. The Clan version of the Arrow IV missile artillery system is lighter than its Inner Sphere counterpart. In addition, where the Inner Sphere version can fire only the two types of warheads described above, the Clan model can also deliver a FASCAM round, causing a 30-point minefield to appear in the target hex, as described in **Thunder LRM**.

Treat Arrow IV missile artillery as other artillery for game purposes, following all of the **Artillery** rules except as noted below.

In a standard area attack, note the location of the target hex and the turn of arrival on a piece of paper. Such attacks do 20 points of damage to all units in the impact hex and 10 points to all units adjacent to that hex. Handle scattering normally.

Homing missiles do not need a plotted target hex. However, the player must select a specific TAG-equipped unit to act as spotter on the turn of arrival. If for any reason the selected TAG unit cannot designate the target during the Off-Board Attack Phase on the turn the missile arrives on the board, the missile automatically misses and explodes harmlessly.

To use TAG equipment for target designation, the spotting unit must be within 15 hexes of the target and have a line-of-sight. Calculate the To-Hit Number based on the range from the spotting unit to the target, just like a normal weapon attack. All normal combat modifiers apply, using the spotting unit's movement, *Gunnery* Skill, and so forth.

If the spotter successfully designates the target (i.e., if the To-Hit roll is successful) the Homing Missile will hit on a 2D6 roll of 4 or more. If the spotting roll fails, the missile explodes harmlessly. The missile does 20 points of artillery damage to the target and 5 points of artillery damage to any other unit in the hex. Adjacent hexes are not attacked, and there is no scattering. The location of the spotting unit relative to the target determines the direction of the attack. Therefore, if the spotting unit is on the left side of the target, use the Left column of the *Hit Locations* tables to determine

what part of the BattleMech or vehicle is hit.

If the target is designated successfully but the missile misses, it causes 5 points of artillery damage to all units in the target hex, including the target unit.

The TAG system cannot target infantry.

ARTEMIS IV FIRE-CONTROL SYSTEM

The Artemis IV is a fire-control system that improves the accuracy of standard missile launchers. Mounted in a dome on the side of the launcher, the Artemis locks onto any target, illuminates it with an infrared beam, and fires a spread of missiles. The system provides constant course-correction data to the missiles in flight with a tight-beam microwave communications link. The Artemis increases the number of missiles that hit the target.

Any missile attack from an Artemis-equipped launcher is resolved normally. However, when rolling on the *Missile Hits* table, add 2 to the roll, possibly increasing the number of hits scored on the target. If the Artemis for a particular launcher is destroyed, the missile launcher can still be fired as a normal launcher.

Artemis units can be attached to any standard long- or short-range missile launcher. The system must be mounted in the same part of the BattleMech as the launcher that it controls (though missile launchers mounted in the center torso may be controlled by a system mounted in the head). Each launcher requires its own Artemis. If *any* class of missile system aboard the BattleMech or vehicle is outfitted with the Artemis IV, *all* Artemis-compatible systems must be. The Artemis IV may only be mounted on standard missile launchers; it is incompatible with the Streak SRM, Narc missile beacon, and Swarm and Thunder munitions. It may be used with one-shot missile packs. The Artemis requires special missiles, identical to standard missiles in all game areas except for double cost.

BEAGLE ACTIVE PROBE

Capable of detecting and identifying even shut-down and camouflaged units at distances much greater than standard-issue electronic warfare (EW) suites, the active probe is a valued addition to any recon unit.

In **BattleTech**, the probe will detect any hidden BattleMech or vehicle (but not infantry) if, at the end of a Movement Phase, the concealed unit is anywhere inside of the probe's operating radius (5 for Clan and 4 for Inner Sphere probes) and a line-of-sight exists between the two. Units hidden underwater cannot be detected by an active probe. (These probes have no effect if the **Hidden Units** optional rules are not being used.)

C³ COMPUTER

Recently designed and field-tested by the Draconis Combine military, the Command/Control/Communications (C³) computer system is a piece of equipment available exclusively to the Inner Sphere. Intended for installation in command or reconnaissance 'Mechs or vehicles, the C³ system is designed to help unit commanders coordinate activities on the lance and company levels.

The C³ computer system requires 5 tons and 5 critical slots aboard the command 'Mech or vehicle, and 1 ton and 1 critical slot aboard each 'Mech or vehicle that will have a communications link to the command computer. Each unit linked to a C³ computer can use the targeting system of any other unit in the network. When firing, calculate the To-Hit Number by using the range to the target from the network's nearest unit with a line-of-sight. All modifiers for movement, terrain effects, and so forth are still based on the firing unit. A weapon still has its normal LOS restrictions and it cannot exceed its maximum range, though a well-placed lancemate can have the effect of reducing the weapon's long range to short range.

The C³ computer also duplicates the function of target acquisition gear (TAG) and can designate a target for **Arrow IV** homing missiles.

Prior to the start of play, designate which units are part of the network. Only three slave units can tie into a single C³ command computer, so a typical network would be the four 'Mechs of a lance. However, the network can be extended by installing a C³ slave computer on the command 'Mech of each lance in a company, and another command computer on the company command 'Mech. This allows any 'Mech in the company to use the computer coordination. Complexities of coordination do not permit more than twelve units to participate in any network, even when it is extended by additional command vehicles. (In general practice, this means there are three lances, of 4 'Mechs each, with a command computer and 3 slave computers assigned to each lance, and then two of the lance commanders slaved to the third lance commander (the company commander) who therefore has *two* command computers.) Different networks cannot share coordinating abilities during a battle. For example, 'Mechs of Warren's Company could not use a 'Mech of Ching's Company as a target designator even if both companies had C³ networks. Loss or destruction of a unit carrying a C³ command computer destroys that portion of the network it controlled.

C³ computers are available only to Inner Sphere 'Mechs.

CELLULAR AMMUNITION STORAGE EQUIPMENT (CASE)

CASE is a damage-control technology that mitigates the effects of internal ammunition explosions. When ammo explodes in a location with CASE, the force of the explosion blows out through specially designed panels and armor, directing the main force of the explosion away from the BattleMech's vital components, such as the cockpit or the engine.

If ammo in a CASE-equipped location explodes, it damages the weapons, internal structure and equipment mounted in that location normally. Apply excess damage to the armor of the location (the rear armor, for torso locations). Any remaining damage is not applied anywhere. Remember that the loss of all internal structure in a side torso location renders the corresponding arm useless. In vehicles, the CASE system blows out the back armor; the vehicle itself is crippled, but the crewmembers and passengers survive the explosion.

If an ammo explosion passes *into* a location that has CASE, the internal structure takes damage as normal, and then all excess damage is blown out as above. This might occur if an Inner Sphere BattleMech had an arm ammo explosion and damage transferred to a side torso equipped with CASE.

All Clan weapons pods containing ammo-fed weapons auto-

matically have CASE, at no cost in tonnage or critical slots. Inner Sphere 'Mechs and vehicles can have CASE built in. AeroSpace fighters (on either side) may not carry CASE systems because of the basic frailty of aircraft systems. Inner Sphere BattleMechs can only carry CASE in a torso location; Clan BattleMechs have no such restriction.

An Inner Sphere CASE system requires one critical slot and weighs half a ton per location protected. Hits on the CASE critical slot have no effect and should be rerolled.

CELLULAR AMMUNITION STORAGE EQUIPMENT

	Tons	Slots
Clan CASE	0	0
Inner Sphere CASE	.5	1

DOUBLE HEAT SINKS

With a heat-dissipation rate twice as fast as that of standard heat sinks, double heat sinks can cool a BattleMech much more efficiently. Though weighing the same as standard heat sinks, the double versions are considerably bulkier, taking up extra space aboard a BattleMech. The Clan version of the double heat sink is twice as bulky, while the Inner Sphere model is three times as bulky, making it impossible to mount this equipment in a BattleMech's legs.

BattleMechs with double heat sinks shed two points of heat for each operating sink each turn. If the heat sink is submerged in water, it dissipates an additional 2 points, but remember the maximum additional heat that can be dissipated underwater is 6 points.

Single and double heat sinks cannot be mixed in any vehicle. Vehicles cannot have double heat sinks at all, but AeroSpace fighters can.

DOUBLE HEAT SINKS

	Tons	Slots
Clan Double Heat Sinks	1	2
Inner Sphere Double Heat Sinks	1	3

ENDO STEEL INTERNAL STRUCTURE

Endo Steel was designed especially for use in BattleMech skeletons. Using zero-G manufacturing techniques that uniformly mix high-density steel with lower density titanium and aluminum, the process produces a metal twice as strong per unit of weight as standard skeleton materials, but at an increase in overall bulk. The Clans have refined Endo Steel production to the point of great efficiency, but the Successor States' use of the material is still severely hampered by the scarcity of orbital manufacturing facilities.

BattleMechs that use Endo Steel need allocate only half the usual weight to the internal structure (rounding up). The bulkiness of the alloy reduces the number of free critical slots on board. The player may allocate these slots wherever he sees fit, even filling up whole locations if desired, but the indicated number of slots must be filled by the Endo-Steel. Hits on an Endo Steel critical slot have no effect and should be re-rolled.

ENDO STEEL INTERNAL STRUCTURE

	Tons	Slots
Clan Endo Steel	Half Standard	7
Inner Sphere Endo Steel	Half Standard	14

FERRO-FIBROUS ARMOR

Ferro-Fibrous armor is an improved version of ordinary BattleMech armor. Using woven fibers of ferro-steel and ferro-titanium, this armor plating greatly increases tensile strength. However, like Endo Steel skeletons, Ferro-Fibrous armor is bulkier than its equivalent weight of standard armor plating.

A version known as Ferro-Aluminum armor is also available for AeroSpace fighters and vehicles. As with Endo Steel skeletons, the Clan versions of these armor types require less space than those used by the Inner Sphere.

Units that use Ferro-Fibrous armor get more Armor Value for the same weight. Calculate the normal Armor Value, and then multiply this number by 1.12 (for Inner Sphere units) or by 1.2 (for Clan units) rounding to the nearest whole number and rounding .5 down. The result is the Armor Value using Ferro-Fibrous armor. The bulkiness of the armor reduces the number of free critical slots in the same way that Endo Steel does. Hits on Ferro-Fibrous armor critical slots have no effect and should be re-rolled.

FERRO-FIBROUS ARMOR

	Tons	Slots	Armor Multiple
Clan			
Ferro-Fibrous Armor	Standard	7	1.2
Inner Sphere			
Ferro-Fibrous Armor	Standard	14	1.12

When mounting Ferro-Aluminum armor on Clan or Inner Sphere vehicles and AeroSpace fighters, reduce the number of weapons available on both their right and left sides by 2.

GAUSS RIFLE

The Gauss rifle uses a series of magnets to propel a projectile through the barrel toward a target. While requiring a great deal of power to operate, it generates very little heat and can achieve a muzzle velocity twice that of any conventional weapon.

Gauss rifle ammunition is a slug of nickel-ferrous metal. If Gauss ammunition takes a critical hit, there is no explosion, but the hit destroys the ammo-feed mechanism, rendering the rest of the ammunition in that location useless.

A critical hit on the Gauss rifle itself destroys the capacitors that power the weapon. Such destruction causes a catastrophic discharge of the capacitor's stored energy, with results similar to an ammunition explosion. If a Gauss rifle takes a critical hit, treat it as a 20-point ammunition explosion for the location containing the rifle.

GUARDIAN ECM SUITE

The Guardian ECM suite is a broad-spectrum jamming and electronic countermeasure device designed to reduce the effectiveness of enemy long-range scanning and surveillance equipment.

A Guardian system nullifies the effects of any *enemy* Beagle active probe (though it would notice that it is being jammed), Artemis fire-control system, Narc missile beacon, or C^3 computer, when that system is within 6 hexes of a Guardian-equipped unit. Friendly systems of these sorts are not affected.

A Guardian nullifies these systems even when they are not directed at the Guardian-equipped unit. It also works when the path of the enemy system passes within 6 hexes of the Guardian. For example, if the LOS to a Narc or the LOS between two C^3-linked units passes within 6 hexes of an enemy Guardian, the line of communication is broken until the Guardian no longer interferes.

LB-X AUTOCANNON

Another improvement on the common autocannon, the LB-X makes use of light, heat-dissipating alloys to reduce weight and heat build-up. These materials make the weapon more expensive than the standard autocannon, but its advantages are often worth the higher costs.

In addition to these advantages, the LB-X autocannon also can use special cluster munitions, which act much like an anti-BattleMech shotgun in combat. When fired, the ammunition fragments into several smaller submunitions. This improves the chances of striking a critical location, but disperses total damage by spreading hits all over the target area rather than concentrating it on one location. Cluster munitions can be used only in LB-X autocannon, not in standard or Ultra autocannon types.

Note that the LB-X series of autocannon does not appear in an Ultra configuration, and it cannot make use of doubled fire rates.

Before the start of play, the player should designate LB-X ammunition as either standard or cluster munitions. Ammo must be designated in full-ton lots. When firing, the player must declare the type of ammo being used and mark it off his Record Sheet accordingly.

Attacks made with cluster munitions receive a –1 modifier to the To-Hit Number at all ranges. Hits by cluster rounds are resolved like a missile hit, with the player rolling on the column of the *Missile Hits* table corresponding to the size of his LB-X autocannon to see how many submunitions strike the target. Roll a separate location for each hit, each of which causes one point of damage.

LB-X autocannon follow all other restrictions and rules for normal autocannon for their appropriate size.

MYOMER ACCELERATOR SIGNAL CIRCUITRY (MASC)

MASC makes a BattleMech capable of a short burst of speed, at some risk to its fragile leg actuators. It works by boosting the signals to the myomer leg musculature, causing them to contract and relax at a quicker rate than is usually possible. (MASC affects only leg musculature.) This increases speed, but the stresses placed on the actuators and the myomer can cause a catastrophic failure, especially after prolonged MASC use.

Any BattleMech with MASC can activate the system before the Movement Phase of any turn. The player declares that he is using the MASC system and rolls 2D6. On a 3 or better, the BattleMech can Run that turn at a speed equal to double its standard Walking speed. If the result is 2, the leg actuators freeze up, immobilizing the BattleMech for the rest of the game.

On the second consecutive turn of MASC use, a roll of 4 or less immobilizes the BattleMech. A roll of 6 or less freezes the actuators on the third consecutive turn, 10 or less on the fourth, and the legs automatically fail on the fifth.

For each turn the system is not used, reduce the threshold number by one step, but never below 3. For example, a player uses MASC for three consecutive turns, needing a 7 or more on the third turn to stay mobile. After an intervening turn of not using the system, the player would need a 5 or better to avoid freezing up. Two turns without using MASC reduces that number to the original 3.

Both Clan and Inner Sphere BattleMechs can use MASC, with the Clans getting a slight advantage in weight and bulk. When figuring tonnage and critical slots required, round all fractions to the nearest whole number; round .5 up. MASC is incompatible with **Triple Strength Myomer**.

MYOMER ACCELERATOR SIGNAL CIRCUITRY

	Tons	Slots
Clan MASC	BattleMech Tonnage/25	BattleMech Tonnage/25
Inner Sphere MASC	BattleMech Tonnage/20	BattleMech Tonnage/20

NARC MISSILE BEACON

The Narc missile beacon is a heavily modified missile launcher that fires special missiles, called pods, which are powerful homing beacons mounted behind a magnetic head. If the missile hits, the pod broadcasts a homing signal for any friendly missile systems equipped to receive Narc transmissions. Like the Artemis IV system, Narc pods increase the number of missiles that hit a target. The Narc system is superior to the Artemis in that the lock is never broken once it has been established, because the beacon is attached to the target and cannot be destroyed.

Players may fire one Narc pod per launcher each turn. If the attack hits, the pod is attached to the target unit. On all following combat phases, all attacks by any Narc-equipped missiles have a +2 modifier on the *Missile Hits* table. This effect stays with the targeted BattleMech for the duration of the battle.

The Narc system can be used to control both standard SRM and LRM missile attacks. It cannot affect Streak SRMs, Artemis IV, or Swarm and Thunder munitions. Missiles capable of homing on a beacon cost twice as much as usual due to special guidance links. Other Narc beacons in the target hex do not confuse Narc-guided missiles. Narc pods cannot be fired into or within buildings.

Exploding Narc pods cause 2 points of damage per pod.

PULSE LASERS

The pulse laser uses a rapid-cycling, high-energy pulse to generate multiple laser beams, creating an effect comparable to machine-gun fire. This improves the hit probability of the laser attack and causes more damage per hit, at a cost of increased heat and a somewhat shorter effective range.

Treat pulse lasers as other energy weapons, but modify the To-Hit Number by -2.

