BATTLETECH®

RULEBOOK

BATTLETECH

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CREDITS

INTRODUCTION

BattleTech, Fourth Edition (BT4), is the game of BattleMech combat in the thirty-first century. This new edition of the game updates the original **BattleTech** game to make it fully compatible with the **BattleTech Compendium: The Rules of Warfare**, the standard set of rules for advanced **BattleTech** play. However, the **BT4** boxed set is a *stand-alone* game system—no other books are needed to use it.

Players new to the **BattleTech** game system should read the **Introduction to BattleTech** book before reading this rulebook. The **Introduction** book lays out the basic rules of the game and provides a training scenario to get players into the action. That book also contains a sourcebook section that sketches out the fictional background on which the **BattleTech** game is based and provides technical descriptions for the BattleMechs found in this box.

The **BT4** rulebook is divided into six main sections. **Components** describes the contents of the **BT4** boxed set and how to use them in the game. **Playing the Game** outlines the basic sequence of **BattleTech** play—the different phases of a game turn and other fundamental game mechanics. The **Movement** section describes the rules governing BattleMech movement. **Combat** contains the rules for resolving BattleMech weapons and physical attacks. **Scenarios** contains three **BattleTech** scenarios to test your skills, familiarize you with play and demonstrate the variety of possible **BattleTech** missions. These scenarios can be played again and again or modified to create an endless array of different battles. **Construction** provides instructions for custom-designing new 'Mechs from the ground up. Finally, the **Equipment** section provides descriptions and special rules for various weapons carried by BattleMechs.

Readers new to **BattleTech** should note that the game's fictional universe has progressed chronologically since **BattleTech** first appeared in 1985. Millions of words' worth of background fiction has been published in game supplements, scenarios and sourcebooks—as well as in the numerous **BattleTech** novels, which represent some of the richest background source material for the game.

Currently, the **BattleTech** universe is set in the year 3058. Much has happened in the years since 3049, including major technological innovations and an invasion by an alien culture. Those events changed the universe and spawned a large number of new rules that far exceed the scope of basic **BattleTech**, and so **BT4** is set in 3049.

As players become more experienced, they may wish to use more advanced rules in their games. For these players, FASA recommends **CityTech, Second Edition**, which introduces **BattleTech** rules for infantry, conventional vehicles, and the advanced weapons of the 3050s.

LEVELS OF BATTLETECH

All **BattleTech** rules now carry a Level One, Level Two or Level Three designation. Level One **BattleTech** represents the basic level of play described in **BT4** and uses the technology available in 3025, including all 'Mechs and weapons described in **Technical Readout: 3025**.

Level Two **BattleTech** represents the rules used in most **BattleTech** tournaments and MechForce-level competition. Level Two **BattleTech** is defined by the rules contained in the **BattleTech Compendium: The Rules of Warfare**, which includes all Level One rules and the technology available in 3058—the 'Mechs, vehicles, equipment, and other technology described in **Technical Readouts 3026, 3050, 3055, and 3058**.

Level Three **BattleTech** play may include any of the optional rules presented in various **BattleTech** products as well as **MechForce North America Quarterly** magazine. These rules are always specifically identified as Level Three; some examples are the rules from the **Tactical Handbook** and the experimental technology described in the **MechWarrior** adventure **Unbound**. Players may use Level Three rules as they see fit. Generally, Level Three rules are not used in tournament play.

COMPONENTS

The **BattleTech, Fourth Edition,** boxed set contains everything needed to play **BattleTech**. Before starting play, check to make sure the box includes the following components:

1 **BattleTech** rulebook (this book)
1 **Introduction to BattleTech** book
1 book of record sheets
48 stand-up BattleMech playing pieces
16 plastic playing-piece stands
1 sheet of unit stickers
2 six-sided dice
2 22-by-17-inch mapsheets
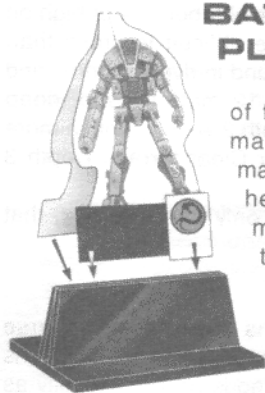
BATTLEMECH PLAYING PIECES

BattleMechs dominate the battlefields of the thirty-first century. These huge, man-shaped vehicles are faster, more maneuverable, better armored and more heavily armed than any other combat machine. Equipped with particle projector cannons (PPCs), lasers, rapid-fire autocannons and missiles, these behemoths pack enough firepower to flatten nearly everything except another 'Mech.

BattleTech, Fourth Edition (BT4) contains forty-eight stand-up playing pieces that represent twenty-four different BattleMech designs. These playing pieces are used to show the position of each 'Mech on the mapsheet and keep track of its movement during the game. To assemble the playing pieces, separate the printed pieces from each other and insert each piece into one of the supplied plastic stands.

In place of these pieces, players can use **BattleTech** miniatures. **Ral Partha** manufactures a complete line of miniatures designed for use with **BattleTech** mapsheets. If playing pieces and miniatures are unavailable, players may use counters or any other item to represent each BattleMech. Nearly any appropriately sized item will do, as long as it contains a mark to indicate which way the BattleMech is facing at all times.

UNIT STICKERS

The supplied unit stickers are used to show the affiliation of each BattleMech. Affix stickers to the playing pieces themselves or to their stands. Use identical unit stickers for all the 'Mechs on a given side.

RECORD SHEETS

BattleMech Record Sheets enable a player to easily monitor the operating status of his 'Mechs. Each sheet provides a summary of the armor and weapons capabilities of a particular machine, spaces to record any damage the 'Mech sustains during combat, and other useful information. Every record sheet contains five parts: an Armor Diagram section, Mech Data section, Warrior Data section, Critical Hit Table, and Heat Scale.

ARMOR DIAGRAM

The Armor Diagram section contains a set of diagrams that show the arrangement of armor plating on the BattleMech. Each circle (called a *box*) represents 1 point of armor. Every time the 'Mech takes a shot that destroys some of its armor, the player fills in the appropriate boxes. (Every 'Mech design has a specific number of Armor Points, called its Armor Value. If the number of boxes exceeds the 'Mech's starting Armor Value, simply fill in the extra boxes before starting play.)

The Armor Diagram shows the front and rear armor of the BattleMech's torso, the Internal Structure Diagram, and the Damage Transfer Diagram.

The Internal Structure Diagram shows the locations of the BattleMech's internal structures and is used to track damage to those locations. The Damage Transfer Diagram shows where damage is transferred when a part of the BattleMech already destroyed takes additional damage. (For a complete explanation of damage rules and directions for using the different armor diagrams, see the **Combat** section, beginning on p. 17.)

MECH DATA

The Mech Data section of the record sheet lists the BattleMech's most important statistics, including the BattleMech type, tonnage, movement rates, weapons, and heat sink boxes. The appropriate rules sections explain how to use these statistics in the game.

WARRIOR DATA

The Warrior Data section lists the name, skills and condition of the MechWarrior piloting the BattleMech. The appropriate rules sections explain how to use these statistics in the game.

CRITICAL HIT TABLE

The Critical Hit Table shows the physical location of the BattleMech's critical equipment, weapons and ammunition. This table helps determine the location of any critical hit; each slot represents a particular weapon or other piece of equipment susceptible to destruction. Some equipment occupies so much space in the 'Mech that it requires multiple slots on the table. (For a complete explanation of critical-hit rules, see **Critical Damage**, beginning on p. 24 of the **Combat** section.)

HEAT SCALE

The Heat Scale helps the player track each 'Mech's internal heat level. As heat builds up, the player checks off these boxes from low to high. Specific heat levels may affect a 'Mech's operation, as shown in the right column of the scale. (Heat rules are fully explained in the appropriate rules sections.)

MAPSHEETS

The 22-by-17-inch mapsheets used in **BattleTech** are divided into six-sided areas called *hexes* (short for hexagon). Each hex on the mapsheet represents an area of ground 30 meters (roughly 100 feet) across. Hexes are used to indicate distances in **BattleTech** and regulate the movement of BattleMechs. During each game turn, a 'Mech can move a specific number of hexes.

The forests, rivers, hills, buildings and rough areas on a **BattleTech** mapsheet represent the typical terrain found on the habitable worlds of the Inner Sphere. Generally, all terrain is divided into one of six categories: Clear, Rough, Hills, Water, Light Woods and Heavy Woods. Different types of terrain have different effects on a 'Mech's ability to move and fight, as described in the **Movement** and **Combat** sections.

CLEAR

Clear hexes represent fields, meadows and other grasslands. Clear terrain is firm and may be gently rolling, but its elevation does not change significantly from one side of the hex to the other.
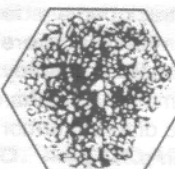
ROUGH

Rough hexes represent broken, rocky and jumbled ground. Though firm, Rough terrain generally proves more difficult to cross than Clear terrain.
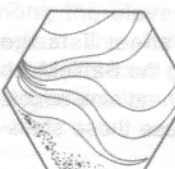
HILLS

Hilly terrain is significantly higher than the surrounding terrain. The light lines in hilly terrain represent slopes and other elevation changes, which may make crossing hilly terrain more difficult than crossing even terrain. Hills can contain Clear, Rough, or wooded terrain.

Elevation levels for hills appear on the mapsheets. Level 1 hills are 6 meters high (waist-high on a BattleMech), and so a BattleMech standing behind a Level 1 hill may be partially hidden. Level 2 terrain is 12 meters high (the same height as a BattleMech), so a BattleMech standing behind Level 2 terrain is completely hidden. Level 3 terrain is 18 meters high, and so on.

Ground hexes without elevation markings are Level 0 terrain.

WATER

Hexes designated as Water terrain are covered by streams, rivers, swamps, ponds or lakes. A Water hex is defined by depth levels, which correspond to the elevation levels of hills. Depth 0 water is very shallow, no more than ankle-deep on a BattleMech, and represents 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 Clear terrain and is found in rivers, ponds, and along lake shores. Depth 2 water is 12 meters deep, deep enough to just cover a BattleMech. Depth 2 water is much more difficult to cross than shallow water or Clear terrain. Depth 3 water is 18 meters deep, and so on.

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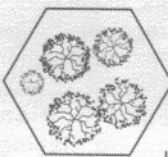
LIGHT WOODS

Light Woods terrain is covered with sparse trees up to 12 meters in height. BattleMechs cannot cross Light Woods hexes as easily as Clear terrain. Unless a wooded area is relatively large (at least 3 hexes across), BattleMechs may have line of sight through light woods. When Light Woods hexes block line of sight, they do so for 2 elevation levels above their standard terrain level.
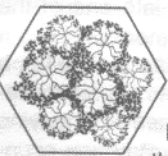
HEAVY WOODS

Heavily wooded terrain is covered thickly with 12-meter-tall trees, which makes movement through such areas very difficult. As in nature, heavy woods often thin out to light woods along their borders. Heavy Woods hexes affect line of sight for 2 levels above their standard terrain elevation.

DICE

Players use two six-sided dice (preferably of two different colors) when playing **BattleTech**. When a player must roll one die, the game directions may tell him to "roll 1D6" or "make a 1D6 roll." Similarly, the abbreviation 2D6 indicates two six-sided dice. Any time a player must roll 2D6, the rules will indicate whether the die results are used separately or combined to produce a single number.

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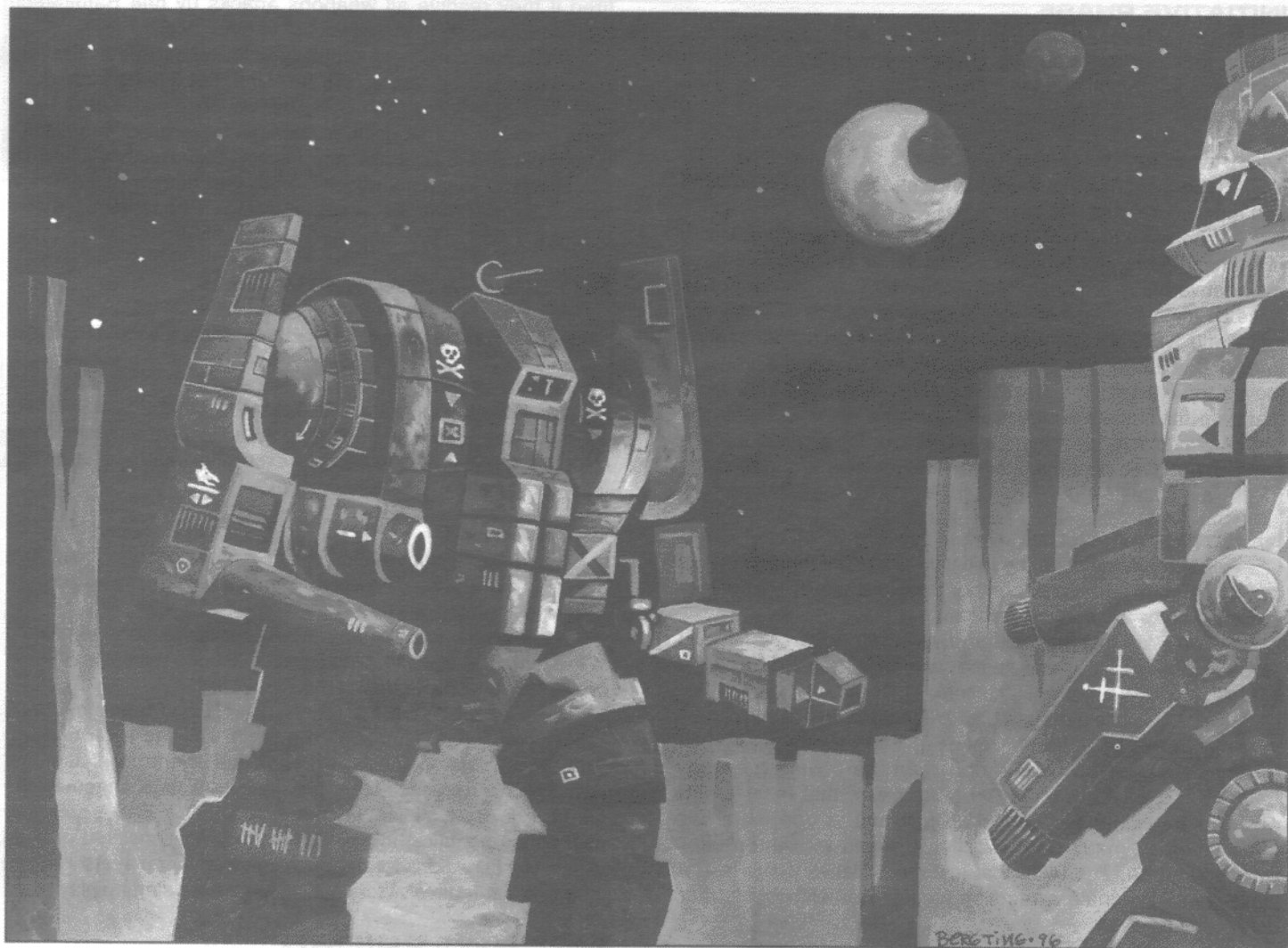
PLAYING THE GAME

This section provides the sequence of play for **BattleTech** and discusses rules for playing MechWarriors in **BattleTech**.