SINGLE-SHOT MISSILE LAUNCHERS

It is possible for a vehicle or BattleMech to be equipped with a single-shot version of a standard missile launcher. Such a system is designated by an "OS" (*one-shot*) after the missile nomenclature, such as LRM 20 (OS).

The player does not purchase any ammunition to go with the launcher. It can be fired only once during the game. The single-shot missile launcher can use special munitions, such as Swarm or Thunder LRM rounds, and special targeting devices (Streak, Narc, or Artemis), at double the base cost of the launcher. All other performance characteristics are the same as for multi-shot launchers of the same type and ordnance.

Single-shot launchers weigh half a ton more than the standard missile launcher of the same type

STREAK SHORT-RANGE MISSILES

Before the Streak can be fired, it must have a lock on its target. A player attempting to obtain a lock must make a standard To-Hit roll as if he were firing a normal SRM. He does this during the Weapon Attack Phase. If successful, the player may immediately fire his Streak SRMs at the locked-on target. All SRMs automatically hit, and the player rolls as normal to determine the hit locations. If the the player fails to achieve a lock, he does not fire the SRMs and does not build up any heat. The player must roll for a lock each turn, even if he had achieved a lock on the target in the previous turn. A separate To-Hit roll must be made for each individual Streak system attempting to fire.

SWARM LONG-RANGE MISSILES

Swarm LRMs are special missiles using hundreds of submunitions able to saturate an area with devastating firepower.

Players should note at the start of the game how many Swarm reloads their ammunition stock includes.

Swarm LRMs are used like normal missiles, except that any Swarm warheads that miss their original target attack any unit, friendly or enemy, in the same or adjacent hex. The closest unit to the original target is attacked first, with any missiles that still miss attacking the next closest unit, and so on until all missiles have hit something or have run out of possible targets. A Swarm missile will first attack all targets in its original target hex, then attempt to hit all targets in adjacent hexes. It will not go farther than the six hexes immediately adjacent to the original target hex.

Generate a new To-Hit Number based on range, movement, and terrain for each new target. It is not necessary for the firing unit to have a line-of-sight to a secondary target for that target to be hit. If two or more possible secondary targets are equally close to the original target, the defender chooses the order of the attacks. (If units from both sides are equally close, choose a target randomly.) When determining the number of missiles that hit a secondary target, use the closest column (rounding down) on the *Missile Hits* table.

TARGETING COMPUTER

The Clans have developed advanced targeting systems not yet available to the Inner Sphere that can enhance the performance of direct-fire weapons, such as lasers, PPCs, Gauss rifles, and autocannon. The Targeting Computer is only found on Clan 'Mechs.

On ordinary attacks, a targeting computer modifies the To-Hit Number by -1 for any attack with the unit's direct-fire weapons. Follow all other procedures normally.

If the player prefers, he can announce an attempt to target a specific hit location with his attack. All direct-fire weapons to be used must fire at the same location, which must be plainly visible to the firing unit. Attacks from one side cannot target locations on the other side of the target, nor can legs be targeted if a BattleMech has partial cover. For example, an attack coming from the Right side of a BattleMech cannot be directed against its left arm, left leg, or left torso. When calculating the To-Hit Number, apply a +3 modifier for all weapons. The head of a BattleMech may never be targeted in this way. The -1 modifier for ordinary attacks is not applied when firing at a specific location.

The size and weight of a Targeting Computer depends on the amount of weaponary it will control. For every five tons, or fraction thereof, of direct fire weapons, the Targeting Computer requires one ton and one critical space.

★ THUNDER LONG-RANGE MISSILES ★

Thunder LRMs deliver scatterable minefields. The "Thunder" warhead is the Inner Sphere designation for FASCAM (*Field Artillery Scatterable Mines*); the Clans use a warhead that is virtually identical.

Players should note the number of tons of LRM ammo set aside as Thunder-FASCAM munitions. Ammo must be designated in full-ton lots.

Like artillery, Thunder LRMs attack hexes rather than units. The To-Hit roll is modified only by intervening terrain and the attacking unit's movement and condition, never by the movement or condition of units in the target hex. If the attack misses the target hex, it scatters as per the optional **Artillery** rules. The hex hit by a Thunder LRM attack is mined from that point on by a minefield equal in strength to the number of missiles in the attack. An LRM 20 will lay a 20-point minefield, while an LRM 5 lays a 5-point field. Units in the hex are not affected until they attempt to leave.

Any unit that attempts to move into a mined hex must roll 2D6 to determine if it encounters mines. On a result of 7 or more the unit hit a mine. Units that are in an unmined hex that is subsequently mined by Thunder LRM's must make the same roll to safely exit. Use the **Minefields: Conventional Minefields** optional rules to resolve the attack. Remember that the attack value varies according to the size of the LRM launcher. A Thunder LRM cannot deliver a command-detonated or vibrabomb field.

Multiple Thunder minefields in the same hex are added together, but the value is never great than 20.

The Thunder-FASCAM missile is identical to a standard LRM round except for its cost, which is double normal. It does not gain the benefits of missile targeting systems (Artemis or Narc).

TRIPLE STRENGTH MYOMER

Triple Strength Myomer is effective only when a BattleMech is running hot. If a BattleMech is equipped with Triple Strength Myomer, each turn that it ends with a heat level of 9 or higher, the following effects take place for the next turn:

- Ignore the –1 MP heat effect at 5 on the Heat Scale (but apply all other heat modifiers to movement). In addition, increase its Walking speed by 1 and recalculate its Running speed accordingly. Jump MPs are not affected.
- Double the damage values for punch, kick, and club attacks it makes.
- Double its lifting ability.

Triple Strength Myomer is incompatible with MASC, and requires 6 critical slots anywhere in the BattleMech allocated to the myomer. Critical hits on these slots have no effect and are re-rolled.

ULTRA AUTOCANNON

When firing an Ultra autocannon, the player must specify whether it is at normal or double rate of fire. If firing normally, all standard combat rules apply. If firing at double rate, use the following special rules.

An Ultra autocannon firing at double rate generates twice as much heat and uses two shots of ammunition instead of one. If successful on the standard To-Hit roll, the player rolls on the "2" column of the *Missile Hits* table to determine how many shots struck the target. Roll for location separately for each hit, which does the full amount of damage for an autocannon of the size used. The second shot cannot be fired at a second target.

If a player is using the double rate of fire and gets a 2 on his To-Hit roll, the arming circuitry fails, leaving the weapon useless until repaired after the battle (see optional rules for **Prizes, Repairs and Scavenging**).

Ultra autocannon follow all other restrictions and rules for normal autocannon of the same size.

XL ENGINES

Advances in the shielding of fusion power plants have enabled designers to retro-fit standard engines with new and lighter shielding materials, greatly reducing overall engine weight, though once more at the cost of compactness. The Clan version of the XL engine is much less bulky than those developed so far in the Inner Sphere.

Players may designate any fusion plant as being built with XL technology. Normal engine weight is halved (rounding up to the half-ton). Additional engine critical slots must be allocated to both the right and left torsos. XL engines can come with either single or double strength heat sinks.

Note that any 3 engine critical hits destroys a BattleMech regardless of wether the critical slots are in the side or center torso.

All BattleMechs, vehicles, and AeroSpace fighters can use XL engines.

XL ENGINES

	Tons	Slots
Clan XL Engine	Half Standard	2 in LT, 2 in RT
Inner Sphere XL Engine	Half Standard	3 in LT, 3 in RT

OUTFITTING AN OMNIMECH

Rather than using a basic OmniMech design, the players customize any of their OmniMechs before any particular battle by the addition of special equipment and weaponry. Each OmniMech design indicates the features permanently installed and specifies a number of tons available for the installation of additional gear. Certain types of equipment can be installed on any OmniMech, subject to weight and space limitations.

Weapons can always be installed, providing there are sufficient slots and tonnage. All Clan weapons are allowed. When mounting weapons, be sure to include ammunition for those that require it. Weapon pods for OmniMechs automatically include the CASE ammo-protection feature (see **Advanced Equipment: CASE**) at no cost in space or weight.

In addition to weapons, other optional features that can be mounted on an OmniMech include the following:

HEAT SINKS

Additional heat sinks may be added if slots are available. Be sure to install compatible heat sinks; some OmniMech designs use standard heat sinks, but most use double heat sinks, instead. A OmniMech that is to carry weapons that produce a great deal of heat may add the heat sinks along with the weapons themselves, thus retaining greater flexibility. On a later mission, so many heat sinks might not be necessary, and the space can be better used for other equipment instead. Heat sinks may be mounted in pods attached to any portion of the OmniMech, provided sufficient critical slots are available in the chosen location.

JUMP JETS

Players may add jump jets to any OmniMech, whether it normally has jump jets or not. Jump jets may only be mounted in pods on the Left and Right Legs, the Left and Right Torsos, and the Center Torso, and may only be mounted if there are sufficient critical slots in these areas. Use the standard rules for determining the jets' tonnage necessary to give the OmniMech the desired jump capacity.

ELECTRONICS

Probes, targeting gear, and other high-tech electronics may be mounted in OmniMech pods. Electronics may be mounted anywhere, provided there are sufficient slots available in the chosen hit location to fit the gear.

OTHER EQUIPMENT

OmniMech pods can accommodate any of the new equipment, anti-missile systems, A-Pods, and so on.

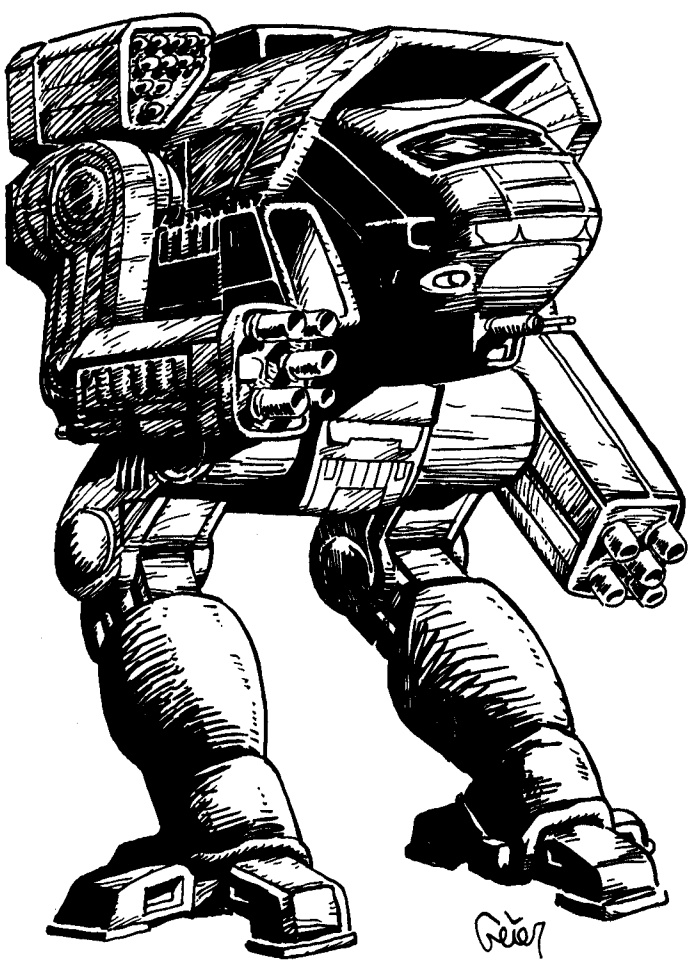
Certain items may never be added in pods. Engines, Endo Steel, MASC, and armor are all forbidden. It is possible, though rarely desirable, to mount empty cargo-carrying pods on an OmniMech to transport infantry or equipment. Cargo transport is addressed in the **Cargo Carriers** optional rules.

When preparing an OmniMech for a battle, determine the available tonnage for add-on pods listed in the descriptions of the standard OmniMech designs. Pods may not have more equipment than this weight capacity.

Choose locations for each pod aboard the OmniMech. The locations selected must have sufficient critical slots available for the systems being added.

BattleMech arm and hand actuators are themselves mounted as pods on OmniMechs. They may be attached and detached freely between battles, but may never be mounted if an arm is to contain any type of PPC, autocannon, or Gauss rifle. Their use in conjunction with other arm-mounted weapons is optional. If any of these mechanisms are omitted, the appropriate arm actuator and hand actuator slots of the *Arm Critical Hits* table are considered empty and may be used as extra critical slots for arm-mounted weapons. The OmniMech cannot use a hand for any purpose (lifting, carrying, using clubs) if its hand actuator is omitted. Remember, BattleMechs without hand and/or arm actuators have negative modifiers for punch attempts.

All add-ons are designated before the battle begins. If using the optional **Prize, Repair and Scavenging** rules, pods may not be changed except by Techs, between battles. Pod replacement takes 30 minutes, or twice that long on a roll of 2 on 2D6.



VEHICLE CONSTRUCTION

The follow system makes it possible for players to construct their own vehicles. They can then pit their designs against others on the battlefield.

In order to design a vehicle, the player will need a piece of scratch paper, a pen, the appropriate *Weapons and Equipment* chart, and an unused Vehicle Record Sheet. The procedure is as follows.

1. Determine Technology Base
2. Choose Tonnage
3. Determine Engine Rating
4. Add Cockpit and Control Components
5. Add Lift Equipment/Rotors/Diving Equipment
6. Allocate Tonnage for Internal Structure
7. Add Armor
8. Add Weapons, Ammunition, and other Equipment
9. Allocate Armor Values
10. Complete the Record Sheet

★ 1. DETERMINE TECHNOLOGY BASE ★

There are two available technology bases, Inner Sphere and Clan. Clan technology tends to be lighter, more compact and able to generate less heat than their Inner Sphere counterparts. Once the technology base is chosen, the player should be sure to use the appropriate *Weapons and Equipment* charts for his vehicle.

2. CHOOSE TONNAGE

Vehicle weight is limited by type according the charts following. Within these limits, any integral tonnage may be chosen. Record your vehicle's tonnage at the top of the sheet of scratch paper. The total weight of the vehicle's engine, weapons, armor and other components may not exceed this figure.

3. DETERMINE ENGINE RATING

A vehicle's engine rating is determined by its weight, desired speed, and suspension (or lift) factor. Multiply the vehicle's tonnage by its desired Cruising speed, and then subtract the suspension (or lift) factor from this total. The resulting number is its engine rating.

(Tonnage x Desired Cruising Speed) minus Suspension/Lift Factor is the Engine Rating

For example, a 25-ton VTOL desires a Cruising speed of 10; 25 x 10 is 250. The lift factor for a 25-ton VTOL is 140; 250 minus 140 is 110, so 110 is the rating of the engine necessary to give this VTOL a cruising speed of 10. The suspension or lift factors for each vehicle type is listed below, sometimes broken down by the vehicle's tonnage. A player may select an XL version of the engine if he wishes.

Vehicles have a choice of whether they will use a fusion or internal combustion engine. Internal combustion engines (ICE) weigh twice as much as an identically rated fusion engine, but they are cheaper and more readily available. Also, vehicles with fusion engines must add extra shielding and transmission equipment. The weight of this equipment is equal to one half of the weight of the fusion plant itself. XL ICE is not available. (See the *Fusion Engines* chart.)

VEHICLES

Ground Vehicles

Tracked

Maximum Tonnage	100
Suspension Factor	0
Terrain Restrictions	No Heavy Woods or Water

Wheeled

Maximum Tonnage	80
Suspension Factor	20
Terrain Restrictions	No Rough, Rubble, Woods, or Water

Hovercraft

Maximum Tonnage	50

Suspension Factor:

Tons	*SF*
01 – 10	40
11 – -20	85
21 – 30	130
31 – 40	175
41 – 50	235

Terrain Restrictions	No Woods
Lift Equipment	1 ton for every 10 tons of craft
Minimum Engine Weight	20 percent of total vehicle weight

Naval Vehicles

Hydrofoils

Maximum Tonnage	100

Suspension Factor:

Tons	*SF*
01 – 10	60
11 – 20	105
21 – 30	150
31 – 40	195
41 – 50	255
51 – 60	300
61 – 70	345
71 – 80	390
81 – 90	435
91 – 100	480

Terrain Restrictions	Water Hexes of Depth 1+ only
Lift equipment	10 percent of hydrofoil tonnage.

Displacement Hulls, and Submarines

Maximum Tonnage	300
Suspension Factor	30
Terrain Restrictions	Water hexes of depth 1+ only
Submarine Diving Equipment	10 percent of submarine tonnage.

VTOL

Maximum Tonnage	30

Lift Factor:

Tons	*Lift Factor*
01 – 10	50
11 – 20	95
21 – 30	140

Lift Equipment	10% of VTOL tonnage

4. ADD COCKPIT AND CONTROL COMPONENTS

Every vehicle must have a cockpit along with the controls necessary to control the craft in combat. These components take up 5 percent of the vehicle's total tonnage (rounded up to the nearest half ton).

5. ADD LIFT EQUIPMENT/ROTORS/DIVING EQUIPMENT

Hovercraft, hydrofoils, VTOLs, and submarines all use special equipment that give them their unique movement abilities. This special equipment weighs 10 percent of the vehicle's total tonnage (rounded up to the nearest half ton).

6. ALLOCATED TONNAGE FOR INTERNAL STRUCTURE

Ten percent of every vehicle is taken up by its internal structure (rounded up to the nearest half ton). Each of the five damage locations receives one internal structure box for every 10 tons of the vehicle's total tonnage (rounded up).

★ 7. ADD ARMOR ★

Armor helps protect the vehicle's internal structure. Armor can be normal or **Ferro-Fibrous**. For each ton of normal armor selected, the vehicle has 16 armor points. Ferro-Fibrous armor increases these armor values—see **Advanced Equipment: Ferro-Fibrous Armor**.

Determine the total number of armor points the vehicle will carry. These points will be allocated among the vehicle's locations at Step 9. Armor can only be added in 1/2 or 1 ton lots. A VTOL's rotor may have only 2 points of armor added to it.

★ 8. ADD WEAPONS, AMMUNITION, AND OTHER EQUIPMENT ★

Every weapon placed on a vehicle weighs a certain amount, as listed on the *Weapons and Equipment* charts. Select the weapons and equipment that the newly-designed vehicle will carry. At least one ton (1/2 ton for MGs) of ammo must be purchased for each missile launcher or ballistic weapon (except one-shot weapons, which can have no additional ammo). This purchase will provide a varying number of shots, depending on the launcher or weapon.

Energy weapons may require extra equipment, depending on the type of engine installed. The number of heat sinks should be equal to the number of Heat Points that all of the desired energy weapons can generate in one turn. Remember that all fusion plants have ten free heat sinks built into them, and buy more if the vehicle needs more. Vehicles with internal combustion engines and energy weapons also require power amplifiers at a ratio of 1 ton per 10 tons of energy weapons (round up). Double heat sinks may not be used.

Most vehicles will mount some or all of their weapons in turrets. Any number of weapons can be mounted in one turret. A turret weighs ten percent of the tonnage of the weapons mounted in them (round up to the nearest half ton). If a weapon is not mounted in a turret, it will have a fixed arc of fire, in the direction that it is mounted.

Unlike other vehicles, VTOLs may not mount turrets.

★ 9. ALLOCATE ARMOR VALUES ★

Divide the total Armor Value carried by the vehicle among the five locations shown on the Vehicle Record Sheet. VTOLs have a rotor instead of a turret; the rotor location on a VTOL may not be allocated more than 2 points of armor. The exact Armor Value used to protect the other locations is left to the player's discretion—the number of armor boxes and internal structure boxes on the Record Sheet are not limitations on how much armor may be allocated to a location.

★ 10. COMPLETE THE RECORD SHEET ★

Fill in the remaining information on the record sheet.

INSTALLATION CONSTRUCTION

Rather than using the standard construction factor values for buildings, players may wish to design and construct their own buildings or gun emplacements. Constructing a building with these rules is only recommended for important installations.

In order to design a building, the player will need a piece of scratch paper, a pen, the appropriate *Weapons and Equipment* chart (Inner Sphere or Clan), and the *Fusion Engines* chart. Proceed in this order:

1. Determine Technology Base
2. Choose Construction Factor
3. Choose Number of Levels
4. Choose Number of Hexes
5. Determine Internal Framework Tonnage
6. Determine Armor Tonnage
7. Allocate Weapons, Ammunition, and other Equipment
8. Add Power Plants
9. Complete the Record Sheet

★ 1. DETERMINE TECHNOLOGY BASE ★

There are two available technology bases: Inner Sphere and Clan. Clan technology tends to be lighter, more compact, and able to generate less heat than their Inner Sphere counterparts. Once the technology base is chosen, the player should be sure to use the appropriate *Weapons and Equipment* charts for his installation.

★ 2. CHOOSE CONSTRUCTION FACTOR ★

The player should choose a Construction Factor (CF) between 1 and 150. A CF of 1 – 15 indicates a Light Building; of 16 – 40, a Medium Building; of 41 – 90, a Heavy Building; and of 91 – 150, a Hardened Building. The CF determines the weight of other equipment that can be allocated to the building. For every 1 CF, the building can support 1 ton of equipment per hex (see Steps 4 and 5).

3. CHOOSE NUMBER OF LEVELS

The height of the building is chosen by the player. This height can be from 1 to 4 levels. If the player wishes, one or two of the levels can be in the building's basement. Thus, a building with 3 levels that has a basement would have an exterior elevation of 2, while the same building with no basement would have an exterior elevation of 3. The number of levels in a building affects the tonnage that must be allocated to the building's internal structure.

★ 4. CHOOSE NUMBER OF HEXES ★

The area that the building occupies is next chosen. The player can have the building occupy from 1 to 3 hexes. The number of hexes that a building occupies affects the tonnage that must be allocated to the building's internal structure. The total weight of internal structure, weapons, armor and other components in a building may not exceed the building's CF times its size in hexes.

CF x Hexes = Total Tonnage Allowed

★ 5. DETERMINE INTERNAL FRAMEWORK TONNAGE ★

The internal framework tonnage of a building is the weight of the materials necessary to support the building's walls, floors, and other equipment. Multiply the number of levels by the number of hexes by the CF and divide the resulting number by ten. The resulting number is the internal structure tonnage per hex.

(Levels x Hexes x CF)/10 = Internal Structure Tonnage

The internal structure tonnage is subtracted from the building's total tonnage.

★ 6. DETERMINE ARMOR TONNAGE ★

The armor tonnage is made up of two components, the weight of the walls (based on the CF and size, in hexes) and the amount of armor that the player allocates to the building's turret, if it has one. The weight of the walls is equal to the CF times the number of hexes, divided by 3 (rounded up).

(CF x Hexes)/3 = Weight of Walls

The player can allocate armor to a turret in full or half-ton units. Armor can be normal or Ferro-Fibrous. For each ton of normal armor selected, the building has 16 Armor Points. Ferro-Fibrous armor increases these armor values—see **Advanced Equipment: Ferro-Fibrous Armor**. The total of these two numbers (wall weight and turret weight) is the amount of building tonnage allocated to armor.

★ 7. ALLOCATE WEAPONS, AMMUNITION, AND OTHER EQUIPMENT ★

Every weapon placed in a building weighs a certain amount, as listed on the *Weapons and Equipment* charts. Select the weapons and equipment that the newly-designed building will mount. At least one ton (1/2 ton for MGs) of ammo must be purchased for each missile launcher or ballistic weapon. This purchase will provide a varying number of shots, depending on the launcher or weapon.

Energy weapons require heat sinks to operate. The number of heat sinks should be equal to the number of Heat Ppoints that the weapons would generate if all were fired in one turn. Double heat sinks may not be used.

Some or all of the weapons can be mounted in a turret. Turret-mounted weapons can rotate in a 360° arc. A turret weighs 1 ton for every 10 tons of weapons mounted in it (rounded up). If a weapon is not mounted in a turret, it will have a fixed field of fire in the direction that it is mounted.

8. ADD POWER PLANTS

If a building has a turret and/or energy weapons mounted in it, the building must have a power plant or engine to operate those systems. The rating of the power plant is equal to the tonnage of energy weapons, rounded up to the nearest rating factor. Use the *Fusion Engine* chart. The minimum rating for a power plant is 10, even if there are no energy weapons.

As with vehicles, the engine may be fusion or internal combustion. An internal combustion engine weighs twice as much as an identically rated fusion engine. Buildings with fusion power plants must add extra shielding to protect the building's occupants. This shielding weighs half as much as the fusion plant itself.

A building using an internal combustion engine must also add power amplifiers to operate any energy weapons. Power amplifiers weigh 1 ton for every 10 tons of energy weapons powered (rounded up).

9. COMPLETE THE RECORD SHEET

The player should fill out the rest of the specifics on the Installation Record Sheet.

AEROSPACE & CONVENTIONAL FIGHTER CONSTRUCTION

The following system makes it possible for players to construct their own AeroSpace or conventional fighters, using any legal mix of speed, armor, and weaponry they desire. They can then pit their designs against others above the worlds they fight for.

In order to design a fighter, the player will need a piece of scratch paper, a pen, the appropriate *Weapons and Equipment* chart (Inner Sphere or Clan), and an unused Fighter Record Sheet. Proceed in this order:

1. Determine Technology Base
2. Choose Tonnage
3. Determine Engine Rating
4. Determine Fuel Capacity
5. Add Cockpit (AeroSpace Fighters Only)
6. Add Control Components (Conventional Aircraft Only)
7. Add (Extra) Heat Sinks
8. Add Armor
9. Add Weapons, Ammunition, and Other Equipment
10. Allocate Armor Values
11. Complete the Record Sheet

★ 1. DETERMINE TECHNOLOGY BASE ★

There are two available technology bases: Inner Sphere and Clan. Clan technology tends to be lighter, more compact, and able to generate less heat than their Inner Sphere counterparts. If a player elects to use Clan technology, and he is building an AeroSpace fighter, he must chose whether the AeroSpace fighter that is being designed is an OmniFighter or a standard AeroSpace fighter.

Once the technology base is chosen, the player should be sure to use the appropriate *Weapons and Equipment* charts for his fighter.

2. CHOOSE TONNAGE

A conventional fighter's weight is limited to 50 tons. AeroSpace fighters may weigh up to 100 tons. Within these limits, any tonnage may be chosen. Record the fighter tonnage at the top of the sheet of scratch paper. The total weight of the fighter's engine, weapons, armor, and other components may not exceed this figure.

3. DETERMINE ENGINE RATING

An AeroSpace fighter's engine rating is equal to its tonnage times its desired Thrust, minus 2.

Tonnage x (Thrust minus 2) is Engine Rating

A conventional aircraft's engine rating is determined by its weight and desired speed. Multiply the aircraft's tonnage by its desired Thrust. The resulting number is its engine rating.

Tonnage x Thrust is Engine Rating

AeroSpace fighters use only fusion engines from the *Fusion Engine* chart.

Conventional aircraft have a choice of whether they will use a fusion or turbine engine. A turbine engine weighs twice as much as an identically rated fusion engine, but it is cheaper and more readily available. Also, conventional fighters with fusion engines must add extra shielding. The weight of this equipment is equal to half the weight of the fusion plant itself. (See *Fusion Engine* chart.)

4. DETERMINE FUEL CAPACITY

Conventional fighters must carry fuel to maneuver, whether they are fusion or turbine powered. In an AeroSpace fighter, one ton of fuel generates 15 Thrust Points. (Fuel does not occupy a critical slot.) Conventional fighters receive 30 Thrust Points per ton of fuel carried.

5. ADD COCKPIT (AEROSPACE FIGHTERS ONLY)

All AeroSpace fighters must have a cockpit and controls. This equipment weighs 3 tons and provides 10 points of armor protection for the cockpit.

★ 6. ADD CONTROL COMPONENTS (CONVENTIONAL AIRCRAFT ONLY) ★

Every conventional craft must have the instruments and controls necessary to fly the craft in combat. These components take up 10 percent of the aircraft's total tonnage (round up to the nearest half ton).

If a conventional aircraft wishes VTOL capabilities, it must add components that weight an additional 5 percent of the aircraft's total tonnage (round up to the nearest half ton).

7. ADD (EXTRA) HEAT SINKS

An AeroSpace fighter needs heat sinks to dissipate heat produced by overthrust, weapons fire, and atmospheric entry. Every fusion engine includes 10 heat sinks. Therefore, every undamaged AeroSpace fighter can automatically dissipate 10 Heat Points per turn. However, most fighters need to be able to get rid of more heat than that. Extra heat sinks can be added at the cost of 1 ton per heat sink. Double heat sinks may be used.

Conventional fighters, like vehicles, do not need to dissipate heat in the same manner as an AeroSpace fighter. However, a conventional fighter's energy weapons may require extra equipment, depending on the type of engine system installed. The number of heat sinks should be equal to the number of Heat Points that all of the desired energy weapons would generate in one turn. Remember that all fusion plants have ten heat sinks built into them, so a fusion-driven conventional fighter may not need additional heat sinks. Turbine-powered fighters also require power amplifiers at a ratio of 1 ton per 10 tons of energy weapons (round up to the nearest half ton).

8. ADD ARMOR

Armor helps protect the aircraft's structural integrity. Armor can be normal or Ferro-Aluminum. For each ton of normal armor selected, the aircraft has 16 armor points. Ferro-Aluminum armor increases these armor values—see **Advanced Equipment: Ferro-Fibrous Armor**. Carrying Ferro-Aluminum armor requires the player to reduce the maximum number of weapons the fighter can carry on their left and right wings by 2.

Determine the total number of Armor Points the fighter will carry. A conventional fighter may carry a maximum of 1 point of armor per ton of fighter. AeroSpace fighters have no such restriction. The armor points will be allocated among the aircraft's hit location areas at a later stage of the design process. Armor can only be added in 1/2 or 1 ton lots.

★ 9. ADD WEAPONS, AMMUNITION, AND OTHER EQUIPMENT ★

Every weapon placed on a fighter weighs a certain amount, as listed on the *Weapons and Equipment* charts. Select the weapons and equipment that the newly-designed fighter will carry. At least one ton (1/2 ton for MGs) of ammo must be purchased for each missile launcher or ballistic weapon (except one-shot weapons, which can have no additional ammo). This purchase will provide a varying number of shots, depending on the launcher or weapon.

Omnifighters do not mount weapons at this stage. Rather, they allocate a specific tonnage to weapons and equipment pods. At the start of a game, a player with an Omnifighter can then add weapons and equipment up to this allocated tonnage.

★ 10. ALLOCATE ARMOR VALUES ★

Divide the total Armor Value carried by the fighter among the six different locations shown on the Fighter Record Sheet (nose, cockpit, left and right wings, fuselage, and engine). The exact Armor Value used to protect each location is left to the player's discretion—the number of armor boxes on the Record Sheet are not limitations on how much armor may be allocated to a location.

11. COMPLETE THE RECORD SHEET

Fill in the remaining information on the Record Sheet. Remember that AeroSpace fighters start with 10 free Armor Points in the cockpit location. The Equipment Table on the sheet shows the four parts of the fighter's structure that can mount weapons. Each area can mount up to 6 weapons and/or ammunition storage locations, except the rear location, which can only mount 2.

COSTS

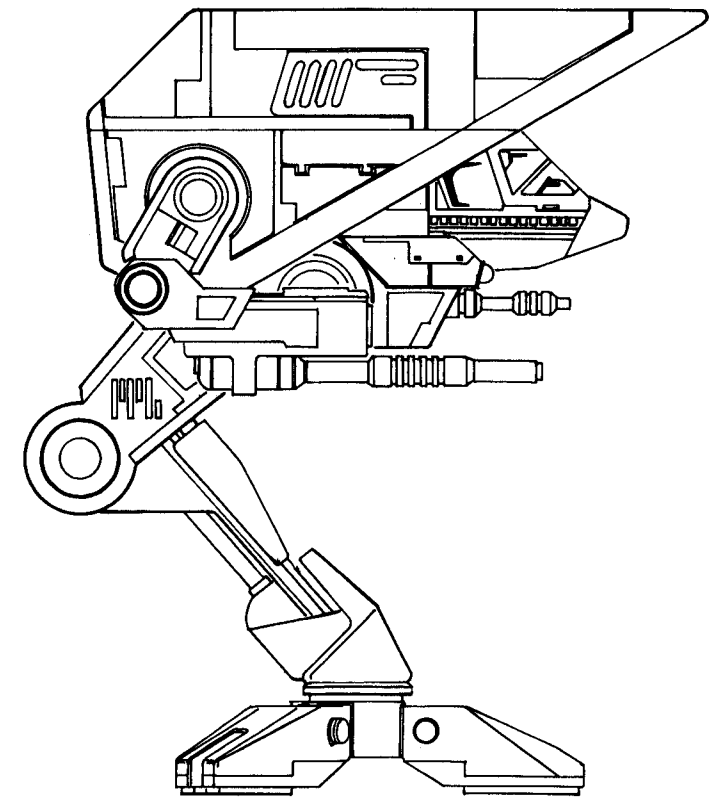
★ BATTLEMECH COSTS ★

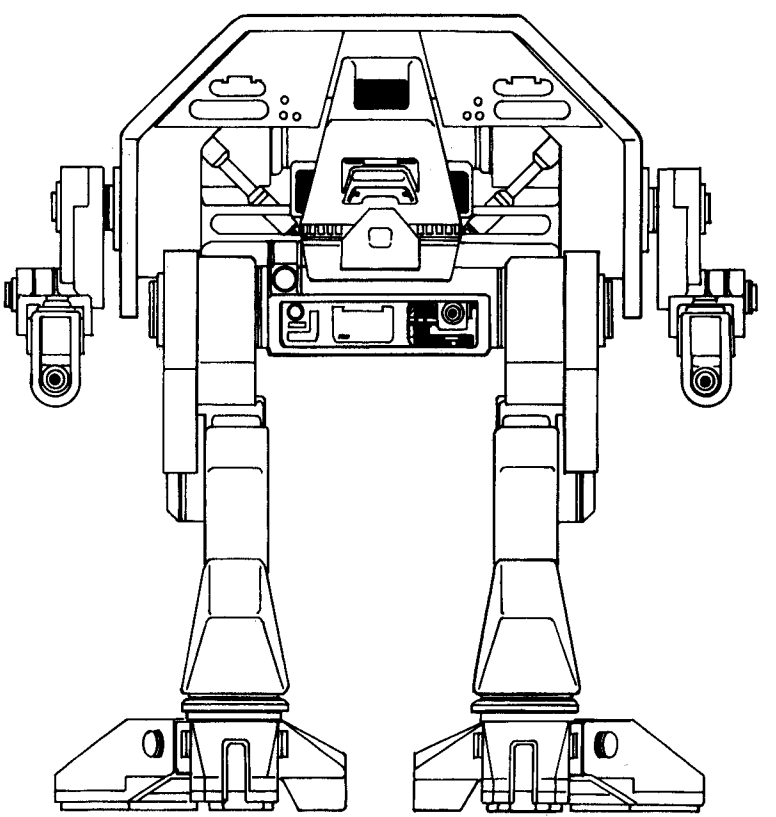
The Cost in C-Bills for a custom-designed BattleMech is the sum of the cost of all components according to the formulas listed below, multiplied by the *Final BattleMech Cost Multiplier.* All tonnages are that of the BattleMech, except for gyros and armor, when the individual component weight is used. The *Structure Cost* of a BattleMech includes everything but its weapons, equipment, Onni-Mech and LAM conversion cost.