To begin a game, the players lay out the **BattleTech** mapsheets on a table or other playing surface. If players are using a FASA scenario pack, the **Game Set-Up** rules of each scenario provide directions for selecting and laying out the mapsheets, as well as placing any other terrain features. Otherwise, players may arrange the mapsheets according to any scheme they all find acceptable.

Next, the players fill out record sheets for each of their BattleMechs involved in the battle. If desired, players can photocopy the appropriate record sheets provided in **BT4**. (The various **BattleTech Technical Readout** books contain a large selection of additional 'Mech designs, and the corresponding **BattleTech Record Sheets** contain completed record sheets for these designs.) If all players agree, they may even create their own custom BattleMechs using the **Construction** rules (pp. 40–46).

SEQUENCE OF PLAY

A **BattleTech** game consists of a series of turns. Each turn represents ten seconds of game time. During each turn, all BattleMechs on the mapsheets receive an opportunity to move and fire their weapons. The standard turn consists of seven phases. During each phase, players perform one specific type of action, such as movement or combat. (Rules for these actions appear in later sections of this book.)

The phases always occur in the following order:

Initiative Phase
Movement Phase
Reaction Phase
Weapon Attack Phase
Physical Attack Phase
Heat Phase
End Phase

INITIATIVE PHASE

1. One player from each side rolls 2D6 and adds the results together to determine his team's Initiative. The team with the higher result has the Initiative throughout the turn. Ties are rerolled.

MOVEMENT PHASE

2. The team that lost the Initiative chooses one BattleMech and moves it first.

3. The team that won the Initiative moves one BattleMech. Movement alternates between sides until all BattleMechs have been moved. If, prior to any pair of movements, one team has twice as many BattleMechs left to move as the other team, the team with twice as many moves two BattleMechs rather than one. If one team has three times as many BattleMechs, it moves three each time, and so on. This means that the team that won the Initiative moves at least one of its BattleMechs last. A player may designate a movement for any BattleMech that has not been destroyed, even if the 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 declares that one of its BattleMechs will not twist this turn.

5. The team that lost the Initiative twists the torso of one of its BattleMechs one hexside either way or declares that one of its BattleMechs will not twist this turn.

Reaction twists alternate until all BattleMechs have reacted or declared that they will not react. As with movement, if, prior to any pair of torso twists, one team has twice as many BattleMechs left to twist as the other team, that team reacts with two BattleMechs rather than just one. If one team has three times as many BattleMechs, it reacts with three each time, and so on. The team that lost the Initiative twists last. A player may designate a reaction for any BattleMech that has not been destroyed.

WEAPON ATTACK PHASE

6. The team that lost the Initiative chooses a BattleMech to declare fire first. The player controlling that BattleMech declares any attacks he plans to make using his BattleMech's weapons, specifying which weapons he will fire and at what target(s).

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

8. Weapons fire is resolved one BattleMech at a time. Because all combat fire is considered to take place simultaneously, the order in which it is resolved does not matter. (However, players can more easily track which weapons have

fired if they resolve all weapons attacks by one BattleMech before proceeding to the attacks of another 'Mech.)

9. Damage from weapons attacks takes effect. Players record damage as attacks are resolved, but this damage does not affect any BattleMech until after *all* weapons attacks have been resolved. At that point, all damage takes effect immediately and players must make any Piloting Skill Rolls required by the effects of weapons attacks. Note that damage taken by a BattleMech during the Weapon Attack Phase takes effect before the start of the same turn's Physical Attack Phase.

PHYSICAL ATTACK PHASE

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

HEAT PHASE

11. Players adjust their BattleMechs' Heat Scale to reflect any heat built up or lost during the turn. Resolve any temporary or permanent damage caused by excessive internal heat at this time.

END PHASE

12. Players whose MechWarriors lost consciousness in a previous turn now roll dice to see if the pilot regained consciousness during this turn.

13. Players execute any miscellaneous actions remaining in the turn. The specific rules for such actions will state whether or not they take place during the End Phase.

14. Repeat Steps 1 through 13 until one team meets its victory conditions. Normally, the team with the last surviving BattleMech left on the board wins the scenario. If the last BattleMechs from each team are destroyed simultaneously, the game is a draw. However, the scenarios in FASA scenario packs may contain **Victory Conditions** sections that provide alternative conditions for determining victory, or players may set their own alternative victory conditions before starting play.

MECHWARRIORS

The soldiers who pilot BattleMechs are called MechWarriors, and their skills play an important role in keeping a BattleMech moving and fighting effectively. A BattleMech will be knocked out of action if its MechWarrior is killed or seriously injured, even if the BattleMech suffers only minimal damage.

MECHWARRIOR SKILLS

MechWarriors use two important skills in combat, *Piloting* and *Gunnery*. Inner Sphere MechWarriors of average skill have a Piloting Skill level of 5 and a Gunnery Skill level of 4.

A MechWarrior's Piloting Skill helps determine the outcome when a MechWarrior attempts to avoid falling and minimizes damage when a BattleMech does fall down, as discussed in **Piloting Skill Rolls** (see **Movement**, p. 13). A MechWarrior's Gunnery Skill helps determine how easy or difficult it is to make a successful shot with the BattleMech's weapons, as discussed in **Firing Weapons** (see **Combat**, p. 19).

Making Piloting Skill Rolls

When a BattleMech or vehicle attempts a potentially danger-ous maneuver, or when the pilot might lose control of the BattleMech for some other reason, the pilot must make a Piloting Skill Roll. (See **Piloting Skill Rolls** in **Movement**, p. 13.) The player adds the appropriate modifiers to his pilot's Piloting Skill level. The resulting number is the Piloting Skill Roll target number. Then the player rolls 2D6. If the result is equal to or greater than the target number, the action is successful and the BattleMech suffers no adverse effects from the situation.

Gunnery Skill Rating

A MechWarrior's base to-hit number for weapons attacks is equal to his Gunnery Skill level. When modified for range, ter-rain, and other factors, this number becomes the modified to-hit number (see **Firing Weapons**, p. 19). A player whose BattleMech fires a weapon must roll a result equal to or greater than the modified to-hit number to hit the target. As a result, the lower the Gunnery Skill level, the more likely the MechWarrior will be to hit his target.

Varying Skill Levels

Rather than giving their MechWarriors the standard Piloting and Gunnery Skill levels, players can roll randomly at the begin-ning of the game to assign a Piloting and Gunnery Skill level to every MechWarrior. This random generation usually produces an interesting mix of inexperienced and seasoned fighters. To use the Random MechWarrior Skills Table, the player rolls 1D6 to determine the MechWarrior's Piloting Skill level and repeats the roll to determine his Gunnery Skill level.

RANDOM MECHWARRIOR SKILLS TABLE

Die Roll (1D6)	Piloting Skill	Die Roll (1D6)	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 use the MechWarriors they create in future scenarios or in **BattleTech** campaign games—assuming, of course, that the warrior survives the current battle. In this case, players should keep track of the number of enemy BattleMechs destroyed by each surviving MechWarrior. For every 4 BattleMechs he destroys, the MechWarrior can reduce his Gunnery Skill or Piloting Skill by 1, though Gunnery and Piloting Skill levels can never be less than 0.

MechWarrior, Second Edition, the roleplaying game for the **BattleTech** universe, offers a more advanced system for Piloting, Gunnery, and other skills that can be used in place of these rules.

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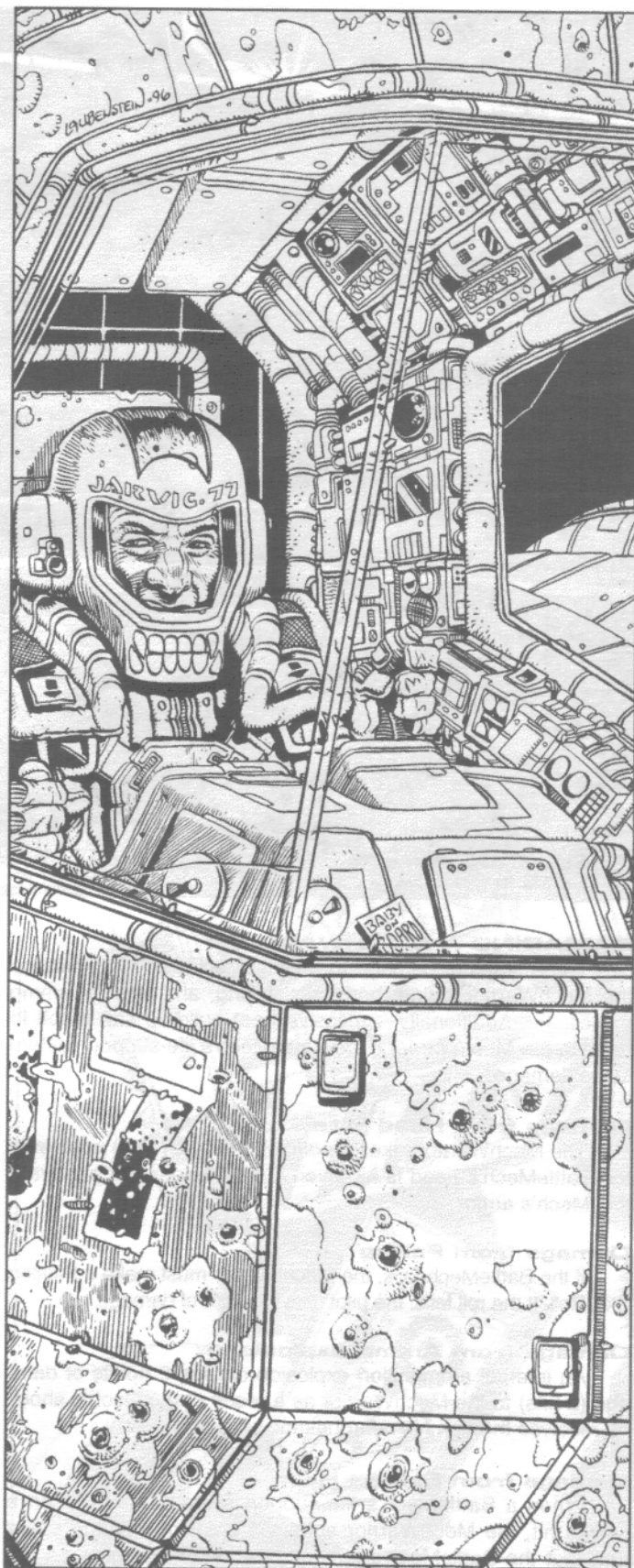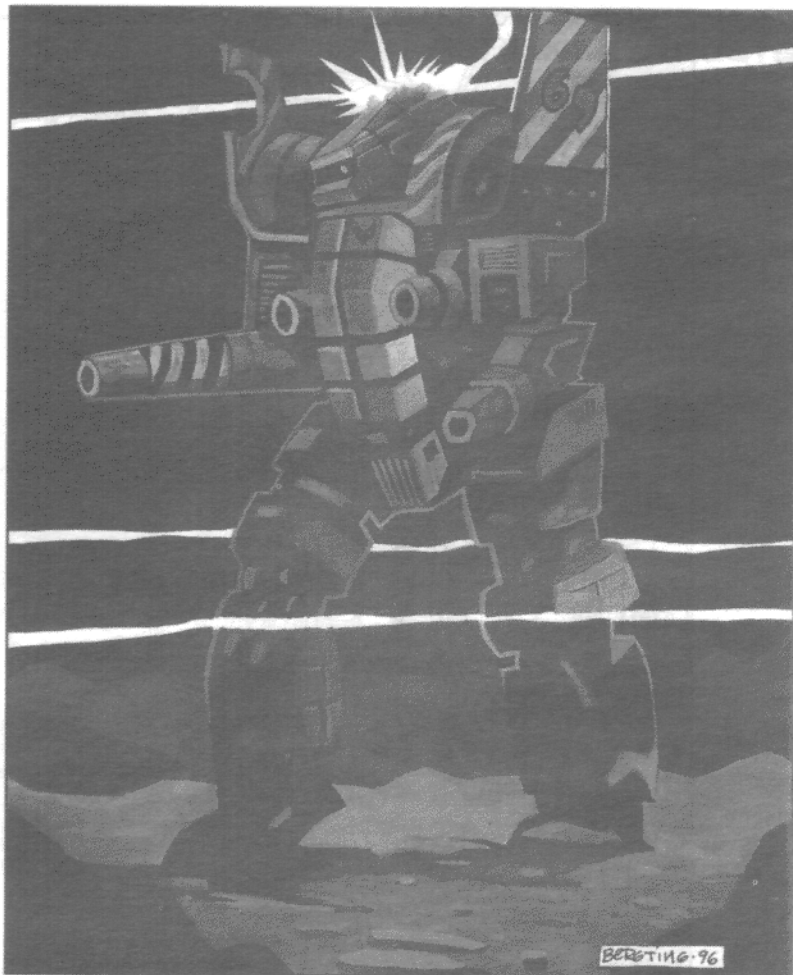
DAMAGING A MECHWARRIOR

Three types of damage to a BattleMech can also damage the MechWarrior inside: head hits, falling, and internal ammo explosions. Additionally, excessive heat build-up can result in harm to the MechWarrior if the BattleMech's life-support system takes damage.

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 the 'Mech's armor.

Damage from Falling

If the BattleMech falls, the MechWarrior must make a Piloting Skill Roll. If the roll fails, the pilot takes 1 point of damage.

Damage from Ammo Explosions

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

Damage from Excess Heat

When a BattleMech's life-support systems have taken a critical hit, the MechWarrior suffers 1 point of damage every turn that the BattleMech's internal heat is 15 or higher on the

Heat Scale at the end of the Heat Phase. Every turn that the heat is 26 or higher causes 2 points of damage to the MechWarrior.

MECHWARRIOR CONSCIOUSNESS TABLE

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

CONSCIOUSNESS ROLLS

A MechWarrior can take 5 points of damage (5 hits) before dying from his injuries, but he may be knocked unconscious long before taking that much damage. Every time the MechWarrior takes damage, the player must immediately roll 2D6 and consult the MechWarrior Consciousness Table to determine if the MechWarrior remains conscious.

If the dice roll result is equal to or greater than the consciousness number, the MechWarrior remains conscious. If the result is less than the consciousness number, the MechWarrior is knocked unconscious. The BattleMech becomes an immobile target, unable to move or fire. Any Piloting Skill Rolls that the BattleMech must make while the pilot is unconscious automatically fail.

During the End Phase of each turn after the turn in which the MechWarrior loses consciousness, the player rolls 2D6. If the result is equal to or greater than the consciousness number for the MechWarrior's current level of damage, the MechWarrior regains consciousness. The player need not roll again to determine consciousness until the MechWarrior takes new damage. Of course, if the MechWarrior takes 6 hits, he is dead and never regains consciousness.

In Turn 3, an Awesome's head takes a hit from an attack with a medium laser. Though the laser does not penetrate the head's protective armor, the Awesome's pilot takes 1 point of damage. He took 2 points of damage in previous attacks, 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. Because its pilot is unconscious, the Awesome will not be able to move or fire during Turn 4. In the End Phase of Turn 4, the player rolls 2D6 again. If he rolls a 7 or higher, the MechWarrior regains consciousness and his BattleMech will be able to move and fire during Turn 5.

MOVEMENT

BattleMechs change their positions and locations on the mapsheet by performing any one of several movements or movement actions. During the Movement Phase of each turn, each player must choose one mode of movement (walking, running or jumping) that his BattleMech will use during that turn. A BattleMech may not combine movement modes during a turn.

When it is his turn to move a BattleMech, the player must announce what movement mode he is using and how many Movement Points he has to spend on that movement. Within the limits of the rules, the player always chooses how a BattleMech moves.

MOVEMENT COSTS

A BattleMech must spend at least 1 Movement Point (MP) to move 1 hex. If the hex the BattleMech is entering is anything but Clear terrain, this cost usually increases, as shown in the Movement Cost Table, p. 12. Some types of terrain require a player to make a successful Piloting Skill Roll for a BattleMech to remain standing once it enters that terrain. Such restrictions are described in the sections discussing applicable terrain.

A BattleMech must possess sufficient MP to pay the cost of entering each new hex. However, a BattleMech can always move into the hex directly in front of it at the beginning of the Movement Phase, regardless of the terrain cost, under the following conditions: the BattleMech enters only 1 hex that turn, the BattleMech has at least 1 MP to spend, the BattleMech makes no facing changes or other expenditures of MP, and the BattleMech is not prohibited from entering that terrain. A BattleMech that enters a hex under these conditions is considered to have run for the purpose of determining combat modifiers.

A fallen BattleMech spends 2 MP any time it attempts to stand up. A fallen BattleMech may only attempt to stand up during the Movement Phase of a turn, but it may make multiple attempts as long as it has sufficient MP remaining. A fallen BattleMech with only 1 MP available at the beginning of its turn may make one attempt to stand using the exception noted in the previous paragraph. A fallen BattleMech cannot crawl into another hex, but it may change its facing in the hex it occupies. Once a fallen BattleMech regains its feet, any remaining MP may be used to move out of the hex in the same Movement Phase.
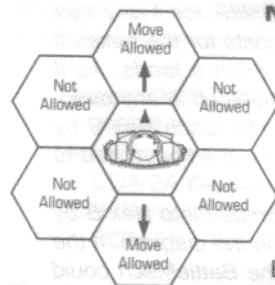
MOVEMENT DIRECTION

A BattleMech can move forward into the hex it is facing or backward into the hex directly to its rear. It cannot move into any other hex unless it first changes its facing. To change its facing, the BattleMech turns until the hex it wants to enter is directly to its front or rear. Then the BattleMech may enter the hex. The diagram left shows the two hexes that a BattleMech may enter without changing its facing.

During the course of its movement, a BattleMech can move forward and backward and change direction in any manner the player chooses. However, a BattleMech may not run backward. Additionally, BattleMechs moving backward may not change elevation levels.

While moving forward, a BattleMech may change elevation or depth by 1 or 2 levels per hex. (This rule does not apply to a jumping BattleMech. See **Jumping**, p. 12.)

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 available MP 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 MP 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). The BattleMech's walking MP of 4 is not enough to get it to Hex E because it would have to move forward into Hex B (1 MP), then change its facing one hexside (1 MP), then enter the Depth 1 Water hex (2 MP), which would require an additional +1 MP for the elevation level change (total 5 MP). Finally, if the player wanted to move his BattleMech from Hex A directly to Hex F, he would first have to change facing (1 MP), and then, after climbing 2 elevation levels (2 MP), enter the Clear terrain (1 MP).
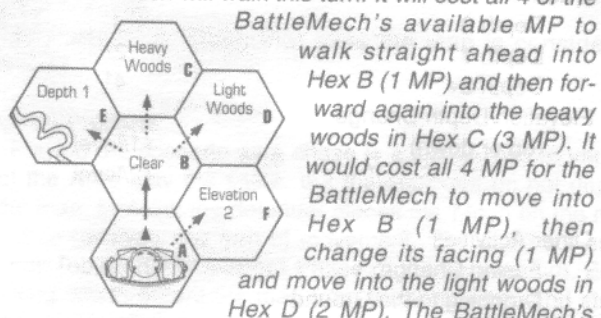
MOVEMENT MODES

At the beginning of the Movement Phase and before moving, a player must select one of four movement modes for his BattleMech: standing still, walking, running or jumping.

STANDING STILL

If the player declares that the BattleMech will stand still, the BattleMech stays in the hex in which it started the turn. It does not move at all, not even to change facing. Standing still generates no heat, gives no penalty to weapons fire, and allows attackers to fire on the BattleMech without target movement penalties. There is no movement cost for standing still.

WALKING

If the player declares that the BattleMech will walk, the BattleMech may expend a number of MP up to its Walking MP rating. Walking creates 1 point of heat for BattleMechs.

A walking BattleMech suffers a small penalty to its to-hit number when firing weapons. As a moving target, a walking BattleMech is also harder to hit. These combat effects appear on the Weapons Fire Modifiers Table on p. 22 of the **Combat** section, and are explained in that section.

MOVEMENT COST TABLE

Terrain Type/ Activity	MP Cost Per Hex
Clear	1
Rough	2
Light Woods	2
Heavy Woods	3
Water	
Depth 0	1
Depth 1	2[1]
Depth 2+	4[1]
Elevation/Depth Change	
(up or down)	+1/level
	+2/level
Other Activities	
Facing Change	1/hexside[1]
Dropping to the Ground	1
Standing Up	2/attempt

[1]Piloting Skill Roll required to prevent falling.

RUNNING

A BattleMech can move farther in a turn when running than it can when walking. The player may spend up to the Running MP rating of the BattleMech each turn. Running BattleMechs pay the same movement costs as do walking BattleMechs. However, no BattleMech can move backward while running, nor can it enter Water hexes of Depth 1 or deeper.

Running creates more heat for a BattleMech (2 Heat Points per turn) than walking. A running BattleMech suffers penalties to its to-hit number when firing weapons, but its speed also makes the BattleMech a more difficult target to hit. These effects are explained in the **Combat** section, p. 20.

Certain damage to a BattleMech may reduce its Walking MP rating. When such damage occurs, the BattleMech's running speed must be recalculated. A BattleMech's Running MP rating is always equal to its Walking MP multiplied by 1.5, rounding up.

JUMPING

A jump-capable BattleMech may move into any hex within its jump range (to determine whether a particular 'Mech is jump-capable, check its description for a Jumping MP rating, located under the 'Mech's Walking and Running MP ratings). The terrain type in the landing 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 Jumping MP greater than its Walking MP. A jump-capable BattleMech may not jump higher, in levels, than its Jumping MP. Jumping generates a great deal of heat—1 Heat Point for every hex jumped, with a minimum cost of 3 Heat Points. Even if a BattleMech only jumps 1 hex, it builds up 3 Heat Points for that jump. Jumping also makes it harder to fire weapons accurately, but a jumping BattleMech makes a more difficult target than a running or walking BattleMech. These effects are explained in the **Combat** section, p. 20.

When a BattleMech jumps, it can move 1 hex in any direction for every available Jumping MP. It can jump over and into any hex, regardless of terrain type or elevation difference (within the elevation restriction given above). The path a jumping BattleMech travels is always the shortest one possible between the starting and ending hexes. If this path crosses an elevation higher than the BattleMech's Jumping MP, then the BattleMech cannot make the jump. If there is more than one possible path between the BattleMech and its goal hex, the player may declare which path his BattleMech takes.

Jumping requires a BattleMech to fire its jump jets, so jumping may not be combined with any other movement mode. The process of firing the jump jets, lifting off, and landing requires a full Movement Phase. BattleMechs must be standing at the start of the turn to jump.

Jump jets cannot be fired while submerged in water, and so a 'Mech standing in Depth 2 or deeper water cannot jump. If a 'Mech is standing in Depth 1 water, it may not fire jump jets located in its legs, but it may use any jets located in the torso, each one providing 1 Jumping MP. For example, a 'Mech with a Jumping MP of 5 that has one jump jet in each leg and each torso location may only use 3 MP when jumping out of Depth 1 water.

BattleMechs that jump with damaged leg actuators or gyros must make a Piloting Skill Roll to avoid falling when they land.
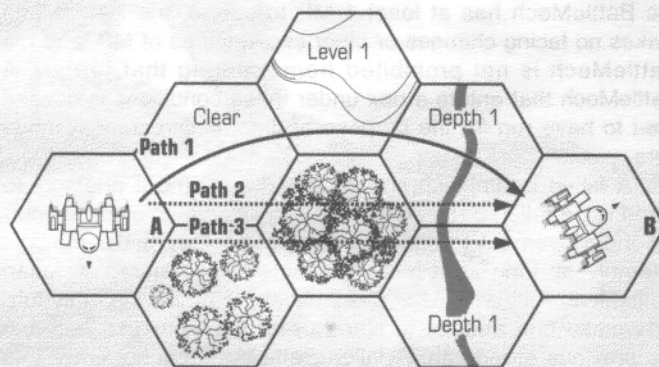
The BattleMech in Hex A of the diagram above has a Jumping MP of 6. The BattleMech jumps to Hex B, 4 hexes away. Because the BattleMech is using jump movement, it spends only 1 MP for every hex that it moves, ignoring all terrain costs for the hexes it passes over and for the hex in which it lands. As it lands, the player can face the BattleMech in any direction he chooses, at no extra cost. To reach Hex B by walking or running, the BattleMech would have had to spend at least 11 MP.

The BattleMech could have jumped into Hex B by at least three paths, as indicated on the diagram. If the hill had an Elevation Level of 7, the BattleMech could not have used path 1 (because the 'Mech has a Jumping MP rating of 6), but the player still could have chosen path 2 or 3.

FACING

Every hex on the map has six edges, called hexsides. In **BattleTech**, every BattleMech must be oriented to face one of these six hexsides. A BattleMech is considered to be facing the way its feet are pointing. A BattleMech's facing affects both movement (see below) and combat (see **Combat**, p. 17), and can only be changed during the Movement Phase.

BattleMechs not clearly facing a hexside can be realigned to one of the two possible hexsides by the opposing player.

FACING CHANGE

Every hexside by which a BattleMech changes its facing costs 1 MP. A 180-degree turn would cost a BattleMech 3 MP.

A player wants to move the BattleMech in the diagram from Hex A to 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.
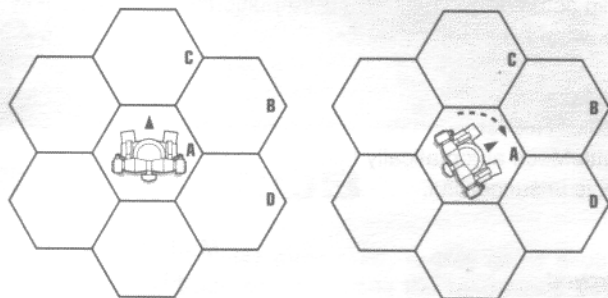
DROPPING TO THE GROUND

A player may choose to have his BattleMech drop to the ground during combat. This tactic can be used at the end of movement to hide the 'Mech or make attacks against it more difficult.

This action creates no additional heat, causes no falling damage, and costs 1 MP. The BattleMech drops with the same facing it had while standing and automatically falls face down, as with an unintentional fall (see **Falling**, p. **15**).

STACKING

During the Movement Phase, a BattleMech may move through hexes occupied by other friendly BattleMechs, but a BattleMech may not move through a hex occupied by an enemy BattleMech, nor may it end its movement in a hex occupied by another BattleMech.

It is important to note that while only one BattleMech can occupy a hex, it does not actually take up the entire hex. A 30-meter-wide hex offers plenty of room for a 12-meter-tall 'Mech to move around and avoid fire. Simply put, a BattleMech tactically controls the hex it occupies but does not physically fill it.

STANDING UP

The player may choose to have a BattleMech attempt to regain its feet after falling or dropping to the ground. Each attempt to stand creates 1 point of heat 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 was not jumping during that turn. BattleMechs may only attempt to stand during the Movement Phase.

For a fallen BattleMech to stand up, the player must make a successful Piloting Skill Roll. If the attempt is not successful, the BattleMech falls again, taking falling damage. The unit may make repeated attempts to stand as long as it has Movement Points available.

Once the BattleMech successfully stands, it may face in any direction (at no cost), regardless of its facing while on the ground, and may continue to move using any remaining Movement Points.

If a BattleMech begins its turn on the ground, it must declare whether it will walk or run before it attempts to stand. A fallen BattleMech may not jump.

TORSO TWIST

At the end of all movement, the players can twist the torsos of their BattleMechs. Torso twisting takes place in reverse Initiative order, with the team that won the Initiative twisting one BattleMech before the team that lost Initiative twists one of their BattleMechs. While standard Initiative order gives the team that won Initiative the advantage of moving last, this reversed order gives the team that lost the Initiative the advantage of twisting last.

A BattleMech can twist its torso one hexside (60 degrees) to the left or right of the direction in which its feet are pointing. This new alignment modifies a BattleMech's firing arc as described in **Combat**, p. 18, but for movement and hit location purposes, the BattleMech is still considered to be facing in its pre-twist direction.

PILOTING SKILL ROLLS

Players must make Piloting Skill Rolls to keep their BattleMechs from falling under the following conditions: whenever the BattleMech moves through exceptionally difficult terrain; whenever the BattleMech receives 20 Damage Points or more during a single phase; whenever certain components of a BattleMech are damaged; and in other, specific circumstances noted in the following sections.

MAKING PILOTING SKILL ROLLS

The Piloting Skill Roll Table on page 14 lists the events that require a player to make a Piloting Skill Roll for his BattleMech's MechWarrior. Each time one of these events occurs, the player adds the following modifiers to his MechWarrior's Piloting Skill: any indicated modifiers for the event, plus additional modifiers from other events taking place in the same phase, including those listed under Additional Modifiers on the Piloting Skill Roll Table. The resulting number is the Modified Piloting Skill level. To make the Piloting Skill Roll, the player rolls 2D6.