BATTLEMECH COSTS AND FORMULAS

Structural Costs	Formula/Cost
Cockpit	200,000
Life Support	50,000
Sensors (1/BattleMech)	Tonnage x 2,000
Musculature	
Normal	Tonnage x 2,000
Triple Strength	Tonnage x 16,000
Internal Structure Skeleton	
Normal	Tonnage x 400
Endo Steel	Tonnage x 1,600
Arm Actuators	
Upper	Tonnage x 100
Lower	Tonnage x 50
Hand	Tonnage x 80
Leg Actuators	
Upper	Tonnage x 150
Lower	Tonnage x 80
Foot	Tonnage x 120
Engine	
Normal	(5,000 x Rating x Tonnage)/75
XL	(20,000 x Rating x Tonnage)/75
Gyro	300,000 per Ton of Gyro
Jump Jets	Tonnage x (Number of Jets)^2 x 200
Heat Sinks	
Normal	2,000 per each over 10
Double	6,000 each (including 10 that come with Engine)
Armor	
Normal	10,000 x Tons of Armor
Ferro-Fibrous	20,000 x Tons of Armor
Weapons and Equipment	per Weapons Charts
LAM Conversion Cost	(Weapons and Equipment Cost + Structure Cost) x .75
OmniMechs Conversion Cost	(Weapons and Equipment Cost + Structure Cost) x .25

Final BattleMech Cost Multiplier (Structure Cost + Weapons and Equipment Cost + LAM Cost+ Omni-Mech Cost) x [1 + (Tonnage/ 100)]

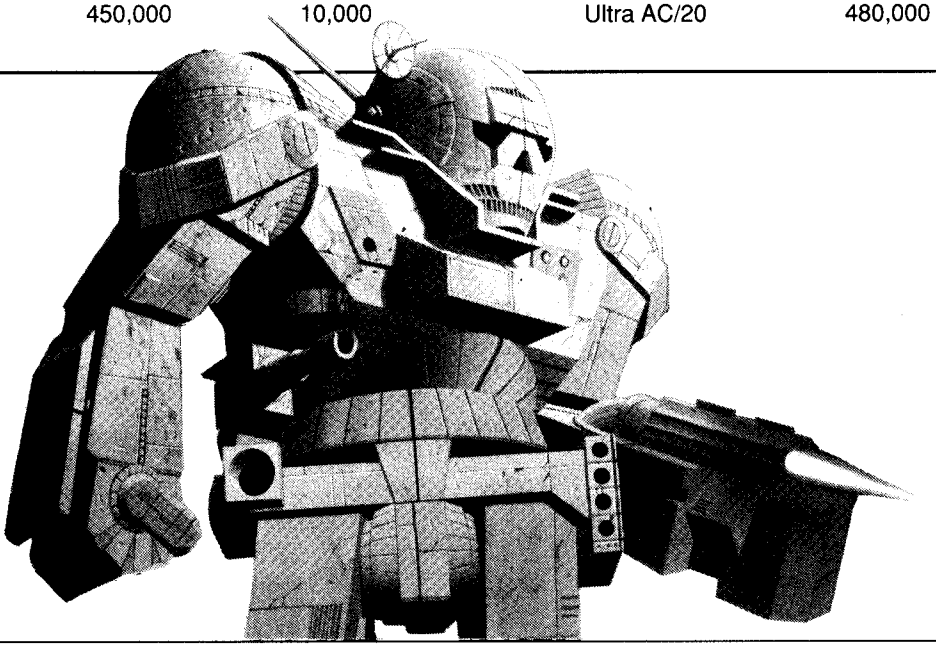




WEAPON AND EQUIPMENT PRICE LIST

WEAPON AND EQUIPMENT COSTS

Type	Cost (unloaded)	Ammo Cost (per ton)	Type	Cost (unloaded)	Ammo Cost (per ton)
AC/2	75,000	1,000	LRM-5	30,000	30,000
AC/5	125,000	4,500	LRM-10	100,000	30,000
AC/10	200,000	6,000	LRM-15	175,000	30,000
AC/20	300,000	10,000	LRM-20	250,000	30,000
Anti-Missile System	100,000	2,000	MASC	Engine Rating x MASCTonnage x 1,000	-
Anti-Personnel Pod	1,500	-			
Arrow IV System					
(Standard)	450,000	10,000	MG	5,000	1,000
(homing)		15,000	Narc Missile Beacon	100,000	6,000
TAG	50,000	-	PPC	200,000	-
Artemis IV FCS	100,000	2 x normal	Pulse Laser (Large)	175,000	-
Beagle Active Probe	200,000	-	Pulse Laser (Medium)	60,000	-
CASE	50,000	-	Pulse Laser (Small)	16,000	-
C^3 Command Unit	1,500,000	-	Single-Shot (OS)		
Slave Unit	250,000	-	Launchers	Half Normal	-
ER Laser (Large)	200,000	-	Smoke Round	-	=
ER Laser (Medium)	80,000	-	Conventional		
ER Laser (Small)	11,250	-	Sniper	300,000	6,000
ER PPC	300,000	-	SRM-2 (Standard)	10,000	27,000
Flamer	7,500	-	(Inferno)		13,500
Gauss Rifle	300,000	20,000	SRM-4	60,000	27,000
Guardian ECM Suite	200,000	-	SRM-6	80,000	27,000
Hatchet (per ton)	5,000	-	Streak SRM-2	15,000	54,000
Laser (Large)	100,000	-	Streak SRM-4	90,000	54,000
Laser (Medium)	40,000	-	Streak SRM-6	120,000	54,000
Laser (Small)	11,250	-	Swarm LRM	-	2 x normal
LB 2-X (Standard)	150,000	2,000	TAG (for Arrow IV)	50,000	-
(Cluster)		3,300	Targeting Computer		
LB 5 -X (Standard)	250,000	9,000	(per ton)	10,000	-
(Cluster)		15,000	Thumper	187,500	4,500
LB 10-X (Standard)	400,000	12,000	Thunder LRM	-	2 x normal
(Cluster)		20,000	Ultra AC/2	120,000	1,000
LB 20-X (Standard)	600,000	20,000	Ultra AC/5	200,000	9,000
(Cluster)		34,000	Ultra AC/10	320,000	12,000
Long Tom	450,000	10,000	Ultra AC/20	480,000	20,000



VEHICLE COSTS

For the cost of a custom-designed vehicle, add the cost of all components together according to the formulas listed below. All tonnages are that for the component itself, except for the engines and the final cost multiplier, for which the vehicle's total tonnage is used. Total Structural Costs are multiplied by the *Cost Multiplier* to get the vehicle's final cost.

VEHICLE COSTS

Structural Costs	Formula/Cost
Engine	
Normal Fusion	(5,000 x Rating x Tons)/75
XL	(20,000 x Rating x Tons)/75
ICE	(1,250 x Rating x Tons)/75
Control	10,000 x Control Tonnage
Internal Structure	10,000 x IS Tonnage
Heat Sinks (Normal)	2,000 each over 10, if Fusion 2,000 each, if ICE
Armor	
Normal	10,000 x Tons of Armor
Ferro-Fibrous	20,000 x Tons of Armor
Power Amplifiers	20,000 x Amplifier Tonnage
Turret	5,000 x Turret Tonnage
Lift/Dive Equipment (Hovercraft, Hydrofoils, Submarines)	20,000 x Equipment Tonnage
Rotors (VTOLs)	40,000 x Rotor Tonnage
Weapons and Equipment	per Weapons Charts
Cost Multipliers	
Tracked	1 + (Tons/100)
Wheeled	1 + (Tons/200)
Hover	1 + (Tons/50)
VTOL	1 + (Tons/30)
Displacement Hull	1 + (Tons/200)
Hydrofoil	1 + (Tons/75)
Submarine	1 + (Tons/50)

INFANTRY COSTS

To determine the cost of an infantry platoon or a point of BattleArmor, refer to the following chart.

INFANTRY COSTS

Type	Cost
Foot Platoon	
Rifle	600,000
Machine Gun/Flamer	800,000
Portable Lasers	1,200,000
SRM	1,400,000
Motorized Platoon	
Rifle	960,000
Machine Gun/Flamer	1,280,000
Portable Lasers	1,920,000
SRM	2,240,000
Jump Platoon	
Rifle	1,200,000
Machine Gun/Flamer	1,600,000
Portable Lasers	2,400,000
SRM	2,800,000
Battle Armor Point	3,500,000
Anti-Mech Training (Platoons only)	5 x normal cost

INSTALLATION COSTS

For the cost of a custom-designed installation, add the cost of all of the components together according to the formulas listed below, and insert that total in the *Final Installation Cost Multiplier* formula. All tonnages are that for the component itself, except for the power plant and the final cost multiplier, for which the building's Construction Factor is used.

INSTALLATION COSTS

Structural Costs	Formula/Cost
Internal Structural	Internal Structure Tonnage x 10,000
Engine	
Normal Fusion	(5,000 x Rating x Tons)/75
XL	(20,000 x Rating x Tons)/75
ICE	(1,250 x Rating x Tons)/75
Heat Sinks	
Normal	2,000 each over 10, if Fusion 2,000 each, if ICE
Double	6,000 each (including 10 that come with engine)
Armor	
Normal	10,000 x Tons of Armor
Ferro-Fibrous	20,000 x Tons of Armor
Turret	5,000 x Turret Tonnage
Power Amplifiers	20,000 x Amplifier Tonnage
Weapons and Equipment	per Weapons and Equipment Charts

Final Installation Cost Multiplier (Structural Costs) x (1 + (Tonnage/150))

★ AEROSPACE FIGHTER COSTS ★

The Cost in C-Bills for a custom-designed AeroSpace fighter is the sum of the cost of all components according to the formulas listed below, multiplied by the *Final AeroSpace Fighter Cost Multiplier.* All tonnages are that of the fighter, except for armor, where the armor weight is used.

AEROSPACE FIGHTER COSTS AND FORMULAS

Structural Costs	Formula/Cost
Cockpit	200,000
Life Support	50,000
Sensors	Tonnage x 2,000
Structural	SI Tonnage x 50,000
Engine	
Normal	(5,000 x Rating x Tonnage)/75
XL	(20,000 x Rating x Tonnage)/75
Heat Sinks	
Normal	2,000 each, over 10
Double	6,000 each (including 10 that come with Engine)
Armor	
Normal	10,000 x Tons of Armor
Ferro-Aluminum	20,000 x Tons of Armor
Weapons and Equipment	per Weapons Charts
Omni Capability	All other Structural Costs (except Weapons and Equipment) x .75

Final AeroSpace Fighter Cost Multiplier (Structural Costs) x (1 + (Tonnage/200))

CONVENTIONAL AIRCRAFT COSTS

The Cost in C-Bills for a custom-designed Conventional Aircraft is the sum of the cost of all components according to the formulas listed below, multiplied by the *Final Conventional Aircraft Cost Multiplier.* All tonnages are that of the aircraft, except for avionics and armor, where the individual component weight is used.

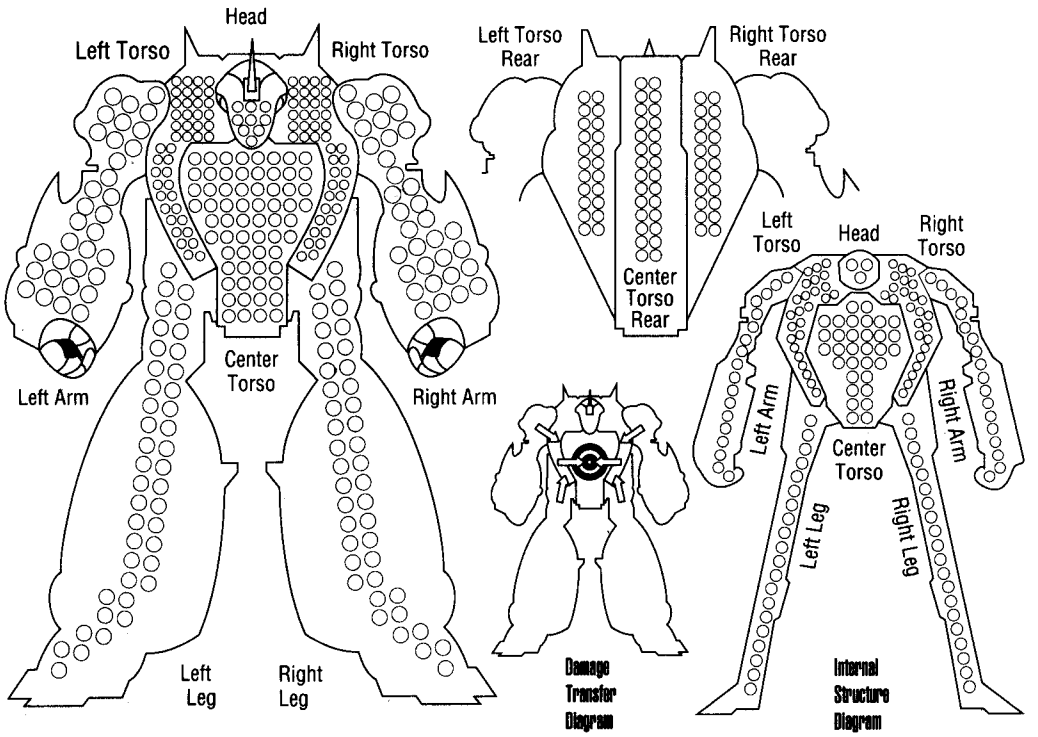
CONVENTIONAL AIRCRAFT COSTS AND FORMULAS

Structural Costs	Formula/Cost
Avionics	Tonnage x 4,000
Structural	SI Tonnage x 4,000
Engine	
Normal Fusion	(5,000 x Rating x Tons)/75
XL	(20,000 x Rating x Tons)/75
ICE	(1,250 x Rating x Tons)/75
Heat Sinks	
Normal	2,000 each over 10, if Fusion 2,000 each, if ICE
Double	6,000 each (including 10 that come with Engine)
Armor	
Normal	10,000 x Tons of Armor
Ferro-Aluminum	20,000 x Tons of Armor
Weapons and Equipment	per Weapons Charts

Final Conventional Aircraft Cost Multiplier (Structural Costs) x [1 + (Tonnage/200)]

BATTLETECH®

Armor Diagram



Mech Data

Type: _____
Tonnage: _____
Movement Points: _____
Walking: _____
Running: _____
Jumping: _____

Weapons Inventory

#	Type	Location

Pod Space: _____
AMMO:
Auto Cannon Rounds: _____
M.G. Rounds: _____
S.R.M. Packs: _____
Missiles per pack: _____
L.R.M. Packs: _____
Missiles per pack: _____