If the result is equal to or greater than the Modified Piloting Skill, the BattleMech avoids falling. If the result is less than the Modified Piloting Skill, the BattleMech falls. If the BattleMech

falls during the Movement Phase and has at least 2 MP remaining, it may attempt to regain its feet that turn.

Piloting Skill Rolls required because of movement (entering water, trying to stand up, avoiding falling damage, and so on) must be made immediately following the action. Multiple rolls may be required during the BattleMech's movement for a turn. For example, if a BattleMech is moving through 3 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 required because of weapons attacks must be made at the end of the Weapon Attack Phase of the turn. Note that a BattleMech only makes one Piloting Skill Roll for taking 20+ Damage Points in a single phase, regardless of how many points of damage over 20 it takes. All weapons attacks are resolved before the players make any required Piloting Skill Rolls. BattleMechs that fall during the Weapon Attack Phase begin the turn's Physical Attack Phase in a prone position.

PILOTING SKILL ROLL TABLE

BattleMech's Situation	Modifier
Damage to BattleMech	
BattleMech takes 20+ Damage Points in one phase	+1
BattleMech reactor shuts down	+3[1]
Leg/foot/hip actuator destroyed	+1
Gyro hit	+3
Gyro destroyed	Automatic Fall
Leg destroyed	Automatic Fall
Physical Attacks on BattleMech	
BattleMech was kicked	0
BattleMech was pushed	0
BattleMech was charged/death-from-above attack	+2
Unit's Actions	
BattleMech missed kick	0
BattleMech charging	+2
BattleMech death-from-above attack	+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 jumping with damaged leg actuators	per Additional Modifiers, below
MechWarrior trying to avoid damage when his BattleMech is falling	+1/ level fallen

[1]Only during the turn that the reactor shuts down. If the MechWarrior must make a Piloting Skill Roll for a 'Mech with a shut-down reactor, the BattleMech automatically falls.
[2]Automatic fall if death-from-above attack is unsuccessful.

Additional Modifiers	Modifier
Per leg/foot actuator previously destroyed	+1
Per hip also/previously destroyed	+2
Gyro also/previously hit (automatic fall if 2 previous hits)	+3
Leg previously destroyed	+5[3]

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

All Piloting Skill Rolls required because of physical attacks are made at the end of the Physical Attack Phase. Resolve all physical attacks before making any Piloting Skill Rolls.

During the Weapon Attack Phase, a BattleMech whose MechWarrior has a Piloting Skill of 5 takes 40 points of damage and loses 2 leg actuators. The player makes one Piloting Skill Roll for taking 20 or more points of damage, and two more for losing 2 leg actuators. The modified Piloting Skill Target Number for each of the three rolls is 8 [5 (Piloting Skill) + 1 (20+ points 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, in the process losing another actuator and taking 23 more points of damage. The player must make four more Piloting Skill Rolls: two for being kicked twice, one for losing a leg actuator, and one for the 23 points of damage. The modified Piloting Skill Target Number for each of the four rolls is 9 [7 (existing actuator damage) + 1 (another damaged leg actuator) + 1 (20+ points of damage)].

FALLING

When a BattleMech falls, both the machine and its pilot may suffer damage. The amount of damage taken by the BattleMech depends on its weight and the distance it falls. Whether or not the MechWarrior suffers an injury 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 judgment and the following guidelines to create a reasonable outcome. Location after a fall should be largely determined by the action that created the fall.

In general, when a BattleMech falls because of terrain (movement into or out of deep water, for example), the BattleMech will fall into the lower of the two hexes. If the fall occurs during the Movement Phase from other causes, the BattleMech falls in the hex it was entering. If a fall occurs because of weapons fire, a physical attack, or any other reason related to combat, the BattleMech falls in the hex it currently occupies.

If a BattleMech falls into a hex occupied by another BattleMech, the second BattleMech might also take damage, depending on how the BattleMech falls. If the BattleMech fell from a hex 2 or more elevation levels above the landing hex, use the **Accidental Falls from Above** rules, p. 31. If the BattleMech fell from a hex only 1 level higher, use the **Domino Effect** rules, p. 31.

To find the number of levels the BattleMech fell, subtract the terrain elevation level of the hex into which the BattleMech fell 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 determines the BattleMech Hit Location Table used when allocating damage from the fall.

To determine the BattleMech's facing after the fall and the area of the BattleMech that takes damage from the fall, roll 1D6 and consult the Facing after a Fall Table.

A fallen BattleMech lies prone and face down. BattleMechs that fall on their sides or rear automatically roll over to lie on their fronts. Rather than attempting to stand after a fall, a prone BattleMech may spend Movement Points to change its facing in the normal manner.

The BattleMech in the diagram was entering a Water hex and failed its Piloting Skill Roll. The player rolls 1D6 with a result of 3 and consults the Facing After a Fall Table. The BattleMech is now facing 2 hexsides to the right (clockwise) of its original facing and takes the damage from the fall on its right side. The BattleMech is now prone and face down in the Water hex.

FALLING DAMAGE TO A BATTLEMECH

A BattleMech always takes damage from a fall 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 elevation levels it fell is 0. If it fell from land into a Water hex, treat the Water hex as a Level 0 hex and apply only half the resulting damage (rounding up).

Divide the damage into clusters of 5 points each; in other words, form as many 5-point groups as possible, assigning any remaining points to one smaller group, and determine a hit location for each cluster. For example, a BattleMech that suffers 33 points of falling damage takes six clusters of 5-point hits and one 3-point hit. To determine the location of the damage, use the appropriate column of the BattleMech Hit Location Table, p. 23 in **Combat**, as specified by the Facing After a Fall Table.

FACING AFTER A FALL TABLE

Die Roll (1D6)	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Rear
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

If the fall occurs during the Movement Phase, resolve the damage as it happens. If the fall occurs during a Combat Phase, the damage from the fall occurs simultaneously with all other damage in that phase.
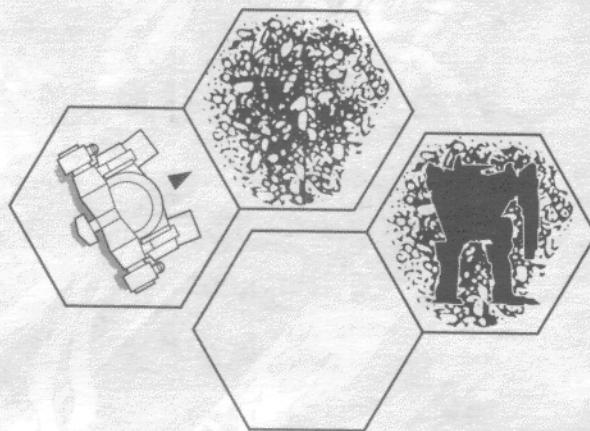
A JagerMech in a Level 1 hex attempts to stand during the Movement Phase. The MechWarrior fails his Piloting Skill Roll and the BattleMech falls again into the same hex. The BattleMech fell from a Level 1 to a Level 1 hex (the same one) and so fell 0 levels. The player rolls a 1 on the Facing after a Fall Table and finds that the BattleMech landed on its face. It takes the falling damage on its Front. The JagerMech suffers 7 points of damage (65 tons divided by 10 is 6.5, rounded up to 7; the number of levels fallen plus 1 equals 1; 7 x 1 = 7). These 7 points are divided into one cluster of 5 and one of 2. The player then uses the Front column of the BattleMech Hit Location Table to determine the location of the damage.

FALLING DAMAGE TO THE MECHWARRIOR

To determine if the pilot took damage when the BattleMech fell, the player makes a second Piloting Skill Roll after every fall, adding 1 to the MechWarrior's Piloting Skill target for every level fallen. If the die roll result is equal to or greater than this modified Piloting Skill target, then the MechWarrior avoided taking any damage. If not, the MechWarrior takes 1 point of damage.

COMBAT

After the players complete the Movement Phase of the turn, BattleMechs engage in combat. BattleMechs use two forms of combat: weapons attacks and physical attacks. BattleMechs make weapons attacks using weapons such as missiles, lasers and autocannons. For physical attacks, the BattleMechs use their own massive weight to inflict damage on targets.

In **BattleTech**, both weapons and physical attacks first inflict damage on the outer armor protecting every BattleMech. When an attack or series of attacks destroys all of an armor location's Armor Points, any remaining damage affects the internal structure of the BattleMech in that location. Every attack that penetrates a BattleMech's armor may result in a critical hit that can knock out a major weapon or movement system or even destroy the BattleMech.

WEAPONS ATTACKS

During the Weapon Attack Phase, players use their BattleMechs' weapons to attempt to inflict damage on targets. For one BattleMech to fire at another, the attacking BattleMech 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 the attacking player wishes to use. The attacking player then calculates the likelihood of a shot hitting the target based on the range to the target, movement of the target and attacker, intervening terrain, and other factors.

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

If the attack hits the target, the attacking player determines the damage location, and the target player records the result on the damaged BattleMech's record sheet.

LINE OF SIGHT

When a player decides to fire on a BattleMech, he must first determine whether or not his BattleMech can see its intended target. Various terrain features can fully or partially block a BattleMech's line of sight (LOS) to a target, making a shot difficult or even impossible.

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

• When determining LOS, consider a BattleMech to be 1 level higher than the terrain on which it stands. For example, if a 'Mech is standing on Level 2 terrain, it is 3 elevation levels high for purposes of determining line of sight.

• All terrain has an elevation. If its level is not marked on the map, it is 0.

• All woods are considered to be 2 levels tall. BattleMechs can fire through certain types of woods (see below). Woods that block LOS add 2 levels to the level of the terrain on which they stand. BattleMechs occupying wooded hexes are standing on the underlying terrain, not on top of the trees.

• If the attacker and target BattleMechs occupy adjacent hexes, both BattleMechs always have LOS to each other.

• If any intervening terrain is higher than both BattleMechs, that terrain blocks LOS.

• No single wooded hex blocks LOS. However, if any three wooded hexes (or any two wooded hexes, if one of them is Heavy Woods) intervene between the attacker and the target, LOS is blocked. Woods in the target's hex and wooded hexes intervening between the attacker and target that are not dense enough to block LOS still make the attack more difficult (see **To-Hit Modifiers**, p. 19).

• If the terrain in 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 has a higher elevation than the target, then LOS is blocked. Note that because no single wooded hex can block LOS, an adjacent wooded hex does not block LOS according to this rule.

• Intervening BattleMechs never block LOS.

Water hexes and partial cover have unique effects on line of sight that are explained below.
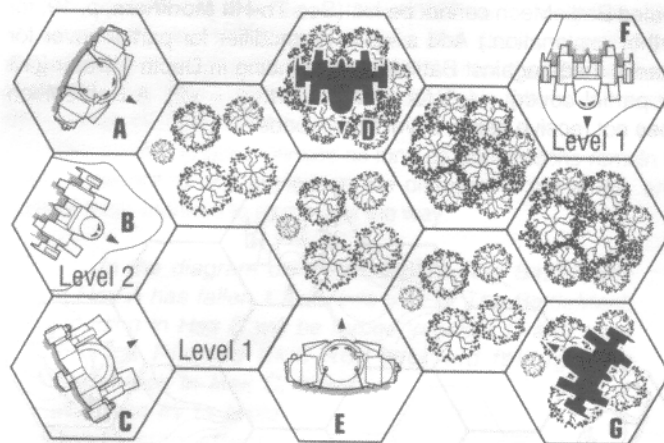
The above diagram illustrates some of the principles governing LOS. The BattleMech in Hex A has line of sight to the BattleMechs in Hexes B, D, E and F because of the following conditions. Even though 3 wooded hexes normally block LOS, it can see the BattleMech in Hex F because the elevation levels of the 3 wooded hexes between them are not higher than both BattleMechs. The BattleMech in Hex F is 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 3 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 because the adjacent hex has a higher elevation level. The BattleMech in Hex C does, however, have an unblocked line of sight to the BattleMechs in Hexes B, D, E, F and G.

Effects of Water Hexes

Water hexes have negative elevation levels, or depths, of 0 and below. Treat a hex's depth as a negative number when calculating the elevation differences between two BattleMechs.

A Depth 1 Water hex provides partial cover for a BattleMech occupying that hex. Because only part of the BattleMech is exposed, add a partial cover modifier to the to-hit number for attacks against the 'Mech (see **Effects of Partial Cover**, below). Depth 2 or deeper water completely blocks LOS to and from a BattleMech standing in a Water hex.

Effects of Partial Cover

Partial cover makes a BattleMech harder to hit, but any shot that hits a partially concealed 'Mech is more likely to hit a critical location. To receive partial cover, a BattleMech must be adjacent to a hex of equal elevation to itself, and that hex must lie between it and the attacking BattleMech. For example, a 'Mech standing on Level 0 terrain has an Elevation Level of 1 for determining LOS. An adjacent hex of Level 1 terrain lying between the attacker and the target would provide partial cover. The firing BattleMech must also be at an elevation level equal to or lower than the defending BattleMech. In other words, an attacker firing downhill negates its target's partial cover.

Partial cover does not block LOS. Instead, it adds a +3 to-hit modifier to the attacker's to-hit number. Use the BattleMech Punch Location Table to determine the location of damage inflicted on a partially concealed target. The legs of a partially concealed BattleMech cannot be hit. (See **To-Hit Modifiers**, p. 19, for further explanation.) Add a +2 to-hit modifier for partial cover for attacks made against BattleMechs standing in Depth 1 water [(+3 for partial cover) + (−1 for being in water) = +2]. A BattleMech does not receive partial cover from woods.
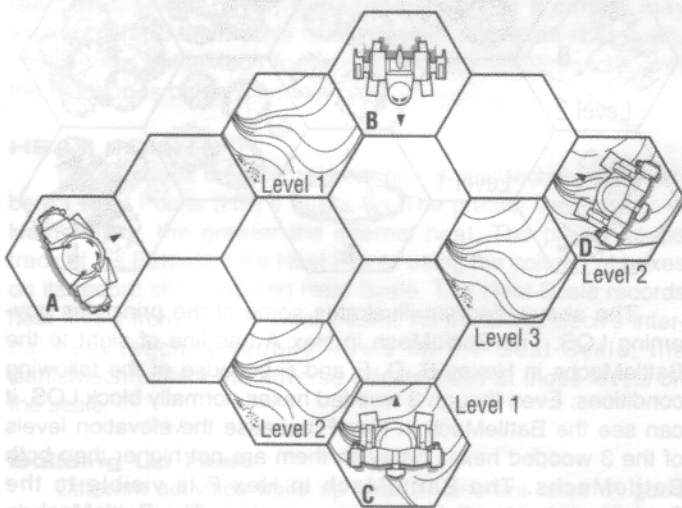
The BattleMechs in Hexes B, C and D have partial cover from the BattleMech in Hex A because each is adjacent to a hex equal to its own elevation along the LOS from the BattleMech in Hex A.

FIRING ARCS

If an attacking BattleMech has LOS to its intended target, the attacking player can then check the firing arcs of his 'Mechs' weapons to see which weapons can hit the target. Every 'Mech has four firing arcs: the forward arc, left-arm arc, right-arm arc and rear arc. The following diagrams illustrate the boundaries for each arc. To determine the exact boundaries of the forward, left-arm and right-arm firing arcs, draw straight lines from the firing 'Mech through Hexes A and B, as shown in the appropriate diagram. The firing arc includes the hexes between the two lines, as well as the hexes through which these lines pass.

(Note that the following firing arcs extend from the firing 'Mech to the edge of the playing area. The maximum ranges for different weapons are described in the Weapons and Equipment Tables, beginning on p. 45 in **Construction**.)

Forward Arc

Weapons mounted in the three forward torso locations, the legs, or the head of a BattleMech may fire only at targets in the forward arc.

Left-Arm Arc

Weapons mounted in the left arm may fire only at targets in the left-arm arc.

Right-Arm Arc

Weapons mounted in the right arm may fire only at targets in the right-arm arc.

Rear Arc

Weapons mounted in any of the three rear torso locations may only fire into the rear arc. Weapons may also be rear-mounted on the head and legs. All rear-mounted weapons are indicated by an R on a 'Mech's record sheet and may fire at targets only in the rear firing arc.

To determine the boundaries of a 'Mech's rear arc, draw a straight line starting in Hex A and passing through Hex B, and another line starting in Hex A and passing through Hex C on the Rear Arc diagram. The rear firing arc includes the hexes between the two lines, as well as the hexes through which these lines pass.

Rotating the Firing Arcs

A BattleMech can rotate its torso one hexside to the left or right while keeping its feet pointed straight ahead during the Reaction Phase. This means that a BattleMech can move in one direction while firing in another. A BattleMech's upper-body firing arcs are determined by the direction in which its torso is turned, not by the 'Mech's facing; leg-mounted weapon firing arcs are always aligned with the feet.

When the BattleMech's torso rotates, all upper-body firing arcs rotate with it as shown on the diagram.

Prone 'Mechs may not twist their torsos.

Torso Forward   **Torso Twisted Left**   **Torso Twisted Right**
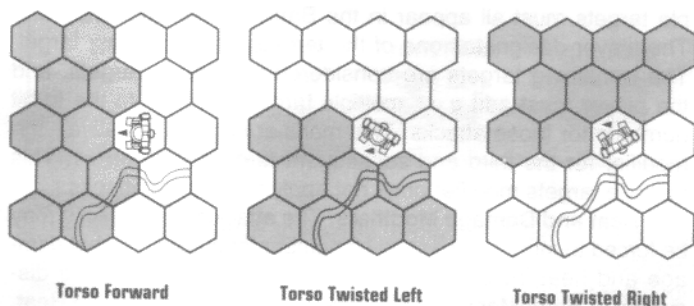
FIRING WEAPONS

After a player has determined that a target is within line of sight and the firing arcs of his weapons, his BattleMech may make one or more weapons attacks. The player uses the MechWarrior's Gunnery Skill as the base to-hit number for each Attack Test. For each weapon he will fire, the player determines if the shot is more or less difficult than normal by factoring in range, terrain, movement and other conditions. Each of these factors adds a modifier to the base to-hit number to create a modified to-hit number. (Difficult shots will have higher modified to-hit numbers, while easier shots will have lower modified to-hit numbers.)

The player then rolls 2D6 to see if the attack hits the target. If the result is greater than or equal to the modified to-hit number, the attack hits its target. If the fired weapon requires ammunition, the player marks off one shot of ammunition. Weapons may be fired only once per turn.

Base To-Hit Number

The base to-hit number for a weapon attack is equal to the firing pilot's Gunnery Skill level.

Modified To-Hit Number

The modified to-hit number equals the base to-hit number plus all appropriate modifiers for range, minimum range, movement, concealment, and other factors discussed in the following **To-Hit Modifiers** section. If the modified to-hit number is greater than 12, the shot automatically misses. If a player determines that his BattleMech's declared attack will automatically miss, he can choose not to make the attack, thereby conserving his ammunition and avoiding the heat build-up caused by firing the weapon. However, he may not switch his declared attack to another target.

To-Hit Modifiers

The base to-hit number may be modified by a number of factors, including range, terrain, movement, multiple targets, heat and damage, and prone and immobile targets. All modifiers are cumulative and are listed in the Weapons Fire Modifiers Table (p. 22).

Range Modifier: The farther away the target is from the firing BattleMech, the more difficult it will be to hit. The range modifier for an attack is determined by the range to the target, which is the distance between the attacking BattleMech and its target. To determine range, begin at the hex adjacent to the attacker's hex along the line of sight, find the shortest path to the target, and count the number of hexes between those two points, including the target's hex.

The ranges for all available weapons appear in the Weapons and Equipment Table, beginning on p. 45 in **Construction**. A weapon's maximum range is divided into three distances: short, medium and long. Find the distance to the target in the row for the appropriate weapon, and determine if the BattleMech's current range is short, medium, long or out of range. A shot at short range requires no to-hit modifier. A medium-range shot has a +2 to-hit modifier, while a shot at long range has a +4 modifier.

Weapons cannot hit a target at a distance greater than the weapon's long range, but BattleMechs may fire at targets beyond long range just to get rid of ammunition.

Minimum Range Modifier: Some weapons, such as particle projector cannons, autocannons, and long-range missiles (LRMs), are designed to be fired at long-range targets. Accurately aiming these weapons becomes difficult at close range. The minimum effective range of each available weapon—the range at which the weapon becomes less effective than normal—appears in the Weapons and Equipment Table, pp.45–46.

If the target occupies the hex indicated as the minimum effective range, modify the to-hit number by +1. For every hex closer to the firer, add an additional +1 to the to-hit number.

A particle projector cannon (PPC) has a minimum effective range of 3 hexes. If a Panther is firing a PPC at a target 3 hexes away, it adds a Minimum Range Modifier of +1 to its to-hit number. If the target is only 2 hexes away, the modifier is +2. If the target is 1 hex away, the modifier is +3.
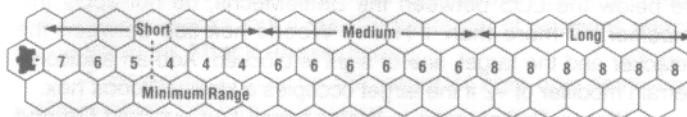
If the 'Mech in the above example allows its target to move to within 2 hexes of its position, the player must modify the BattleMech's to-hit number because the target stands inside its weapon's minimum effective range. The base to-hit number is 4 because the MechWarrior's Gunnery Skill level is 4, and the Minimum Range Modifier is +2. This gives the attacking 'Mech a Modified To-Hit Number of 6, the same as if the target was at medium range.

Movement Modifiers: A moving target is harder to hit, and a moving attacker must constantly adjust his aim to compensate for his movement. To reflect this, a BattleMech's to-hit number is modified by the movement of the attacking BattleMech and its target's movement, using the values found in the Weapons Fire Modifiers Table (p. 22).

The target movement modifiers are based on the hexes traversed during the Movement Phase rather than the number of Movement Points spent. If the target moved both backward and forward in the turn, base the movement modifier on the number of hexes moved from the hex in which the BattleMech last reversed its movement. For example, if the target moved backward 3 hexes and then forward 2 hexes, the target movement modifier would be based only on the final 2 hexes of movement, resulting in a Target Movement Modifier of 0.

Note that if the target jumped in the current turn, the player must also add a jump modifier.

During the Movement Phase, the attacking 'Mech from the previous example walked (+1 modifier), and its target moved a total of 4 hexes (+1 modifier). The combined movement modifier is +2. This modifier is added to the base to-hit number. This means that when the 'Mech fires its PPC at the target, which is 2 hexes away, it uses a Modified To-Hit Number of 8 [4 (base to-hit) + 2 (minimum range modifier) + 2 (movement modifier)].

Terrain Modifiers: Terrain can affect the probability of a successful shot by forcing the attacker to account for intervening land features and partial cover. BattleMechs can shoot through Light and Heavy Woods hexes under certain circumstances, but successful shots become increasingly difficult as the number of wooded hexes between an attacker and its target increases. Water generally makes a BattleMech harder to hit, as does partial cover. Specific terrain modifiers appear below.

• **Light Woods.** Modify the to-hit number by +1 per hex of light woods between the attacker and the target. (If the treetops lie below the LOS between the BattleMechs, do not apply this modifier.) Add an additional terrain modifier of +1 if the target occupies a Light Woods hex. The attacker may fire through up to 2 intervening Light Woods hexes as long as the modified to-hit number is less than 13.

• **Heavy Woods.** Modify the to-hit number by +2 per hex of heavy woods between the attacker and its target. (If the treetops lie below the LOS between the BattleMechs, do not apply this modifier.) If more than 1 Heavy Woods hex lies between the attacker and the target, line of sight is blocked. Add an additional terrain modifier of +2 if the target occupies a Heavy Woods hex.

• **Water.** BattleMechs in Water hexes find avoiding fire and attacking targets difficult. Add a terrain modifier of +1 to the to-hit number if the attacker is in a Water hex of Depth 1. Modify the to-hit number by –1 if the target occupies a Water hex of Depth 1. (Because a BattleMech also receives a +3 partial cover modifier for standing in a Depth 1 Water hex, a targeted 'Mech in such a hex would have a total terrain modifier of +2. See **Effects of Partial Cover**, p. 18, for more information.)

Water of Depth 0 has no effect on the to-hit number.

A BattleMech standing in a Depth 2 (or deeper) Water hex cannot fire on or be fired on by other BattleMechs.

• **Partial Cover.** Add a terrain modifier of +3 to the to-hit number if the target BattleMech is partially concealed (see **Effects of Partial Cover**, p. 18). When a BattleMech receives the partial cover modifier, resolve all damage on the BattleMech Punch Location Table, p. 27.

Multiple Targets Modifier: A player may declare that his BattleMech will engage more than one target in a turn and allocate different weapons systems to fire at different targets.

For a BattleMech to fire at more than one target, the multiple targets must all appear in the BattleMech's front firing arc. The player designates one of the targets as the primary target. The remaining targets are considered secondary targets, and the player must add a +1 multiple targets modifier to the to-hit numbers for those attacks. This modifier is not cumulative—the modifier for the third and subsequent targets remains +1. This multiple targets modifier does not apply to physical attacks.

Heat and Damage Modifiers: The attacking BattleMech may be forced to modify its base to-hit number for current combat damage and heat build-up. Modifiers for these conditions are discussed in **BattleMech Critical Hits,** p. 24, and **Building Up Heat,** p. 32. The Heat Scale section of the record sheets summarizes the modifiers for the effects of heat build-up. Note that some BattleMechs are designed without certain arm actuators and do not suffer the +1 modifier if that actuator is destroyed.

Firing at Immobile Targets: If a BattleMech fires at an immobile target, such as a BattleMech that is shut down, add a –4 modifier to the to-hit number. Note that this modifier does not apply to attacks against active BattleMechs that are simply remaining stationary, nor does it apply to prone BattleMechs or 'Mechs with destroyed gyros or two destroyed hip actuators. Such BattleMechs are assumed to be moving within their hexes and must be fired on as standard targets.

Prone BattleMechs

Prone BattleMechs may still make weapons attacks. Because they are largely stationary, they often make excellent targets.

Firing When Down: A BattleMech that has fallen or dropped to the ground may fire some of its weapons as long as neither of its arms has been destroyed. The pilot uses one arm to support the BattleMech as it fires, and so the weapons on the supporting arm cannot fire. The pilot may fire all the weapons mounted on the other arm, and the BattleMech may fire any weapons mounted in its head or torso. A prone BattleMech may not fire its leg-mounted weapons. Add a +2 to-hit modifier for firing when down.

Attacking Prone Targets: A BattleMech that has fallen or is prone makes an easier target for an opponent in an adjacent hex, and a more difficult target at longer ranges. Apply a –2 modifier to the to-hit number of any physical or weapon attack made against a prone BattleMech from an adjacent hex. Add a +1 to-hit modifier for all other attacks made against a prone 'Mech.

Use the BattleMech Hit Location Table, p. 23, in the normal manner for determining the hit location. Note that the facing of a prone BattleMech is determined in **Facing After a Fall,** p. 15.

The only physical attacks that can be made against a prone BattleMech are kicking, charging, or death-from-above attacks. Determine the location of successful attacks of this type using the appropriate column of the BattleMech Hit Location Table. Note that hit location for death-from-above attacks against prone 'Mechs is determined using the Rear column of the table, regardless of the attack direction.

The 'Mech on the left, carrying a pilot with a Gunnery Skill of 4, declares it will fire its PPC at the 'Mech on the right. It is 2 hexes away (+2 minimum range modifier), with 2 hexes of heavy woods giving it cover (1 hex between the two 'Mechs and the hex the target occupies, a +4 terrain modifier). The attacker walked in this turn (+1 movement modifier), and the target jumped (+1 movement modifier) 4 hexes (+1 movement modifier). This makes the Modified To-Hit Number 13 (4 + 2 + 4 + 1 + 1 + 1 = 13), which means the shot will automatically miss. The attacking pilot prudently decides to abort the attack, avoiding the PPC's massive heat build-up.
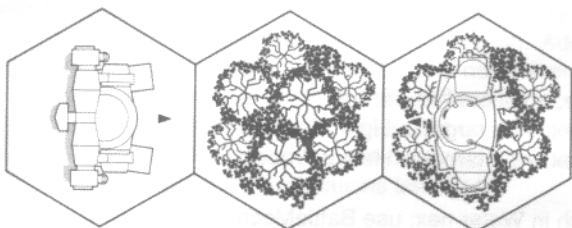
TO-HIT ROLL

For each attack, the player makes a to-hit roll by rolling 2D6. If the result is equal to or greater than the modified to-hit number, the attack succeeds.

Missile Hits

When a player launches a missile attack, the damage inflicted by a hit (a successful attack) depends on how many of the fired missiles actually reached the target.

To make a missile attack, the player calculates the modified to-hit number and makes the to-hit roll, just as for other weapons. On a successful attack, the player must also determine how many of the missiles hit the target by rolling 2D6 and consulting the Missile Hits Table.

First, find the number of missiles fired on the top row of the table. Cross-reference this number to the dice roll result in the left column. The result is the number of missiles that actually hit the target.