Total Heat Sinks

Single ☐
Double ☐

Warrior Data

Name: _____
Gunnery Skill: _____
Piloting Skill: _____
Hits Taken: (Consciousness Number)

1st	2nd	3rd	4th	5th	6th
(3)	(5)	(7)	(10)	(11)	(Dead)

Critical Hit Table

Left Arm

1 1. Shoulder
2. Upper Arm Actuator
3. Lower Arm Actuator
4. Hand Actuator
5. _____
6. _____

2 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Left Torso

1 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

2 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Left Leg

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Head

1. Life Support
2. Sensors
3. Cockpit
4. _____
5. Sensors
6. Life Support

Center Torso

1 1. Engine
2. Engine
3. Engine
4. Gyro
5. Gyro
6. Gyro

2 1. Gyro
2. Engine
3. Engine
4. Engine
5. _____
6. _____

Engine Hits ○○○
Gyro Hits ○○
Sensor Hits ○○

Right Arm

1 1. Shoulder
2. Upper Arm Actuator
3. Lower Arm Actuator
4. Hand Actuator
5. _____
6. _____

2 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Right Torso

1 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

2 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Right Leg

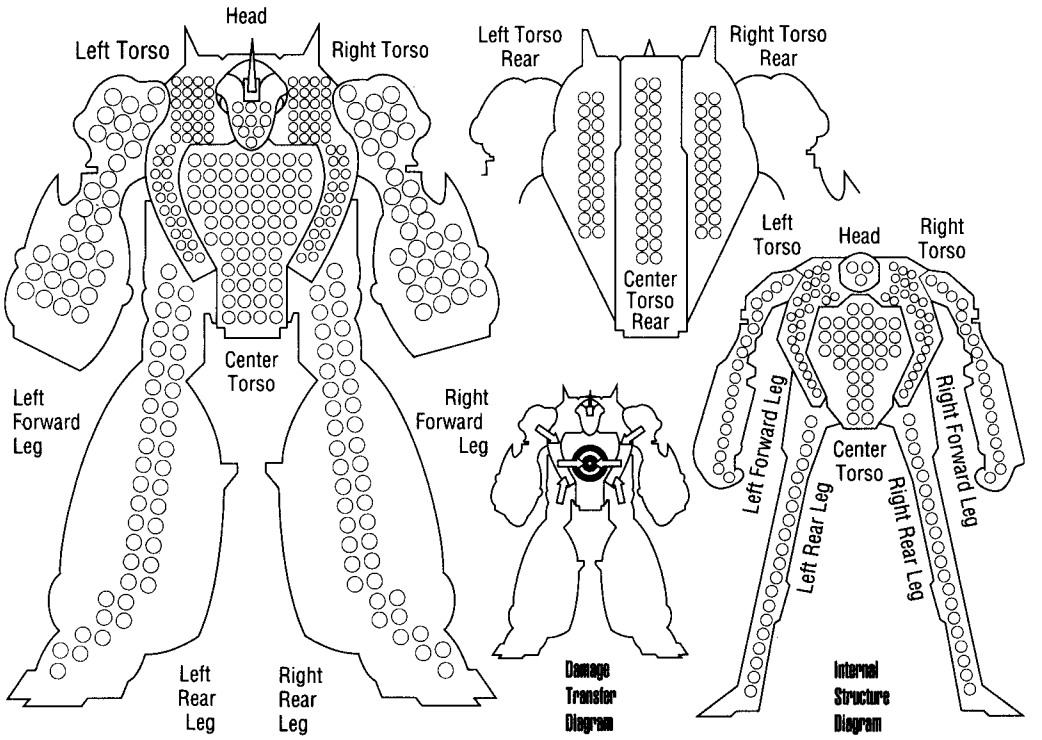
1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Heat Scale

30	Shutdown
29	
28	Ammo Explosion, avoid on 8+
27	
26	Shutdown, avoid on 10+
25	-5 Movement Points
24	+4 Modifier to Fire
23	Ammo Explosion, avoid on 6+
22	Shutdown, avoid on 8+
21	
20	-4 Movement Points
19	Ammo Explosion, avoid on 4+
18	Shutdown, avoid on 6+
17	+3 Modifier to Fire
16	
15	-3 Movement Points
14	Shutdown, avoid on 4+
13	+2 Modifier to fire
12	
11	
10	-2 Movement Points
09	
08	-1 Modifier to Fire
07	
06	
05	-1 Movement Points
04	
03	
02	
01	
00	

BATTLETECH®

Armor Diagram (QUAD)



Mech Data

Type: _____
Tonnage: _____
Movement Points: _____
Walking: _____
Running: _____
Jumping: _____

Weapons Inventory

#	Type	Location

Pod Space: _____
AMMO:
Auto Cannon Rounds: _____
M.G. Rounds: _____
S.R.M. Packs: _____
Missiles per pack: _____
L.R.M. Packs: _____
Missiles per pack: _____

Total Heat Sinks

○○○○○○○○○○ Single ☐
○○○○○○○○○○ Double ☐

Warrior Data

Name: _____
Gunnery Skill: _____
Piloting Skill: _____
Hits Taken: (Consciousness Number)

1st	2nd	3rd	4th	5th	6th
(3)	(5)	(7)	(10)	(11)	(Dead)

Critical Hit Table

Left Forward Leg

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Head

1. Life Support
2. Sensors
3. Cockpit
4. _____
5. Sensors
6. Life Support

Right Forward Leg

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Left Torso

1 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____
2 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Center Torso

1 1. Engine 2. Engine 3. Engine 4. Gyro 5. Gyro 6. Gyro
2 1. Gyro 2. Engine 3. Engine 4. Engine 5. _____ 6. _____

Right Torso

1 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____
2 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Left Rear Leg

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Engine Hits ○○○
Gyro Hits ○○
Sensor Hits ○○

Right Rear Leg

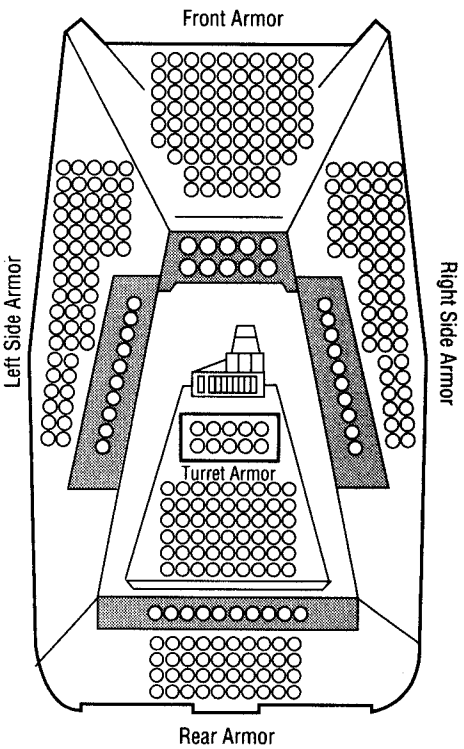
1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

Heat Scale

30	Shutdown
29	
28	Ammo Explosion, avoid on 8+
27	
26	Shutdown, avoid on 10+
25	-5 Movement Points
24	+4 Modifier to Fire
23	Ammo Explosion, avoid on 6+
22	Shutdown, avoid on 8+
21	
20	-4 Movement Points
19	Ammo Explosion, avoid on 4+
18	Shutdown, avoid on 6+
17	+3 Modifier to Fire
16	
15	-3 Movement Points
14	Shutdown, avoid on 4+
13	+2 Modifier to fire
12	
11	
10	-2 Movement Points
09	
08	-1 Modifier to Fire
07	
06	
05	-1 Movement Points
04	
03	
02	
01	
00	

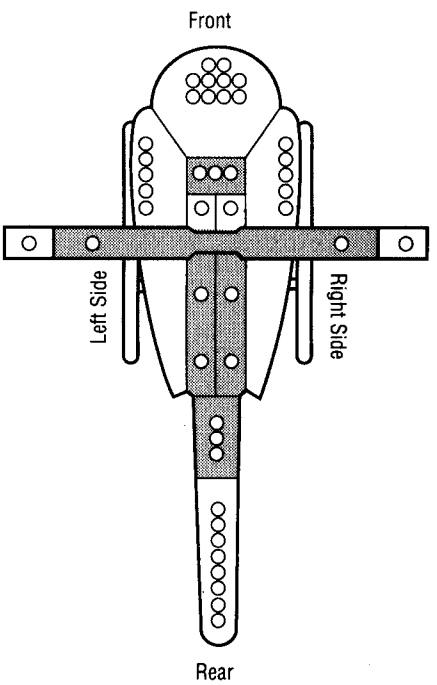
Vehicle Record Sheet

Unit Type:			Driving Skill:
Movement Type:	Cruise Speed:	Flank Speed:	Gunnery Skill:
Tonnage:			
Engine Rating: Tonnage: Fusion ☐ I.C.E. ☐			**Weapons & Ammo**
Control Tonnage:	Lift Equipment:		1
Power Amplifier:	Heat Sinks:		2
Internal Structure:			3
Turret:			4
Armor: Tons:	Points:		5
Front:			6
Left/Right side:	/		7
Back:			8
Turret:			9



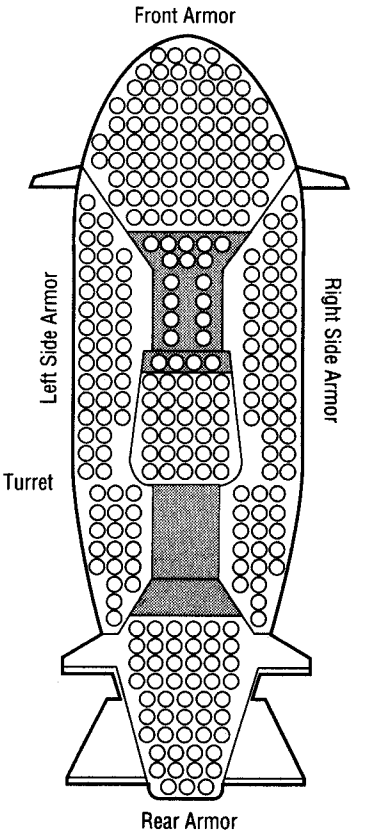
VTOL Record Sheet

Unit Type:			Driving Skill:		
Movement Type:	Cruise Speed:	Flank Speed:	Gunnery Skill:		
Tonnage:			**Weapons**	Turn	Elevation
Engine Rating: Tonnage: Fusion ☐ I.C.E. ☐					
Control Tonnage:	Lift Equipment:				
Power Amplifier:	Heat Sinks:				
Internal Structure:					
Turret:					
Armor: Tons:	Points:				
Front:					
Left/Right side:	/				
Back:					
Turret:					



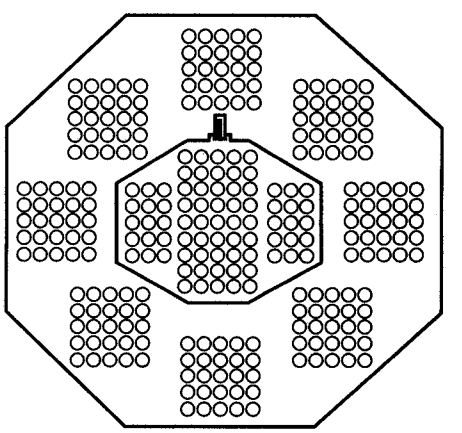
Naval Record Sheet

Unit Type:			Driving Skill:		
Movement Type:	Cruise Speed:	Flank Speed:	Gunnery Skill:		
Tonnage:			**Weapons**	Turn	Depth
Engine Rating: Tonnage: Fusion ☐ I.C.E. ☐					
Control Tonnage:	Lift Equipment:				
Power Amplifier:	Heat Sinks:				
Internal Structure:					
Turret:					
Armor: Tons:	Points:				
Front:					
Left/Right side:					
Back:					
Turret:					



Installation Record Sheet

Construction Factor:		Weapons	Ammo	Location	Number	Tonnage
Numbers of Hexes:						
Numbers of Levels:						
Tonnage:						
Power Plant Rating:						
Power Amplifier:						
Framework:						
Heat Sinks:						
Armor Factor:						
Turret:						
Turret Armor:						



Infantry Record Form

▼ Jump Platoons Start Here

	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Rifle Platoon	7	7	7	7	6	6	6	6	5	5	5	5	4	4	4	4	3	3	3	3	2	2	2	2	1	1	1	1
Machine Gun or Flamer Platoon	10	9	9	8	8	8	7	7	7	6	6	6	5	5	5	4	4	4	3	3	3	2	2	2	1	1	1	1
Laser or SRM Platoon	14	14	13	13	12	12	11	11	10	10	9	9	8	8	7	7	6	6	5	5	4	4	3	3	2	2	1	1

▼ Jump Platoons Start Here

	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Rifle Platoon	7	7	7	7	6	6	6	6	5	5	5	5	4	4	4	4	3	3	3	3	2	2	2	2	1	1	1	1
Machine Gun or Flamer Platoon	10	9	9	8	8	8	7	7	7	6	6	6	5	5	5	4	4	4	3	3	3	2	2	2	1	1	1	1
Laser or SRM Platoon	14	14	13	13	12	12	11	11	10	10	9	9	8	8	7	7	6	6	5	5	4	4	3	3	2	2	1	1

▼ Jump Platoons Start Here

	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Rifle Platoon	7	7	7	7	6	6	6	6	5	5	5	5	4	4	4	4	3	3	3	3	2	2	2	2	1	1	1	1
Machine Gun or Flamer Platoon	10	9	9	8	8	8	7	7	7	6	6	6	5	5	5	4	4	4	3	3	3	2	2	2	1	1	1	1
Laser or SRM Platoon	14	14	13	13	12	12	11	11	10	10	9	9	8	8	7	7	6	6	5	5	4	4	3	3	2	2	1	1

▼ Jump Platoons Start Here

	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Rifle Platoon	7	7	7	7	6	6	6	6	5	5	5	5	4	4	4	4	3	3	3	3	2	2	2	2	1	1	1	1
Machine Gun or Flamer Platoon	10	9	9	8	8	8	7	7	7	6	6	6	5	5	5	4	4	4	3	3	3	2	2	2	1	1	1	1
Laser or SRM Platoon	14	14	13	13	12	12	11	11	10	10	9	9	8	8	7	7	6	6	5	5	4	4	3	3	2	2	1	1

To-Hit Numbers of Infantry Weapons

Weapon Type	Range in Hexes						
	0	1	2	3	4	5	6
Rifle	2	4	6	-	-	-	-
Machine Gun	2	4	6	8	-	-	-
Flamer	3	4	6	-	-	-	-
Portable Laser	2	4	6	8	-	-	-
SRM Missiles	3	4	4	6	6	8	8

POINT NUMBER ______

	10	09	08	07	06	05	04	03	02	01	00
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3											
4											
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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

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☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

POINT NUMBER ______

	10	09	08	07	06	05	04	03	02	01	00
1											
2											
3											
4											
5											

☐ MISSILE SALVO 1 MISSILE SALVO 2 ☐

BATTLEARMOR MISSILES (2D6)

Roll	Members Active/No. of Missiles Fired				
	1 (2)	2 (4)	3 (6)	4 (8)	5 (10)
2	1	1	2	2	3
3	1	2	2	3	3
4	1	2	3	3	4
5	1	2	3	4	6
6	1	2	4	4	6
7	1	3	4	5	6
8	2	3	4	5	6
9	2	3	5	6	8
10	2	3	5	7	8
11	2	4	6	8	10
12	2	4	6	8	10

BATTLEARMOR DIRECT FIRE (2D6)

Roll	Point Members Active/No. of Weapons Fired				
	1	2	3	4	5
2	1	1	1	1	1
3	1	1	1	2	2
4	1	1	2	2	2
5	1	1	2	2	3
6	1	1	2	2	3
7	1	2	2	3	3
8	1	2	2	3	4
9	1	2	3	3	4
10	1	2	3	4	4
11	1	2	3	4	5
12	1	2	3	4	5

LEG ATTACKS

Number of Men in Platoon	Number of BattleArmor	Base To-Hit Number
28 - 22	4-5	4
21 - 16	3	7
15 - 10	2	10
9 - 5	1	12
4 - 1		no attack possible

SWARM ATTACKS

Number of Men in Platoon	Number of BattleArmor	Base To-Hit Number
28 - 22	4-5	7
21 - 16	1-3	10
15 - 1	—	no attack possible

SWARM HIT LOCATIONS (2D6)

Roll	Location	Roll	Location
2	Head	7	Front Center Torso
3	Rear Center Torso	8	Left Arm
4	Rear Right Torso	9	Front Left Torso
5	Front Right Torso	10	Rear Left Torso
6	Right Arm	11	Rear Center Torso
		12	Head