An Atlas fires its 20-pack long-range missile launcher and hits its target. The attack is successful, and the attacking player must now determine how many of the 20 missiles actually hit the target. He rolls 2D6 with a result of 8. He finds that number in the left-hand column of the Missile Hits Table, then reads across the row to the 20 missiles column, which shows that 12 of the missiles reached their target.

MISSILE HITS TABLE

Dice Roll (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

HIT LOCATION

When an attack hits its target, the firing player must determine precisely where the attack struck. Hit location is determined by the direction of the attack and the facing of the target.
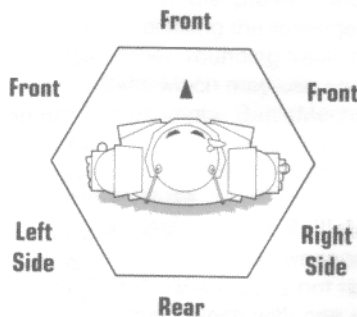
Attack Direction

When an attack hits a BattleMech, it hits from the front, rear, 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. Compare the hexside crossed by the straightedge to the diagram at right to find the side of the BattleMech 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 a BattleMech is hit, use the facing of a standing BattleMech's feet to determine its Front side, regardless of torso twist. If the target BattleMech is prone, use the hexside toward which its head is pointing as its facing.

Determining Hit Location

To determine the exact location of a hit, the attacker rolls 2D6 and consults the appropriate column of the BattleMech Hit Location table (p. 23).

In the case of missiles, treat each short-range missile (SRM) and every 5 long-range missiles (LRMs) as a separate attack for purposes of determining hit location. For LRMs, group the missiles that hit into clusters of 5; in other words, form as many 5-point groups as possible, assigning any remaining points to one smaller group, and determine a hit location for each cluster.

WEAPONS FIRE MODIFIERS TABLE

Attacker	Modifier
Movement	
Stationary	None
Walked	+1
Ran	+2
Jumped	+3
BattleMech Damage	
Sensor Hit	+2
Shoulder	+4 for weapons in arm
Arm Actuator (each)	+1 for weapons in arm
Heat	
8–12	+1
13–16	+2
17–23	+3
24+	+4
Prone	+2

Range and Terrain	
Range	
Short	None
Medium	+2
Long	+4
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 Location Table
	+1 to hit for BattleMech firing from Water hex
Depth 2	BattleMechs cannot fire into or out of Depth 2+ water

Target	
Partial Cover	+3 (use BattleMech Punch Location Table)
Prone	–2 from adjacent hex; +1 from all others
Secondary Target	+1
Immobile	–4
Movement	
Moved 0–2 hexes	0
Moved 3–4 hexes	+1
Moved 5–6 hexes	+2
Moved 7–9 hexes	+3
Moved 10+ hexes	+4
Jumped	+1

The Atlas from the previous example hits its target with an LRM 20 and inflicts 12 points of damage. The straightedge shows that the attack strikes the target's left side. Because the attack is an LRM attack, the damage is divided into 5-point groups. In this case, the attack hits in two groups of 5 points of damage, plus one group of 2 points of damage. The attacking player rolls to determine hit location for each of the three groups, with results of 8, 4 and 11. Consulting the column for left-side hits, he finds that the 5-point groups of damage hit the target's center torso and right arm. The remaining 2-point group strikes the target's left leg.

Aimed Shots

Using any weapons except missile launchers, players may make aimed shots against BattleMechs that are shut down or whose pilots are unconscious. When firing on an immobile BattleMech (see **Firing at Immobile Targets**, p. 20), the attacking player can make an aimed shot by naming a target location. The player makes the to-hit roll, using the standard –4 to-hit modifier for firing at an immobile target. If the attack succeeds, the player rolls again; on a result of 6, 7 or 8, his shot hits the designated location. For any other result, the player rolls normally on the BattleMech Hit Location Table.

BATTLEMECH HIT LOCATION TABLE

Dice Roll (2D6)	Left Side	Front/Rear	Right Side
2*	L. Torso (critical)	C. Torso (critical)	R. 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	C. Torso	Right Torso
8	C. Torso	Left Torso	C. 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

*A result of 2 may inflict a critical hit. Apply damage to the armor in that section in the normal manner, but the attacking player also rolls once on the Determining Critical Hits Table, p. 24.

If the attacker is taking an aimed shot at the target BattleMech's head, modify the to-hit number by +3 rather than the normal −4. If the shot hits, the player rolls 2D6. On a result of 8 or greater, the shot hits the head. For any other result, roll normally on the BattleMech Hit Location Table.

If the attacker misses an aimed shot but rolls the intended location on the BattleMech Hit Location Table, the effect is as if the aimed attack succeeded.

DAMAGE

Each successful attack does damage to the target. Every weapon does a specific amount of damage, which is given on the appropriate Weapons and Equipment Table, beginning on p. 45.

Each missile type does the same amount of damage at any range, but the number of missiles that hit determines how much damage a missile attack inflicts. 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 takes damage, the player of the targeted BattleMech finds the appropriate hit location on the record sheet's Armor Diagram, then checks off one box in that location for every point of damage taken. When all the armor boxes at that location have been checked off and the target takes additional damage to that location, the damage transfers to the internal structure of the BattleMech, and the player checks off the appropriate number of boxes on the Internal Structure Diagram. When a hit strikes an unarmored location, check off one box on the Internal Structure Diagram per point of damage taken. When all of the internal structure boxes in a given location have been checked off, that location has been

destroyed and all its functions are lost. Any weapons, equipment and heat sinks mounted there are totally destroyed.

Damage to torso locations is marked off the rear armor if the hit came from the rear. Damage to rear torso locations will transfer to the internal structure if all the rear armor in the location hit is gone, even if armor remains on the front. Likewise, damage to the front torso will affect the internal structure once the front armor is gone.

If a BattleMech's side torso has all of its internal structure destroyed, the corresponding arm is also blown off (see **BattleMech Critical Hit Effects**, p. 24). The corresponding leg is not damaged.

Transferring Damage

BattleMechs can survive the destruction of a single body section. If a section is destroyed and the same location takes another hit, or excess damage remains from the shot that destroyed the location, that damage transfers to (affects) the outer armor of the next most logical location. Excess ammunition-explosion damage is transferred directly to the internal structure of the next most logical location.

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

Damage Transfer Diagram

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.
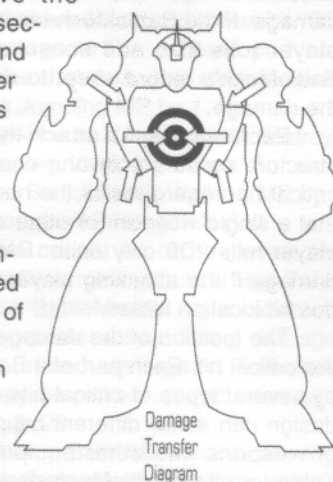
A Grasshopper's left arm is hit by an attack from a PPC (Damage Value 10), a large laser (Damage Value 8), and two 5-point groups of long-range missiles (Damage Value of 1 per missile hit or 5 points per group). Before this turn, the BattleMech still had its full Armor Value of 22 in that arm.

The cannon hit reduces the Armor Value by 10, so 10 boxes are filled in. The laser hit does 8 points of damage, and so 8 more boxes are filled in, leaving 4 boxes. The first cluster of missiles reduces the Armor Value by another 5 points. The Grasshopper's remaining armor has a Armor Value of 4 (4 boxes left), leaving 1 point of damage that the hit location cannot absorb.

The remaining 1, point of damage from the missiles transfers to the 'Mech's internal structure, and so 1 box is filled in on the Internal Structure Diagram, leaving only 10 boxes out of the original 11. The last group of missiles reduces the internal structure by another 5 points. Five more boxes are filled in on the Internal Structure Diagram, leaving 5. If the

Grasshopper's *left arm takes a hit from a weapon that inflicts 5 or more points of damage, it will be completely destroyed, and the 'Mech will lose all of the weapons and other equipment mounted in that arm.*

CRITICAL DAMAGE

Every time the internal structure of a BattleMech takes damage, either from a weapon attack, physical attack or an ammo explosion triggered by excess heat, an internal component may take critical damage.

To determine whether a BattleMech's internal structure takes critical damage from a successful attack, the attacking player rolls 2D6 and consults the Determining Critical Hits Table. On a result of 8 or higher, the target BattleMech takes critical damage. The higher the result, the more serious the damage. If the BattleMech takes critical damage, the defending player rolls 2D6 and consults the Critical Hit Table on the BattleMech's record sheet to determine the precise location of the damage.

Each successful attack that damages a 'Mech's internal structure creates only one chance for the attacker to inflict a critical hit, regardless of the number of internal structure boxes that a single weapon (or other attack) destroyed. The attacking player rolls 2D6 only once. BattleMechs may also take critical damage if the attacking player rolls certain results on the various hit location tables.

The location of the damage determines the exact nature of the critical hit. Each part of a BattleMech's body can be affected by several types of critical hits. Furthermore, every BattleMech design can suffer different critical hits, depending on the array of weapons and other equipment it carries. The Critical Hit Table for each BattleMech design appears on the record sheet for that design. A partially blank Critical Hit Table that can be customized for all BattleMechs is provided on all blank BattleMech Record Sheets.

DETERMINING CRITICAL HITS TABLE

Dice Roll (2D6)	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/Roll 3 Critical Hit Locations*

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

BattleMech Critical Hits

When an attacker inflicts a critical hit on a target, the defending player finds the damaged location on the Critical Hit Table on his BattleMech's record sheet, then rolls dice for each critical hit and marks off the damage inflicted on the Critical Hit Table.

Head or Leg Hits: If the critical hit is inflicted on the BattleMech's head or legs, roll 1D6, find the result on the Critical Hit Table and mark off the damaged location. If the critical location rolled cannot take a critical hit or has already been destroyed by a critical hit, roll the die again.

Torso or Arm Hits: If the critical hit strikes the torso or arms of the BattleMech, the player rolls both dice. The result of the first die identifies which set of slots takes the hit. On a result of 1, 2 or 3, the shot hits a location in the first set of six critical slots. On a result of 4, 5 or 6, the attack hits a location in the second set of six critical slots.

The result of the second die roll identifies the critical slot that takes the hit. If the critical location rolled cannot take a critical hit or has already been destroyed by a critical hit, roll both dice again.

An Atlas takes a critical hit to the left arm. The defending player rolls the first die with a result of 3. This means the critical hit will affect a location in the first half of the critical hit table for the left arm. The player rolls the second die with a result of 4, inflicting a critical hit on the 'Mech's hand actuator.

Each weapon and other piece of equipment fills at least one critical hit location on the Critical Hit Table. If the player rolls damage for a location for which there is no component, or a location that has already taken a critical hit, he rolls again. If all of the possible critical hit locations in the damaged area have already taken critical hits in previous phases, the critical hit transfers to the next location per the Damage Transfer Diagram. When the last possible critical hit location in an area is destroyed, subsequent critical hits to that area in the same phase will not transfer. Critical hits to that area in later phases, however, transfer normally. Center torso and head hits do not transfer.

Some weapons and other equipment take up multiple locations on the Critical Hit Table. A single critical hit disables any weapon or piece of equipment except the engine, gyro and sensors. Critical hits on additional locations that a weapon occupies only increase the difficulty of repairing the damaged equipment.

BattleMech Critical Hit Effects

Each type of critical hit affects a 'Mech's performance in a specific way, as described below. The critical hit locations are arranged alphabetically; the area of the 'Mech containing each location (head, leg, torso, arm and weapons) is noted in parentheses.

Ammunition: If a critical hit destroys a location carrying ammunition, the ammo explodes. The MechWarrior automatically takes 2 Damage Points through his neurohelmet from feedback. The BattleMech takes damage to its internal structure.

When one ammo slot in a specific location explodes, all of the ammo in that location explodes. Calculate the total Damage Value of all ammo carried in that location and apply that total to the Internal Structure Diagram. Any excess damage transfers to the internal structure of the next location.

A critical hit to an ammo location only explodes the ammo in that location. It explodes with a force equal to the ammo's Damage Value multiplied by the shots remaining. Missile ammo explodes with a force equal to the number of missiles remaining

multiplied by their Damage Value. For example, 1 full ton of machine gun ammo explodes with a force of 400 points of damage (2 x 200), while 1 full ton of SRM 2 ammo explodes with a force of 200 points of damage (2 x 2 x 50).

Arm Actuator (Arm): This critical hit destroys the actuator in the BattleMech's upper or lower arm. Add a +1 modifier to the to-hit numbers 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, modify the to-hit numbers for weapons fire by +2 and punches by +4.

Arm Blown Off (Arm): This critical hit occurs when the player rolls a result of 12 on the Determining Critical Hits Table if the location hit is an arm. It blows off the arm, destroying all weapons mounted there. The arm may be picked up and used as a club per the rules for **Clubbing**, p. 28.

Cockpit (Head): A critical hit to the cockpit destroys that location, kills the MechWarrior and puts the BattleMech out of commission for the game.

Engine (Torso): BattleMech engines have 3 points of shielding. Each critical hit to the engine location destroys 1 point of shielding. As points of shielding are destroyed, the amount of heat escaping from the BattleMech's fusion drive increases.

The first hit increases the 'Mech's heat build-up by 5 points per turn. The second hit results in 10 (total) points of added heat build-up per turn, and the third critical hit to this location shuts down the engine and puts the BattleMech out of commission for the rest of the game.

Gyro (Torso): The gyro is a BattleMech's most sensitive piece of machinery. It keeps the BattleMech upright and able to move. The gyro can survive only 1 critical hit; a second critical hit destroys it. Record these hits by marking off the gyro locations on the Critical Hit Table.

After the first critical hit to the gyro, the player must make a Piloting Skill Roll every time the damaged BattleMech runs or jumps, modifying the MechWarrior's Piloting Skill by +3. Make this roll at the end of each such move.

When a BattleMech's gyro is destroyed, the 'Mech automatically falls and cannot stand up again. BattleMechs with a destroyed gyro may make weapons attacks per **Firing When Down**, p. 20, and may change their facing by one hexside per turn provided they have at least 1 MP available.

Hand Actuator (Arm): A critical hit to the hand actuator destroys the muscles controlling the BattleMech's wrist and hand. Add a +1 to-hit modifier to all punches made with this arm. This effect is cumulative with the effects of destroyed arm actuators.

Head Blown Off (Head): A hit blows off a BattleMech's head when the hit location is the head and the player rolls a result of 12 on the Determining Critical Hits Table. This critical hit destroys the BattleMech's head section, kills the MechWarrior and puts the BattleMech out of commission for the rest of the game.

Heat Sinks: One critical hit to a heat sink destroys the heat sink and reduces the BattleMech's ability to dissipate heat. For example, if a BattleMech is designed to dissipate 16 points of heat per turn and 3 of its heat sinks have been destroyed, it can only dissipate 13 points of heat per turn.

Hip (Leg): A hip critical hit freezes the affected leg in a straight position. After a hip critical hit, the BattleMech's Walking MP is cut in half (rounding up), ignoring any movement modifiers from previous critical hits on that leg. Add a +2 modifier to any subsequent Piloting Skill Rolls required, and make a Piloting Skill Roll every turn that the damaged BattleMech runs. The 'Mech cannot make kicking attacks.

A critical hit to the second hip reduces the BattleMech's Movement Points to 0 and adds another +2 modifier to its Piloting Skill Roll target number.

Jump Jet Exhaust Port (Leg/Torso): When a jump jet exhaust port takes a critical hit, that jump jet can no longer deliver thrust. This decreases the distance the BattleMech can jump. The jump jet itself is not damaged; the designers provided protection from weapons fire for this equipment so as to prevent the devastating explosion that would occur if it was 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 BattleMech's Jumping MP by 1.

Leg Actuator (Leg): A critical hit to a leg actuator destroys the muscle (actuator) in the upper leg, lower leg or foot. For each leg actuator damaged, reduce the BattleMech's Walking MP by 1 and add a +1 modifier to any subsequent Piloting Skill Roll.

Leg Blown Off (Leg): This critical hit occurs when the player rolls a result of 12 on the Determining Critical Hits Table if the location hit is a leg. When a BattleMech's leg is blown off, the 'Mech automatically falls and takes normal falling damage, though it might be able to stand up again. See **Leg Destruction**, below. The leg may be picked up and used as a club, per the rules for **Clubbing**, p. 28.

Leg Destruction (Leg): When a BattleMech loses 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 attempt to stand on its remaining leg, but the pilot must add a +5 modifier to the Piloting Skill Roll plus any modifiers for other damage. If the BattleMech manages to stand, it has a Walking MP of 1. To account for the missing leg, add +5 to any Piloting Skill Roll made thereafter. The BattleMech may still jump (minus the power of the jump jets on the missing leg), but the pilot must make a Piloting Skill Roll each time the 'Mech lands.

Life Support (Head): A BattleMech's life-support system protects its pilot from the machine's internal heat and keeps him alive on airless worlds and in hostile environments. In **BattleTech**, the life-support system's main function is to protect the pilot from the heat generated by the 'Mech's fusion reactor, movement, and weapons systems.

Any critical hit knocks this system out permanently and leaves the pilot vulnerable to increased heat. The MechWarrior takes 1 point of damage every turn that the BattleMech's internal heat ranges from 15–25, and 2 points of damage for every turn that its internal heat is above 25 on the Heat Scale.

Sensors (Head): When a BattleMech takes a critical hit to the sensors, add a +2 modifier to the to-hit number every time the 'Mech fires its weapons. A second sensor hit makes it impossible for the BattleMech to fire any of its weapons.

Shoulder (Arm): A critical hit to this location freezes the shoulder joint. The 'Mech may not punch with that arm. Add a +4 modifier to the to-hit number for all attacks made with

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BATTLEMECH PUNCH LOCATION TABLE

Die Roll Result (1D6)	Left Side
1	Left Torso
2	Left Torso
3	Center Torso
4	Left Arm
5	Left Arm
6	Head

Front/Rear	Right Side
Left Arm	Right Torso
Left Torso	Right Torso
Center Torso	Center Torso
Right Torso	Right Arm
Right Arm	Right Arm
Head	Head

weapons mounted on that arm. After a shoulder critical hit, ignore all other weapons fire modifiers from arm critical hits; the total to-hit modifier for weapons and actions involving the damaged shoulder is +4.

Weapons: Most weapons systems are surprisingly delicate, and so a single critical hit destroys a weapon. Though some weapons systems occupy more than one location on the Critical Hit Table, the first critical hit destroys the weapon. Additional critical hits to a multi-location weapon have no further effect, other than to make the equipment more difficult to repair. For example, a particle projector cannon mounted on a BattleMech's arm fills 3 critical slots. However, the cannon is destroyed as soon as one of its three critical locations takes a hit.

DESTROYING A BATTLEMECH

Under the specific conditions described below, a BattleMech must be considered *destroyed*. Note that a destroyed BattleMech might not be actually physically destroyed. It simply is rendered tactically useless and referred to as a "mission kill." Such BattleMechs are out of the game but may be repaired later.

A BattleMech is considered destroyed and out of the game if its MechWarrior dies or the BattleMech suffers 3 engine hits. The destruction of the head, cockpit or center torso also renders a BattleMech destroyed.

AMMUNITION EXPENDITURES

BattleMechs carry a limited amount of ammunition for missile launchers, machine guns, autocannons and other ballistic and missile weapons. The record sheet for each BattleMech indicates the available ammo bins and number of shots for each weapon on the Critical Hit Table. The player should keep a tally on the Critical Hit Table, making a hatch mark next to the appropriate ammo bin every time he fires the corresponding weapon. When the number of marks equals the amount of ammo carried in that location, that bin is empty. If no other bins in the BattleMech carry that type of ammo, the weapon is out of ammunition and cannot be fired for the rest of the game.

PHYSICAL ATTACKS

BattleMechs can make six different types of physical attacks: punching, clubbing, pushing, kicking, charging and death-from-above. To make a physical attack, the BattleMech must be adjacent to its target and the target must be within the attacker's forward firing arc (see **Punching, Charging,** and **Death From Above** for exceptions).

Each type of physical attack has a unique base to-hit number, modified by terrain, movement of both the attacking BattleMech and its target, and the attacker's current critical damage to its arms and/or legs. The damage location for physical attacks is determined using specific hit location tables but is recorded in the same way as damage from weapons fire. In many cases, the player calculates damage from physical attacks by dividing the tonnage of the attacking BattleMech by a given number, rounding fractions up.

A BattleMech may use only one form of physical attack per turn. For example, BattleMechs may not punch and kick in the same turn.

PUNCHING

In a single turn, a BattleMech can either deliver a punch using its arm or fire the weapons on that arm, but it may not do both. A BattleMech does not need hands (or hand actuators) to punch. It may punch with one or both arms. Weapons mounted in the torso, legs or head may be fired in the same turn as a punching attack is made without affecting the punch.

A BattleMech cannot make a punching attack using a shoulder that has suffered critical damage, and any arm actuator damage on the punching arm makes success more difficult. If the target is in the forward arc, then both arms may be used in the punching attack. If the target is not in the front arc but is in the right or left-arm arc, then only the right or left arm, respectively, may punch.

The base to-hit number for a punch is 4, modified by movement and terrain just as for 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 not equipped with a hand on the punching arm must add the +1 modifier for not having a hand. Likewise, BattleMechs that do not come equipped with a lower arm actuator on the punching arm must add a +2 modifier to the to-hit number.

The player makes a separate to-hit roll for each arm making a punching attack. The punch from each arm has a Damage Value of 1 for every 10 tons (or fraction of 10 tons) that the attacker weighs. Reduce the damage by half for each arm actuator damaged or not present, with these effects being cumulative.

For example, if both arm actuators are missing, reduce the damage to one-quarter of its original value (fractions rounded down). Determine the damage location for BattleMech targets by rolling 1D6 and consulting the BattleMech Punch Location Table.

A Grasshopper with a damaged upper arm actuator punches a Catapult on the right side with one fist. Because the Grasshopper is damaged, the player adds a to-hit modifier of +2 and reduces the normal damage by half. The modified to-hit number is a 6 (4 + 2); the player rolls an 8 and hits the target. The Grasshopper weighs 70 tons, and so its punch has a normal Damage Value of 7 (70 divided by 10), but this is reduced to 3 because of the damaged actuator. The attacking player rolls a 3, which means the attack hits the target's center torso. The player with the Catapult records 3 points of damage by crossing 3 boxes off the Armor Diagram on his record sheet.

CLUBBING

Whenever an attack blows a leg or arm off a BattleMech, the limb remains lying in the hex where the BattleMech took the damage. The BattleMech that lost the limb, and other BattleMechs that later occupy that hex, may 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 wooded hex, it may uproot a tree and use it as a club. Uprooted trees may be used for only 1 successful club attack.

To attack another BattleMech with a club, all the BattleMech's shoulders and hand actuators must be in working order and no arm-mounted weapons can have been fired in that same turn, though weapons mounted in the torso, legs and head may be fired. The target must be in the attacker's forward firing arc.

The BattleMech attacking with the club makes a two-handed swing using a Base To-Hit Number of 4 modified by the normal to-hit modifiers for terrain and movement. If any of the BattleMech's upper or lower arm actuators have been destroyed or are not present, add a modifier of +2 per missing arm actuator. A BattleMech attacking with a club does 1 point of damage for every 5 tons that the BattleMech weighs. Roll normally on the BattleMech Hit Location Table.

Hatchets

Some BattleMechs come equipped with hatchets. Like other weapons, hatchets have weight and take up one or more locations on the Arm section of the Critical Hit Table. To use the hatchet, a BattleMech must have a functioning hand actuator in the arm in which the hatchet is mounted.

A BattleMech uses a hatchet to make physical attacks per the standard clubbing attack rules but need use only one arm for the attack, rather than two. This means the target can be in the arm firing arc corresponding to the arm in which the hatchet is mounted.

Though a BattleMech may mount two hatchets, one in each arm, the pilot can make only one hatchet attack per turn. The pilot may fire weapons mounted on the arm not carrying the attacking hatchet in the Weapon Attack Phase.

Hits on a hatchet critical location represent damage to the shaft of the weapon. If a hatchet critical location takes a hit, the weapon no longer functions.

PUSHING

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

The base to-hit number for a push is 4, modified as usual for movement and 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 successful Piloting Skill Roll or fall.
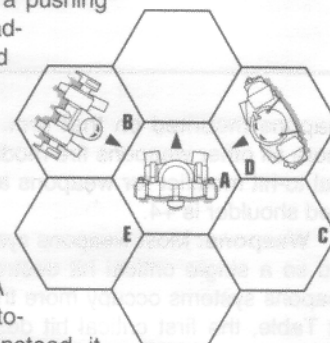
If the BattleMech in Hex B of the above diagram successfully pushes the JagerMech in Hex A, the JagerMech moves into Hex C. If the 'Mech in Hex D successfully pushes the JagerMech, the JagerMech is forced into Hex E. In either case, the pilot of the JagerMech must make a Piloting Skill Roll to remain standing, and the 'Mech's attacker advances into Hex A.

KICKING

A BattleMech may only make a kicking attack with one leg per turn. No weapons mounted on that leg can fire in the turn in which the 'Mech kicks. To make a kicking attack, both of the attacking 'Mech's hips must be undamaged and the BattleMech's target must be in one of the 3 forward-arc hexes.

A player who declares that his BattleMech will make a kicking attack uses a Base To-Hit Number of 3, modified as usual by movement and terrain. Kicks have a Damage Value of 1 point for every 5 tons of the attacking BattleMech's weight. For example, a *Grasshopper*'s kick would inflict 14 Damage Points. Reduce this damage by half for each leg actuator damaged (on either leg), with these effects being cumulative. For example, if two leg actuators are missing, reduce the damage to one-quarter its original value, rounding fractions down. Determine the location of the damage by rolling 1D6 and consulting the BattleMech Kick Location Table.

A BattleMech that has been successfully kicked must make a Piloting Skill Roll. If the attacking BattleMech misses its kick, it must make a Piloting Skill Roll.

When making kicking attacks, use all standard to-hit modifiers, including –2 for attacks against prone BattleMechs from adjacent hexes if applicable. To determine the location of kicking damage to a prone BattleMech, use the BattleMech Hit Location Table (rather than the BattleMech Kick Location Table), using the hexside from which the kick originates as the attack direction.

BATTLEMECH KICK LOCATION TABLE

Die Roll Result	Left Side	Front/Rear	Right Side
1–3	Left Leg	Right Leg	Right Leg
4–6	Left Leg	Left Leg	Right Leg

CHARGING

For a BattleMech to charge, it may not have moved backward in the Movement Phase of the turn. The target must be in the hex directly in front of the charging BattleMech at the beginning of the Physical Attack Phase; in other words, the charging BattleMech must be able to enter the target BattleMech's hex without turning. The charging BattleMech may not make any weapons attacks in the same turn.

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

The charging BattleMech must spend Movement Points to enter the target hex, whether or not the charge is successful. If a BattleMech does not have enough Movement Points left over from its Movement Phase to enter the target hex, it may not make a charging attack. Additionally, if the target occupies terrain that the attacking BattleMech is restricted from entering, the BattleMech may not charge.

The base to-hit number for a charge is 5, modified as usual for both the attacker's and defender's movement. Whenever one BattleMech charges another, compare the MechWarriors' Piloting Skills and use the difference between the two skill levels as a Piloting Skill modifier to the to-hit roll. If the defending MechWarrior's skill level is lower, add the modifier to the to-hit number. If the attacker's Piloting Skill level is lower, subtract the modifier from the to-hit number.

A Commando with a Piloting Skill level of 4 is charging an Atlas with a Piloting Skill level of 5. The attacking MechWarrior's skill level is lower, so the difference between the two is subtracted from the to-hit number, providing a –1 to-hit modifier. If the skill levels of the pilots were reversed, the attack would suffer a +1 to-hit modifier.

Damage

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

Group the damage resulting from charging attacks into 5-point clusters. The attacking player rolls once on the appropriate hit location table for each cluster.

If the attacker is charging a prone BattleMech, the defender takes damage on the appropriate column of the BattleMech Hit Location Table, but the damage to the attacker is taken on the BattleMech Kick Location Table.

A Grasshopper moves 4 hexes and declares a charging attack against another BattleMech. If the charging attack is successful, the defender takes 28 points of damage (7 for the Grasshopper's tonnage multiplied by 4 for the number of hexes it moved).

Location After Attack

If the charging attack succeeds, the defending BattleMech is forced to move just as if it had been pushed, and the attacker advances into the defender's hex. If the attacker misses the target, the attacking player places the attacking BattleMech in the right or left hex of its forward arc.

Falls

After any successful charging attack, both the attacking and defending BattleMechs must make Piloting Skill Rolls modified by +2. A failed Piloting Skill Roll means that the BattleMech falls in the hex it currently occupies and takes additional damage from the fall.

DEATH FROM ABOVE

BattleMechs can jump directly onto a target, resulting in a physical attack that is damaging to both the attacking BattleMech and its target. In effect, the BattleMech crashes into the target from 2 elevation levels above the target BattleMech, using its feet and weight to inflict damage to the target's upper torso, arms and head. The jumping BattleMech risks taking damage to its legs, which are not designed for the enormous stress created by this attack. Finally, both BattleMechs will almost certainly fall.

This type of attack may actually cause less damage than a standard charging attack, but the damage is concentrated on the upper part of the target BattleMech. In fact, this attack has a 1 in 6 chance for a head hit, which is very high.