AEROTECH

Aerospace Fighter Record Sheet

Type: _____

Thrust Rating: _____

Overthrust Rating: _____

Initial Structural Integrity: _____

○○○○○○○○○○○○○○○○○○○○

Heat Sinks

PILOT DATA

Name: _____

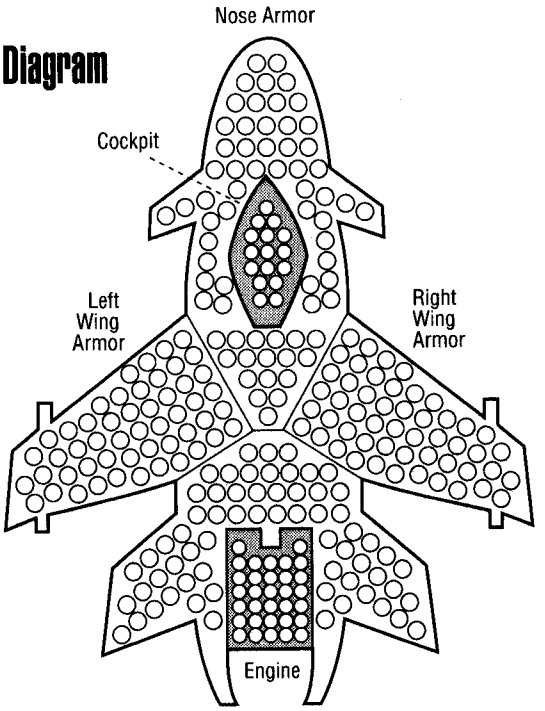
Gunnery Skill: _____

Pilot Skill: _____

Hits Taken:

(3) (5) (7) (11) (Dead)

Armor Diagram



Velocity Record

Turn #	Beg. V	Thrust	End V	Fuel
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Heat Scale

30	Automatic Shutdown
29	
28	Ammo Explosion 8+
27	Pilot Damage 9+
26	Shutdown 10+
25	Round move, no thrust 10+
24	+4 To-Hit
23	Ammo Explosion 6+
22	Shutdown 8+
21	Pilot Damage 6+
20	Round move, no thrust 8+
19	Ammo Explosion 4+
18	Shutdown 6+
17	+3 To-Hit
16	
15	Round move, no thrust 6+
14	Shutdown 4+
13	+2 To-Hit
12	
11	
10	Round move 6+
09	
08	+1 To-Hit
07	
06	
05	Round move 5+
04	
03	
02	
01	
00	

Weapon Data

Nose Weapons

_____

_____

_____

_____

_____

_____

Right Wing Weapons

_____

_____

_____

_____

_____

_____

Left Wing Weapons

_____

_____

_____

_____

_____

_____

Rear Weapons

_____

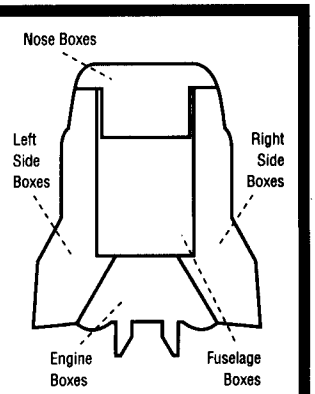
_____

Aerodyne Dropship Record Sheet

Thrust: _____
Overthrust: _____
Structural Integrity: _____

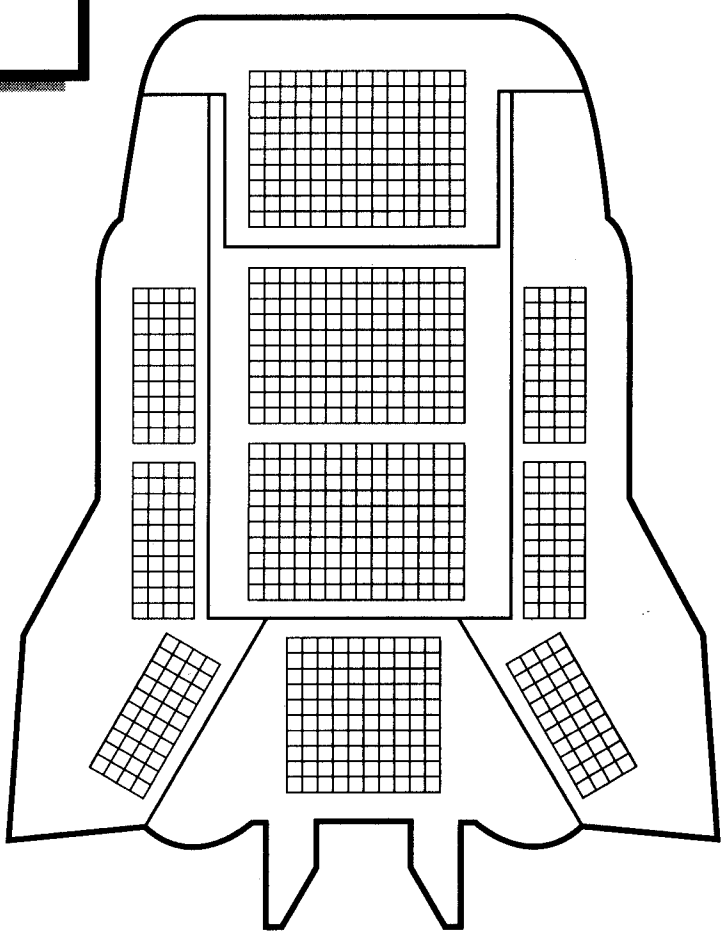
Total Heat Sinks: _____

Armor



Nose Weapons
Fire Factors: _____

_____
_____
_____
_____
_____



Left Wing Weapons
Fire Factors: _____

_____
_____
_____
_____
_____

Right Wing Weapons
Fire Factors: _____

_____
_____
_____
_____
_____

Aft Weapons
Fire Factors: _____

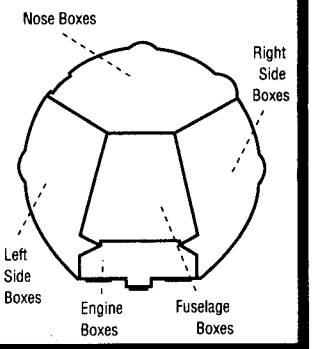
_____
_____
_____
_____
_____

Spheroid Dropship Record Sheet

Thrust: _____
Overthrust: _____
Structural Integrity: _____

Total Heat Sinks: _____

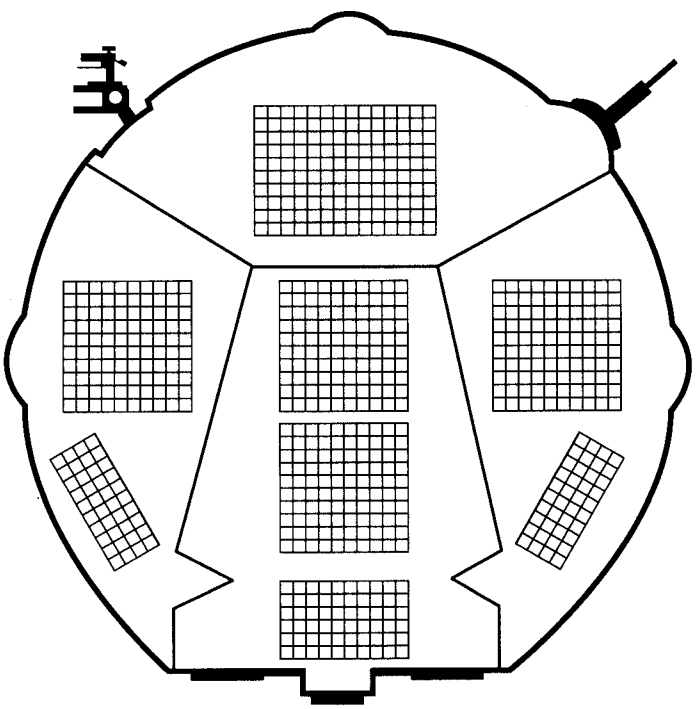
Armor



Nose Weapons
Fire Factors: _____

Left Wing Weapons
Fire Factors: _____

Right Wing Weapons
Fire Factors: _____



Left Side Rear Weapons
Fire Factors: _____

Right Side Rear Weapons
Fire Factors: _____

Aft Weapons
Fire Factors: _____

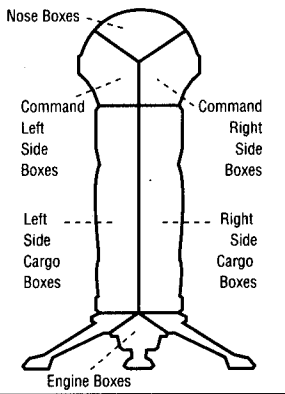
Jumpship Record Sheet

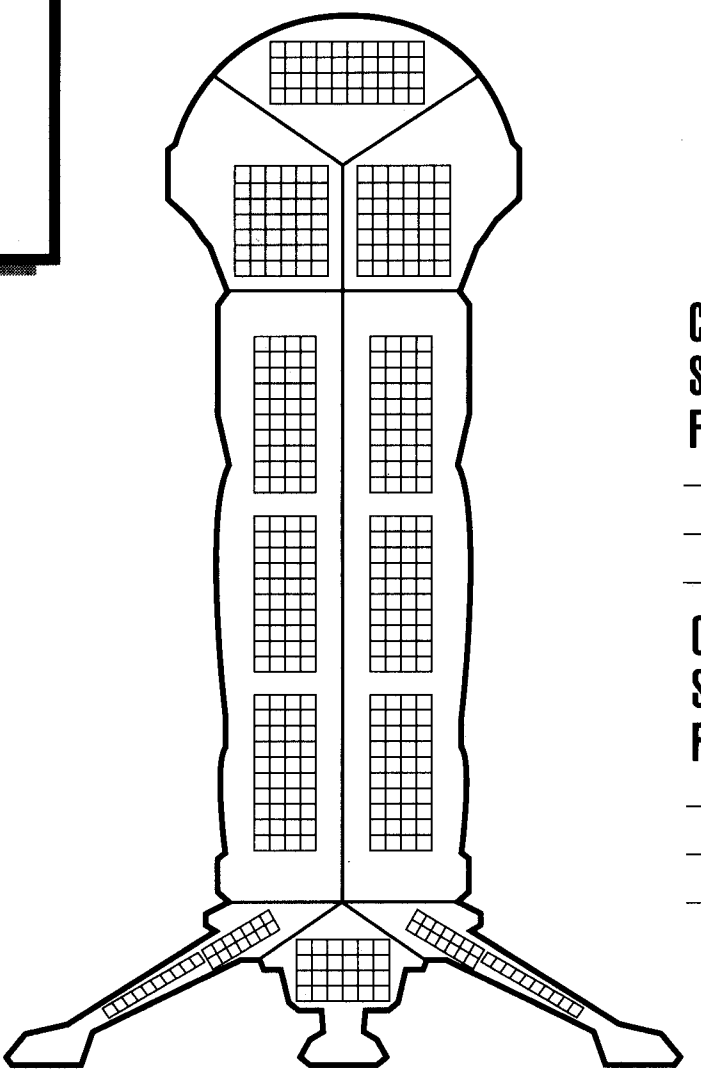
Thrust: _____
Overthrust: _____
Structural Integrity: _____

Total Heat Sinks: _____

Nose Weapons Fire Factors: _____

Armor





Command Left Side Weapons Fire Factors: _____

Command Right Side Weapons Fire Factors: _____

Cargo Left Side Weapons Fire Factors: _____

Cargo Right Side Weapons Fire Factors: _____

Engine Left Side Weapons Fire Factors: _____

Aft Weapons Fire Factors: _____

Engine Right Side Weapons Fire Factors: _____

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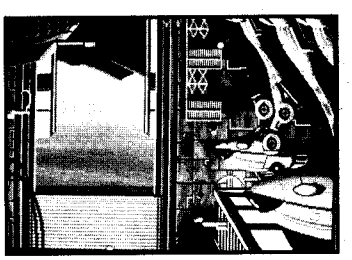

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INNER SPHERE WEAPONS AND EQUIPMENT

Type Heat	Heat	Damage	Minimum	Short	Medium	Long	Tonnage	Critical	Ammo
Energy Weapons									
ER Large Laser	12	8	-	1-7	8-14	15-19	5	2	-
ER PPC	15	10	-	1-7	8-14	15-23	7	3	-
Flamer	3	2	-	1	2	3	1	1	-
Large Laser	8	8	-	1-5	6-10	11-15	5	2	-
Medium Laser	3	5	-	1-3	4-6	7-9	1	1	-
Small Laser	1	3	-	1	2	3	.5	1	-
PPC	10	10	3	7-12	13-18	7	3	-	-
Pulse Laser (Lg.)	10	9	-	1-3	4-7	8-10	7	2	-
Pulse Laser (Med.)	4	6	-	1-2	3-4	5-6	2	1	-
Pulse Laser (Sm.)	2	3	-	1	2	3	1	1	-
Flamer (Vehicle)	3	2	-	1	2	3	.5	1	20
Ballistic Weapons									
Anti-Missile System	1	*	-	-	-	-	.5	1	12
Auto Cannon/2	1	2	4	1-8	9-16	17-24	6	1	45
Auto Cannon/5	1	5	3	1-6	7-12	13-18	8	4	20
Auto Cannon/10	3	10	-	1-5	6-10	11-15	12	7	10
Auto Cannon/20	7	20	-	1-3	4-6	7-9	14	10	5
Gauss Rifle	1	15	2	1-7	8-15	16-22	15	7	8
LB 10-X AC	2	10	-	1-6	7-12	13-18	11	6	10
Machine Gun	0	2	-	1	2	3	.5	1	200
Ultra AC/5	1	5	2	1-6	7-13	14-20	9	5	20
Missile Weapons									
LRM-5	2	1/missile	6	1-7	8-14	15-21	2	1	24
LRM-10	4	1/missile	6	1-7	8-14	15-21	5	2	12
LRM-15	5	1/missile	6	1-7	8-14	15-21	7	3	8
LRM-20	6	1/missile	6	1-7	8-14	15-21	10	5	6
Narc Missile Beacon	0	-	-	1-3	4-6	7-9	3	2	6
SRM-2	2	2/missile	-	1-3	4-6	7-9	1	1	50
SRM-4	3	2/missile	-	1-3	4-6	7-9	2	1	25
SRM-6	4	2/missile	-	1-3	4-6	7-9	3	2	15
Streak SRM-2	2	*	-	1-3	4-6	7-9	1.5	1	50
Artillery Weapons *						*Max*			
Arrow IV System	10	20/10*	-	-	-	5 Boards	15	15	5
TAG	0	*	-	1-5	6-9	10-15	1	1	-
Long Tom	20	20/10	-	-	-	20 Bds.	30	30	5
Sniper	10	10/5	-	-	-	12 Bds.	20	20	10
Thumper	6	5/2	-	-	-	14 Bds.	15	15	20
Other Equipment									
Artemis IV FCS	-	-	-	-	-	-	-	1	1
Beagle Active Probe	-	-	-	-	-	-	4	1.5	2
CASE	-	-	-	-	-	-	.5	1	-
C^3 Computer	-	-	-	-	-	-	5	5	-
Slave	-	-	-	-	-	-	1	1	-
Double Heat Sink	-	-	-	-	-	-	1	3	-
Guardian ECM Suite	-	-	-	-	-	6	1.5	2	-
MASC	-	-	-	-	-	-	**	**	-
TAG (for Arrow IV)	0	*	-	1-5	6-9	10-15	1	1	-

* See special rules for this equipment.
** (Mech Tonnage)/20*

CLAN WEAPONS & EQUIPMENT

Type Heat	Heat	Damage	Minimum	Short	Medium	Long	Tonnage	Critical	Ammo
Energy Weapons									
ER Laser (Large)	12	10	-	1-8	9-15	16-25	4	1	-
ER Laser (Medium)	5	7	-	1-5	6-10	11-15	1	1	-
ER Laser (Small)	2	5	-	1-2	3-4	5-6	.5	1	-
ER PPC	15	15	-	1-7	8-14	15-23	6	2	-
Flamer	3	2	-	1	2	3	.5	1	-
Pulse Laser (Lg.)	10	10	-	1-6	7-14	15-20	6	2	-
Pulse Laser (Med.)	4	7	-	1-4	5-8	9-12	2	1	-
Pulse Laser (Sm.)	2	3	-	1-2	3-4	5-6	1	1	-
Flamer (Vehicle)	3	2	-	1	2	3	.5	1	20
Ballistic Weapons									
Anti-Missile System	1	*	-	-	-	-	.5	1	24
Gauss Rifle	1	15	2	1-7	8-15	16-22	12	6	8
LB 2-X AC	1	2	4	1-10	11-20	21-30	5	3	45
LB 5-X AC	1	5	3	1-8	9-15	16-24	7	4	20
LB 10-X AC	2	10	-	1-6	7-12	13-18	10	5	10
LB 20-X AC	6	20	-	1-4	5-8	9-12	12	9	5
Machine Gun	0	2	-	1	2	3	.25	1	200
Ultra AC/2	1	2	2	1-9	10-18	19-27	5	2	45
Ultra AC/5	1	5	-	1-7	8-14	15-21	7	3	20
Ultra AC/10	3	10	-	1-6	7-12	13-18	10	4	10
Ultra AC/20	7	20	-	1-4	5-8	9-12	12	8	5
Missile Weapons									
LRM-5	2	1/missile	-	1-7	8-14	15-21	1	1	24
LRM-10	4	1/missile	-	1-7	8-14	15-21	2.5	1	12
LRM-15	5	1/missile	-	1-7	8-14	15-21	3.5	1	8
LRM-20	6	1/missile	-	1-7	8-14	15-21	5	4	6
Narc Missile Beacon	0	NA	-	1-4	5-8	9-12	2	1	6
SRM-2	2	2/missile	-	1-3	4-6	7-9	.5	1	50
SRM-4	3	2/missile	-	1-3	4-6	7-9	1	1	25
SRM-6	4	2/missile	-	1-3	4-6	7-9	1.5	1	15
Streak SRM-2	2	*	-	1-4	5-8	9-12	1	1	50
Streak SRM-4	3	*	-	1-4	5-8	9-12	2	1	25
Streak SRM-6	4	*	-	1-4	5-8	9-12	3	2	15
Artillery Weapons *						*Max*			
Arrow IV System	10	20/10*	-	-	-	6 Boards	12	12	5
TAG	0	*	-	1-5	6-9	10-15	1	1	-
Long Tom	20	20/10	-	-	-	20 Bds.	30	30	5
Sniper	10	10/5	-	-	-	12 Bds.	20	20	10
Thumper	6	5/2	-	-	-	14 Bds.	15	15	20
Other Equipment *									
Active Probe	-	-	-	-	-	5	1	1	-
Anti-Personnel Pod	0	*	-	-	-	-	.5	1	-
Artemis IV FCS	-	-	-	-	-	-	1	1	-
CASE	-	-	-	-	-	-	0	0	-
Double Heat Sink	-	-	-	-	-	-	1	2	-
ECM Suite	-	-	-	-	-	6	1	1	-
MASC	-	-	-	-	-	-	**	**	-

BASE TO-HIT MODIFIERS

Range	Base To-Hit Number
Short	4
Medium	6
Long	8

MODIFIERS TO WEAPONS FIRE

Attacker:		
	Gunnery Skill	+1 per *Gunnery* Skill level over 4
		-1 per *Gunnery* Skill level less than 4
	Movement Modifiers	
	Stationary	None
	Walked	+1
	Ran	+2
	Jumped	+3
	BattleMech Damage	
	Sensor Hit	+2
	Shoulder	+4 for weapons in arm
	Arm Actuator	+1 for weapons in arm
	Heat	
	8-12	+1
	13-16	+2
	17-23	+3
	24+	+4
	Prone	+2
Range and Terrain		
	Minimum Range	+1 at minimum range, additional +1 per hex less than minimum range
	Light Woods	+1 per intervening hex; +1 if target *in* Light Woods
	Heavy Woods	+2 per intervening hex; +2 if target *in* Heavy Woods
	Water	
	Depth 1	-1 to hit a BattleMech in Water hex; use *BattleMech Punch Locations* table
	Depth 2	+1 to hit for firing BattleMech in Water hex BattleMechs cannot fire into or out of depth-2+ water
Target:		
	Partial Cover	+3 (use *BattleMech Punch Locations* table)
	Prone	-2 (from adjacent hex); +1 (from all others)
	Secondary Target	+1
	Immobile	-4
	Movement Modifiers	
	Moved 0-2 Hexes	None
	Moved 3-4 Hexes	+1
	Moved 5-6 Hexes	+2
	Moved 7-9 Hexes	+3
	Moved 10+ Hexes	+4
	Jumped	+1

MISSILE HITS (2D6)

Roll	Number of Missiles Fired					
	2	4	5	6	10	15	20
2	1	1	1	2	3	5	6
3	1	2	2	2	3	5	6
4	1	2	2	3	4	6	9
5	1	2	3	3	6	9	12
6	1	2	3	4	6	9	12
7	1	3	3	4	6	9	12
8	2	3	3	4	6	9	12
9	2	3	4	5	8	12	16
10	2	3	4	5	8	12	16
11	2	4	5	6	10	15	20
12	2	4	5	6	10	15	20

BATTLEMECH HIT LOCATIONS (2D6)

Roll	Left Side	Front/Back	Right Side
2	Lt. Torso (critical)	Ct. Torso (critical)	Rt. Torso (critical)
3	Left Leg	Right Arm	Right Leg
4	Left Arm	Right Arm	Right Arm
5	Left Arm	Right Leg	Right Arm
6	Left Leg	Right Torso	Right Leg
7	Left Torso	Ct. Torso	Right Torso
8	Ct. Torso	Left Torso	Ct. Torso
9	Right Torso	Left Leg	Left Torso
10	Right Arm	Left Arm	Left Arm
11	Right Leg	Left Arm	Left Leg
12	Head	Head	Head

BATTLEMECH PUNCH LOCATIONS (1D6)

Roll	Left Side	Front/Back		Right Side
1		Left Torso	Left Arm	Right Torso
2		Left Torso	Left Torso	Right Torso
3		Center Torso	Center Torso	Center Torso
4		Left Arm	Right Torso	Right Arm
5		Left Arm	Right Arm	Right Arm
6		Head	Head	Head

BATTLEMECH KICK LOCATIONS (1D6)

Roll	Left Side	Front/Back		Right Side
1-3		Left Leg	Right Leg	Right Leg
4-6		Left Leg	Left Leg	Right Leg

DIFFERENT ELEVATIONS

Target is:	Allowed Physical Attack
1 level higher	Charge, Punch (use kick table) or Club (use kick table)
1 level lower	Charge, Kick (use punch table) or Club (use punch table)

Death From Above is always allowed, if the BattleMech has the necessary Jumping MP.

CRITICAL HIT EFFECTS (2D6)

Roll	Effect
2-7	No Critical Hit
8-9	Roll 1 Critical Hit Location
10-11	Roll 2 Critical Hit Locations
12	Head/Limb Blown Off or Roll 3 Critical Hit Locations*

MOVEMENT POINTS

Terrain Type/Activity		Cost Per Hex	Prohibited Units
Clear		1 MP	Naval
Road/Paved/Bridge		1 MP[3]	Naval
Rough		2 MP	Wheeled, Naval
Light Woods	2 MP	Wheeled, Hover, Naval	
Heavy Woods	3 MP	Ground, Naval	
Water			
	Depth 0	1 MP	Naval
	Depth 1	2 MP[1]	Infantry, Ground[4]
	Depth 2+	4 MP[1]	Infantry, Ground[4]
Elevation Change (up or down)		+1 MP/level (Mechs,VTOL,Subs) +2 MP/level (Infantry, Ground)	
Rubble		2 MP[1]	Wheeled, Naval
Light Building	2 MP[2]	Naval	
Medium Building		3 MP[2]	Naval
Heavy Building	4 MP[2]	Naval	
Hardened Building		5 MP[2]	Naval
Other Activities			
	Facing Chance	1 MP/hexside[5]	
	Dropping to the Ground	1 MP	
	Standing Up	2 MP	

[1] *Piloting* Skill roll required to prevent falling.
[2] *Piloting* Skill roll required to prevent damage and falling because of building; infantry pay only 1 MP to enter or leave any building.
[3] If traveling along road; otherwise cost of underlying terrain.
[4] Hovercraft may enter all water hexes.
[5] No cost for infantry.

PILOTING SKILL ROLL MODIFIERS

BattleMech's Situation	Modifier
Damage to BattleMech	
BattleMech takes 20+ damage points in one turn	+1
BattleMech reactor shuts down	+3[1]
Leg/foot actuator destroyed	+1
Gyro hit	+3
Leg destroyed	Automatic Fall
Physical Attacks On BattleMech	
BattleMech was kicked	0
BattleMech was pushed	0
BattleMech was charged/Death From Above	+2
Unit's Actions	
BattleMech missed kick	0
BattleMech charging	+2
BattleMech Death From Above	+4[2]
BattleMech entering Depth 1 Water hex	-1
BattleMech entering Depth 2 Water hex	0
BattleMech entering Depth 3+ Water hex	+1
BattleMech attempting to stand	0
BattleMech entering rubble	0
Unit entering/leaving Light Building hex	0[4]
Unit entering/leaving Medium Building hex	+1[4]
Unit entering/Leaving Heavy Building hex	+2[4]
Unit entering/Leaving Hardened Building hex	+5[4]
BattleMech jumping with damaged leg actuators	as per Additional Modifiers
MechWarrior trying to avoid damage when his BattleMech is falling	+1/ level fallen
Additional Modifiers	
Per leg/foot actuator also/previously destroyed	+1
Per hip also/previously destroyed	+2
Gyro also/previously hit (automatic fall if two previous hits)	+3
Leg previously destroyed	+5[3]

[1] Only during the turn that the reactor shuts down. If the BattleMech must make a *Piloting* Skill roll with a shut down reactor, the BattleMech automatically falls.
[2] Fall is automatic if the Death From Above is unsuccessful.
[3] Do not add modifiers for the destroyed hip and other damaged actuators in the leg.
[4] To avoid damage only. No fall results if Piloting Skill roll fails. See **Buildings**.

FACING AFTER A FALL

Roll	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Back
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

HEAT POINTS

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (minimum of 3 per turn)
Trying to Stand	+1 per attempt
Weapons Fire	As per *Weapons and Equipment* tables
Heat Sink	-1 per operational heat sink -2 per operational double heat sink -1 additional per heat sink under water (6 max) -2 additional per double heat sink under water (6 max)
1st Engine Hit	+5 per turn
2nd Engine Hit	+10 (total) per turn
Fire	
Walking Through	+2 per hex
Standing In	+5 per turn

BUILDINGS: COSTS & MODIFIERS

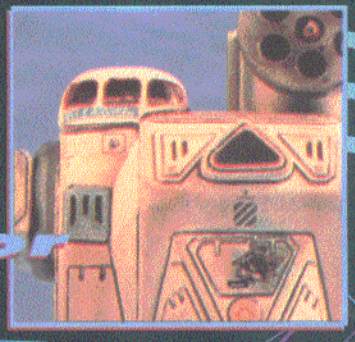
Type	Original CF	MP	Piloting Skill Modifier	Fire Starting Modifier
Light	1-15	2	0	0
Medium	16-40	3	+1	+1
Heavy	41-90	4	+2	+2
Hardened	91+	5	+5	+3

NOTES

The Clans

Color Rererence Section

Mad Cat

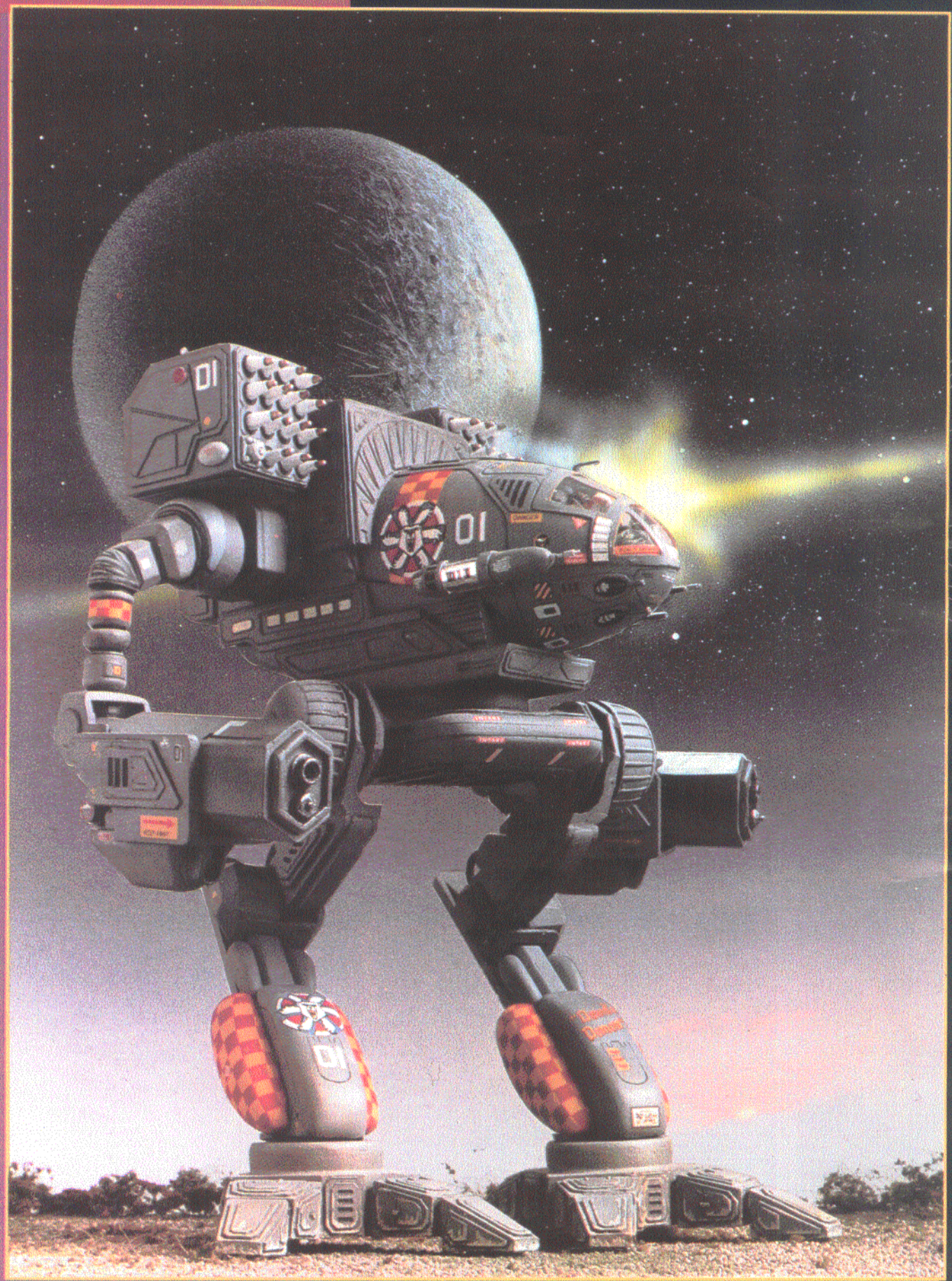


Thor

Vulture

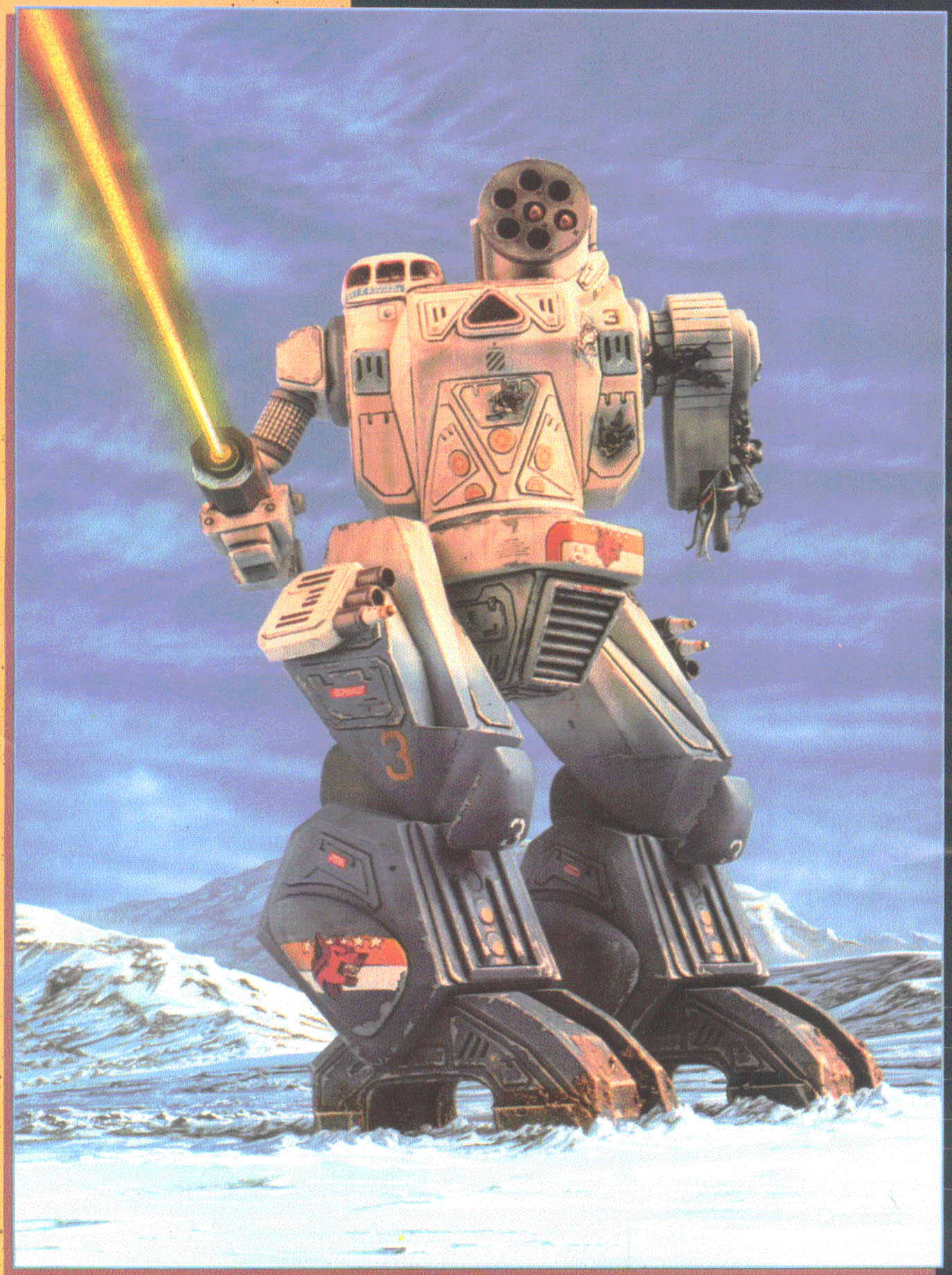
Battlearmor

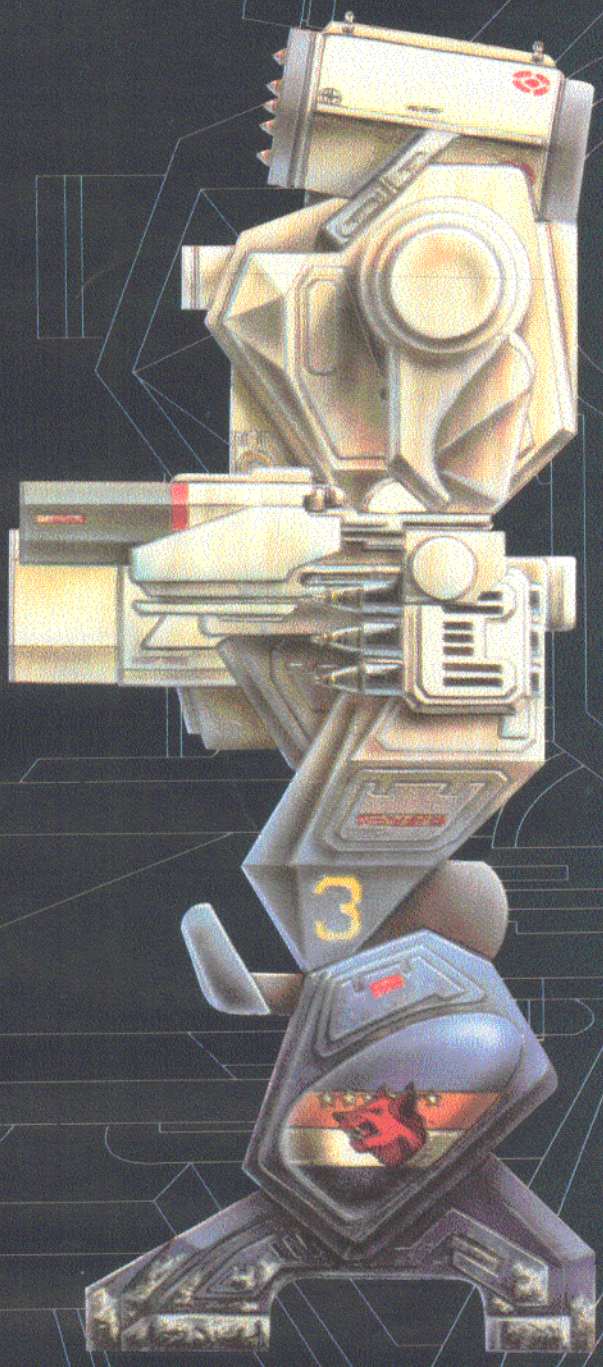
Mad Cat




01
01
01
KEEP AWAY

Thor

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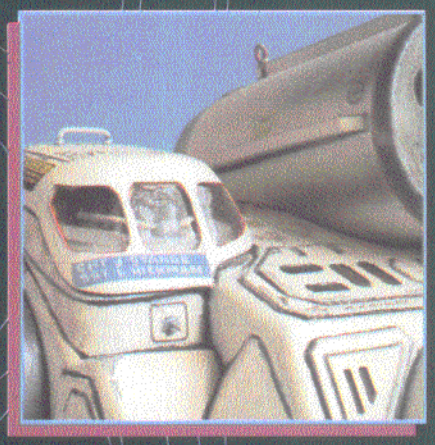
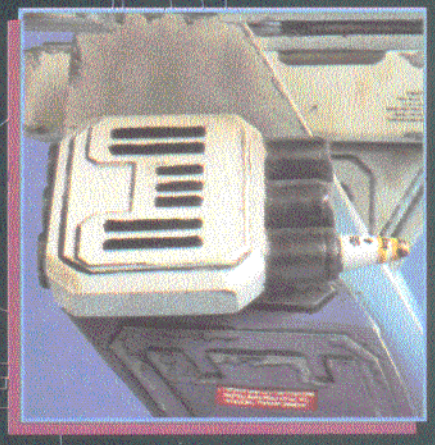
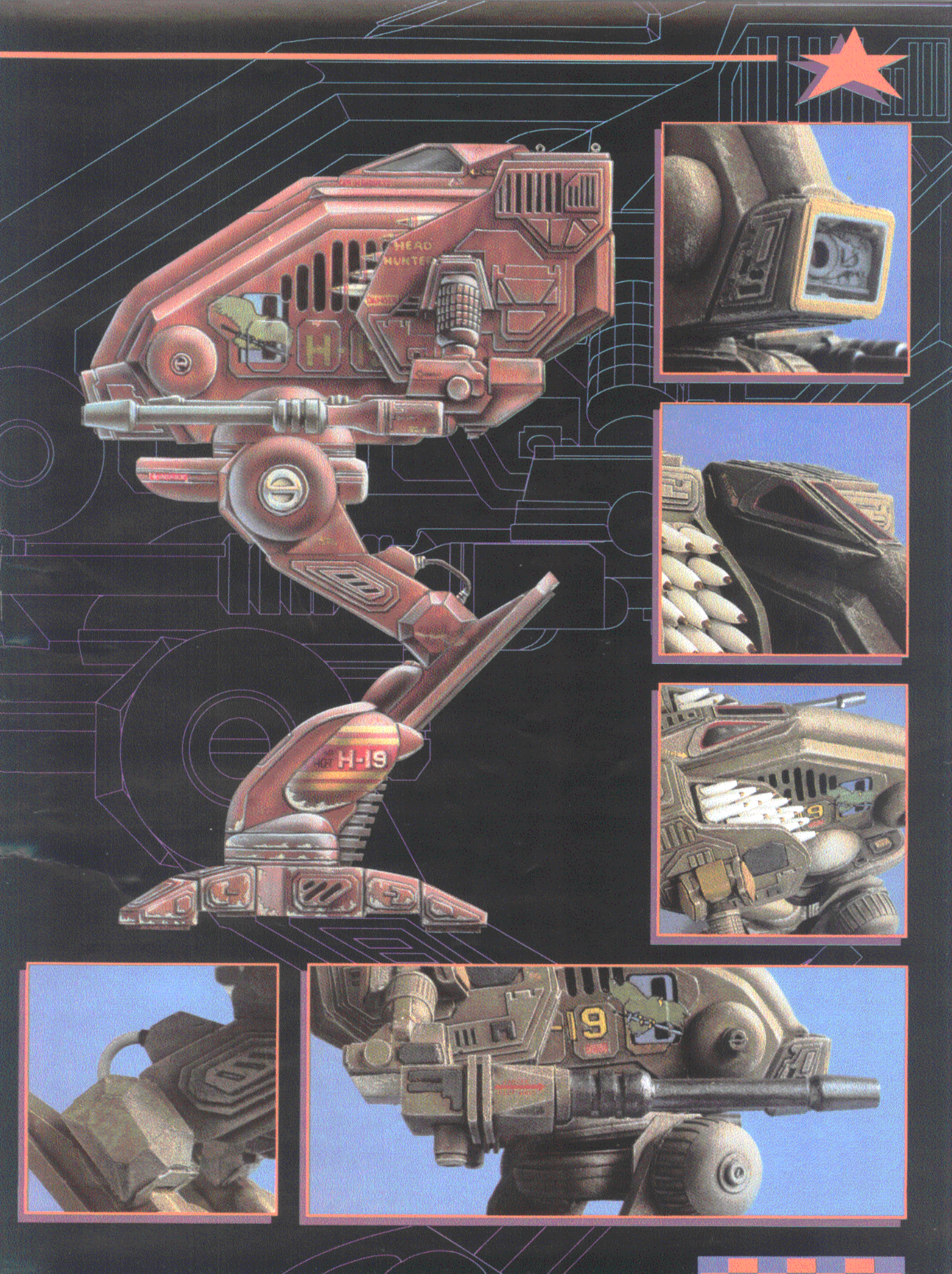


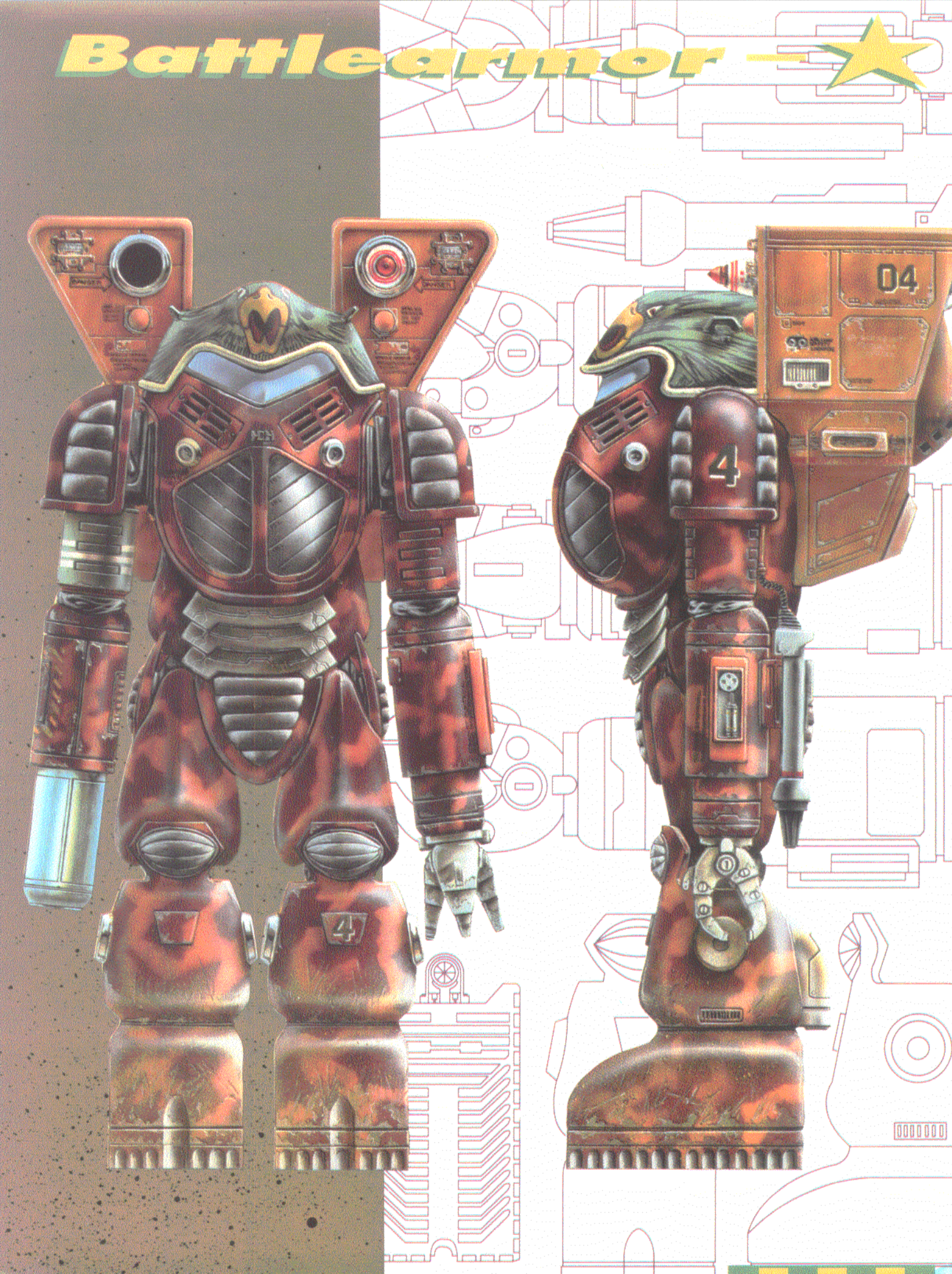


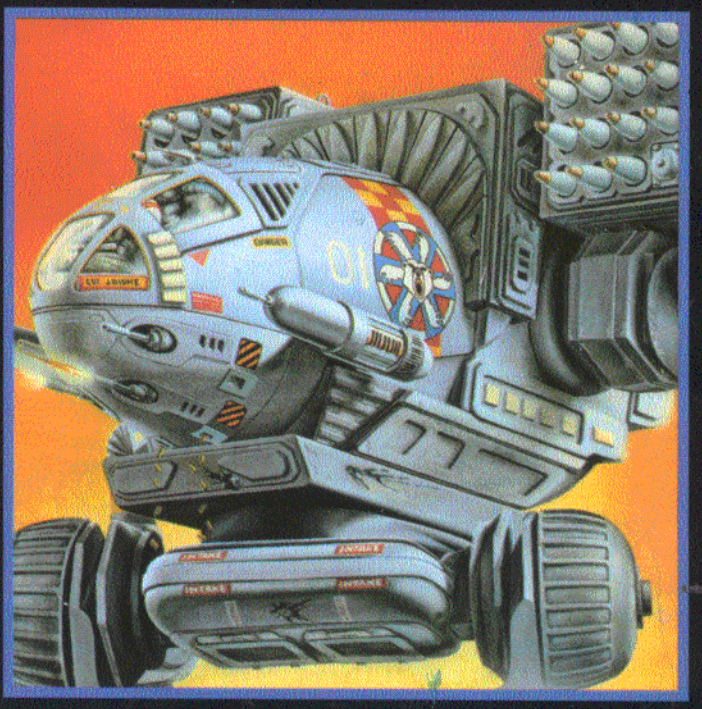

GARDEN

Vulture


HEAD
HUNTER
H-19
H-19
H-19

Battlearmor





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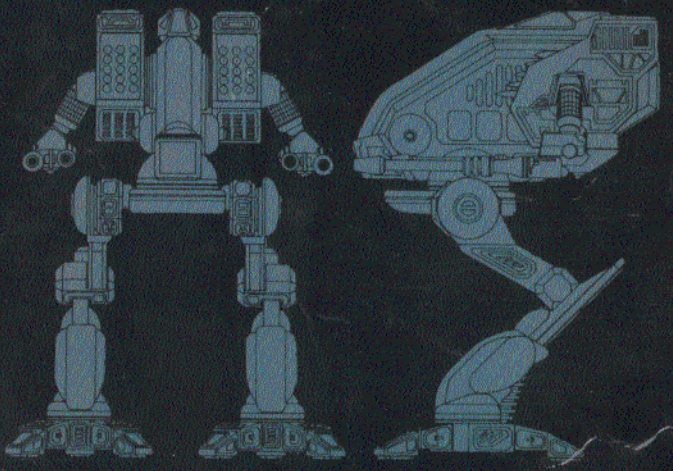

A COMPILATION OF six years of detailed research, *The BattleTech Compendium* may well be the ultimate resource for the player. Clear and concise rules clarifications, battle demonstrations, and rules changes will help develop and streamline play. All the material from *The Battletech Manual* is presented in a revised form, as well as additional rules for JumpShip and DropShip combat, 'Mech construction, and the latest discoveries concerning the technology of the Star League and the invading Clans. Optional rules are included for miniature play, environmental effects on the battlefield, and more. Loaded with color photos, this Compendium gives the clearest picture yet of combat in the 31st century.

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