A BattleMech making a death rom above attack is immune to physical attacks, but it may be the target of weapons attacks. See **Weapon Attack Phase**, below.

A BattleMech may be the target of only one death-from-above attack per turn.

Weapon Attack Phase

BattleMechs make the death-from-above attack after the Weapon Attack Phase of the turn. For purposes of firing on the attacking BattleMech, during the Weapon Attack Phase the attacking BattleMech is considered to be adjacent to the target hex along the path that the attacking BattleMech will travel during the jump, and facing the target hex. It can be fired on as normal during the Weapon Attack Phase. The jumping BattleMech does not receive the benefit of any terrain modifiers
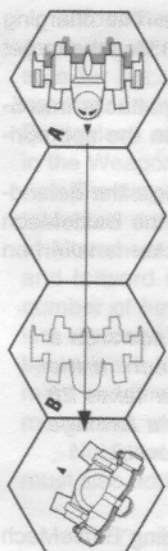
when being shot at and every other BattleMech on the board has LOS to the attacking BattleMech. The jumping BattleMech cannot make any weapon attacks during this turn.

In the diagram at left, a BattleMech is making a death-from-above attack from Hex A. The attacking 'Mech's path during the jump is as shown in the illustration. During the Weapon Attack Phase, the 'Mech is considered to be in Hex B. The target 'Mech may fire against the attacking BattleMech's Front side with any weapons that it can bring to bear at a range of 1.

If an attacking BattleMech takes damage during the Weapon Attack Phase that forces the pilot to make a Piloting Skill Roll, the player should roll as normal. A failed roll means that the attack automatically misses. Resolve the attacker's fall and ending location per the **Location After Attack** rules, p. 31.

A BattleMech does not count as stacked in a hex while executing a death-from-above attack until it completes its attack. As soon as it lands, normal stacking limits apply (see **Stacking**, p.13).

Base To-Hit Number

The base to-hit number for a death-from-above attack is 5, modified for the jumping movement of the attacker and the normal movement of the target, but not for terrain.

If the attack succeeds, both BattleMechs take damage as determined below. If the attack misses, the jumping BattleMech crashes to the ground and takes damage (see **Damage to Attacker**, p. 31).

Damage to Target

To determine damage to the target from a death-from-above attack, divide the weight of the attacking BattleMech by 10 and multiply the result by 3. For example, a *Spider* with a weight of 30 tons inflicts 9 points of damage to the upper part of the target.

Distribute this damage 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 attacking BattleMech's starting hex, then determine the hit location of each cluster by rolling 1D6 and consulting the BattleMech Punch Location Table, p. 27. Record damage as usual.

Prone BattleMech targets take damage to their Rear sides, using the normal BattleMech Hit Location Table.

Damage to Attacker

The attacker takes damage from a successful attack on its legs as though the attacker had fallen 1 elevation level. To determine the amount of damage, divide the attacker's weight by 10, rounding up. Divide the result into 5-point clusters, then roll 1D6 for each cluster and consult the Front column of the BattleMech Kick Location Table to find the location hit.

Location after Attack

At the end of a death-from-above attack, the attacker lands in the target's hex. If the death-from-above attack succeeds, the target is pushed 1 hex in the direction opposite the attack. If the attack fails, the target chooses an adjacent hex and moves to it, even if immobile or prone. This motion might result in **Accidental Falls from Above** or a **Domino Effect,** p. 31.

DIFFERENT ELEVATIONS TABLE

Target is:	Allowed Physical Attack
1 level higher	Charging, Punching (use Kick Table), or Clubbing (use Kick Table)
1 level lower	Charging, Kicking (use Punch Table), or Clubbing (use Punch Table)

Note: A death-from-above attack can always be made if the BattleMech has the necessary Jumping MP.

Falls

A successful death-from-above attack may cause both BattleMechs to fall. Both MechWarriors must make Piloting Skill Rolls, the target adding a +2 modifier and the attacker adding a +4 modifier. If either BattleMech fails this roll, the BattleMech takes damage as from a 0-level fall.

On an unsuccessful attack, the attacker automatically falls, taking damage as though the 'Mech had fallen 2 elevation levels. To determine the amount of damage, divide the attacker's weight by 10 and multiply the result by 3. Divide the total damage into 5-point clusters, then roll 2D6 for each cluster and determine hit locations as though the BattleMech had landed on its back.

DIFFERENT ELEVATIONS

The rules for punching, clubbing, kicking and charging attacks assume that the opposing BattleMechs are at the same elevation.

A BattleMech may make a physical attack against another BattleMech only if both 'Mechs are within 1 elevation level of one another. The Different Elevations Table shows which types of physical attacks can be made in various situations. Note that players must use different hit location tables to determine the location of damage from punching, clubbing, or kicking attacks against an opponent on various levels.

ACCIDENTAL FALLS FROM ABOVE

A BattleMech that falls unintentionally takes and inflicts damage according to the following rules. When a BattleMech accidentally falls 2 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 1 level or less into a hex occupied by another BattleMech, treat it as if resulting in a **Domino Effect**, below.

A BattleMech may not intentionally "accidentally" fall from above for any reason.

Falling BattleMech Hits Target

If the to-hit roll succeeds, treat the accidental fall as a successful death-from-above attack, except that the falling 'Mech takes damage to its upper body.

Determine the amount of damage inflicted on the target BattleMech by dividing the weight of the falling BattleMech by 10. Divide the damage into 5-point clusters, then roll 1D6 for each cluster and consult the BattleMech Punch Location Table. Determine damage to the falling ("attacking") BattleMech as normal for a fall, with the BattleMech falling on its Rear side. (Once it has fallen, a BattleMech that fell accidentally is assumed to be prone on its Front, as with all other prone BattleMechs.)

Falling BattleMech Misses Target

If the to-hit roll fails, the falling BattleMech lands in an adjacent hex, as close to the hex that it fell from as possible, and takes the standard damage from falling. No other BattleMechs take damage.

DOMINO EFFECT

If a BattleMech accidentally falls 1 level or less or is forced into a hex occupied by another BattleMech, the second BattleMech is normally forced out of the hex in the direction of the push. The second BattleMech can avoid this by moving out of the hex, as long as it is neither facing the first BattleMech nor facing directly away from it.

The pilots of both BattleMechs must make a Piloting Skill Roll to avoid falling. When the domino-effect push originates from one of a BattleMech's four side hexes, however, the BattleMech can avoid the domino effect by moving 1 hex directly forward or back, if it has sufficient MP remaining from the Movement Phase, if it is both mobile and standing and if the player made a successful Piloting Skill Roll for that BattleMech. If the Piloting Skill Roll fails, the BattleMech falls and misses this chance to step out of the way.

The domino effect continues as long as BattleMechs remain in hexes adjacent to one another in the direction of the effect, and none of them manage to step out of the way.

In the diagram on the next page, the BattleMech in Hex A has fallen 1 level into Hex B. The BattleMech standing in Hex B will be forced into Hex C and must make a Piloting Skill Roll to avoid falling. The BattleMech in Hex C, however, can try to avoid the domino effect by moving. First, the player must make a Piloting Skill Roll. If the roll fails, the 'Mech falls into Hex D, and if another 'Mech occupied that hex, the domino effect continues. However, if the roll succeeds and the 'Mech has at least 1 MP left from the previous Movement Phase, it may move one hex directly backward, into Hex E, ending the domino effect. If the BattleMech had 3 or more MP left, it could choose to move forward into the heavy woods in Hex F.

HEAT POINT TABLE

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	Per Weapons and Equipment Table, p. 45
Heat Sink	−1 per operational heat sink
	−1 additional per heat sink under water (6 HP maximum)
First Engine Hit	+5 per turn
Second Engine Hit	+10 (total) per turn

HEAT

One of the most severe problems facing any BattleMech in combat is internal heat build-up. Though every BattleMech can dissipate heat through its heat sinks or by standing in water, the BattleMech builds up heat whenever it moves or fires its weapons.

Even when using both dissipation methods to cool its systems, a high rate of activity commonly produces more heat than a BattleMech can dissipate. It is possible for a BattleMech to overheat and continue to function, but a pilot who pushes his BattleMech past its limits eventually must pay the price. As a BattleMech's internal heat increases, it moves more slowly and its weapons fire becomes less accurate. If its internal heat reaches a certain level, the ammunition that it carries may explode. The BattleMech's fusion reactor may even shut down, causing the BattleMech to become inactive and immobile until the heat drops below a certain point.

HEAT POINTS

Players track the internal heat of a BattleMech by the number of Heat Points (HP) it builds up. The greater the number of Heat Points, the greater the internal heat. The player keeps track of his BattleMech's Heat Points using the column of boxes on its record sheet labeled Heat Scale. The Heat Scale records heat levels from 0 to 30 Heat Points. As the BattleMech's internal heat reaches various levels on the Heat Scale, the BattleMech suffers 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 an activity against the heat it will add to his BattleMech. The Heat Point Table indicates the number of Heat Points generated by various activities and damage. It also shows the number of Heat Points that a BattleMech can dissipate through its heat sinks and by standing in a Water hex.

Note that jumping generates more heat than walking or running, even if the BattleMech moves only 1 hex, because firing the jump jets adds a minimum of 3 Heat Points. The Heat Point 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 generate. To determine the number of Heat Points generated by jumping, count the hexes moved. If the 'Mech jumps 3 or fewer hexes, the Heat Point cost is 3 points. If the number of hexes moved is 4 or more, the Heat Points generated equals the number of hexes jumped.

A MechWarrior may actually wish to build up heat in some situations. Building up heat is most easily accomplished by shutting off as many heat sinks as desired during the End Phase of any turn; heat sinks shut off this way dissipate no heat, and they may only be switched back on during a subsequent End Phase.

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 dissipated by his BattleMech's heat sinks and any additional dissipation if his BattleMech occupies a Water hex. The result may be positive or negative. Add this number to the current level of heat shown on the Heat Scale on the BattleMech's record sheet. If the number is negative, adjust the Heat Scale downward; if the result is positive, adjust the Heat Scale upward. The level of heat shown on the Heat Scale cannot drop below 0 or rise above 30.

We suggest that players mark the Heat Scale with a pencil, because the heat will rise and fall many times during the game.

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	

EFFECTS OF HEAT

The effects of excessive heat cause the BattleMech to function less efficiently. It will move more slowly, fire less accurately and possibly shut down or even explode. Some of these effects are permanent, but others are negated when the 'Mech cools.

The BattleMech suffers the effects listed below after the heat for the turn has been adjusted as described in **Recording Heat Build-Up**.

Movement Effects

When the 'Mech's Heat Points reach 5, 10, 15, 20 and 25, subtract the number indicated from the BattleMech's Walking MP. For example, at 5 Heat Points, subtract 1 from the BattleMech's Walking MP as long as the heat is at or above 5. Remember that a 'Mech's Running MP equal its current Walking MP multiplied by 1.5; if the Walking MP are reduced, the BattleMech's Running MP must also be recalculated, rounding fractions 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 MP are reduced by 1. When the build-up reaches 10 on the Heat Scale, its Walking MP are reduced by 2 total, not 2 more.

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 2D6. If the result is equal to or greater than the Avoid number (4+, 6+, and so on), the pilot avoids shutdown until the heat rises to that level again. If the heat rises to another trigger level or falls and rises to the same trigger level, the player must roll 2D6 to avoid the effect again. If heat accumulation reaches 2 trigger levels in one turn, roll 2D6 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 continue to dissipate the excess heat. For every turn that the overheated 'Mech remains motionless, the heat level drops, and the player may attempt to restart the reactor during each Heat Phase. To do this, the player rolls 2D6. If the result is equal to or greater than the highest current Avoid number, he can restart the reactor. A BattleMech may move and fire in the turn following the turn in which the reactor was restarted. 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 becomes an excelent target for aimed shots (p. 22).

Ammunition Effects

If the heat level reaches or exceeds an Ammo Explosion threshold of 19, 23 and 28 Heat Points, the ammunition carried in the BattleMech might explode. The explosion may be avoided by pure luck, as indicated by the Avoid number. To see if the 'Mech avoids an explosion when the heat level reaches an Ammo Explosion threshold, the player rolls 2D6. If the result is equal to or greater than the indicated Avoid number, the ammo remains intact.

When a BattleMech's ammo explodes due to overheating, the ammunition with the most destructive ammo rack explodes first. The Damage Value of 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 Damage Value of 2, an AC/10 has a

When the heat build-up is reduced below the point at which the effect occurs, the BattleMech regains 1 Walking MP, though previous losses remain in force. Thus, if the heat falls 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.

A BattleMech's Jumping MP are not affected by the reduction in Walking MP due to heat build-up.

Weapon Attack Effects

When the 'Mech's Heat Points reach 8, 13, 17 and 24 , add the number indicated to the BattleMech's base to-hit number for weapons attacks. 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 negated 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.

Damage Value of 10, an LRM-15 has a Damage Value of 15, and an SRM-6 has a Damage Value of 12. When the 'Mech carries two racks with equivalent Damage Values, the BattleMech's pilot chooses which ammo explodes. All of the appropriate ammo type in a single critical hit location explodes. If more than one critical hit location contains the appropriate ammo type, the location with the most shots remaining explodes. If two or more locations with an equal number of remaining shots exist, randomly determine which location explodes.

Ammunition explodes with a force equal to the ammo's Damage Value multiplied by the shots remaining. Missile ammo explodes with a force equal to the number of missiles remaining multiplied by 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 damage from exploding ammo strikes the internal structure. Excess damage is transferred to the internal structure of the next section per the Damage Transfer Diagram.

An ammo explosion always causes 2 points of damage to the MechWarrior from feedback through his neurohelmet.

MechWarrior Effects

If the life-support systems suffer a critical hit, the MechWarrior suffers 1 point of damage for every turn that the BattleMech's internal heat reaches 15 or more. For every turn that the heat rises higher than 25, the MechWarrior suffers 2 points of damage.

A Catapult begins a turn with a Heat Scale reading of 4. During the turn, it fires two LRM 15s and three medium lasers, and also walks (generating a total of 20 Heat Points). The BattleMech still has 15 heat sinks working. They dissipate 15 of the 20 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 must reduce its Walking MP by 1 and add +1 to its to-hit number for weapons attacks.

If the BattleMech repeats these actions in the next turn, the player must add 5 more Heat Points to the Heat Scale, bringing the total to 14. The player must roll a 4 or higher on 2D6 to avoid having his BattleMech's fusion reactor shut down. Even if he avoids the shutdown, he must reduce the Catapult's Walking MP by 1 more, for a total of 2, until its heat falls below 10 on the Heat Scale. At the same time, the 'Mech fires its weapons with a +2 to-hit modifier.
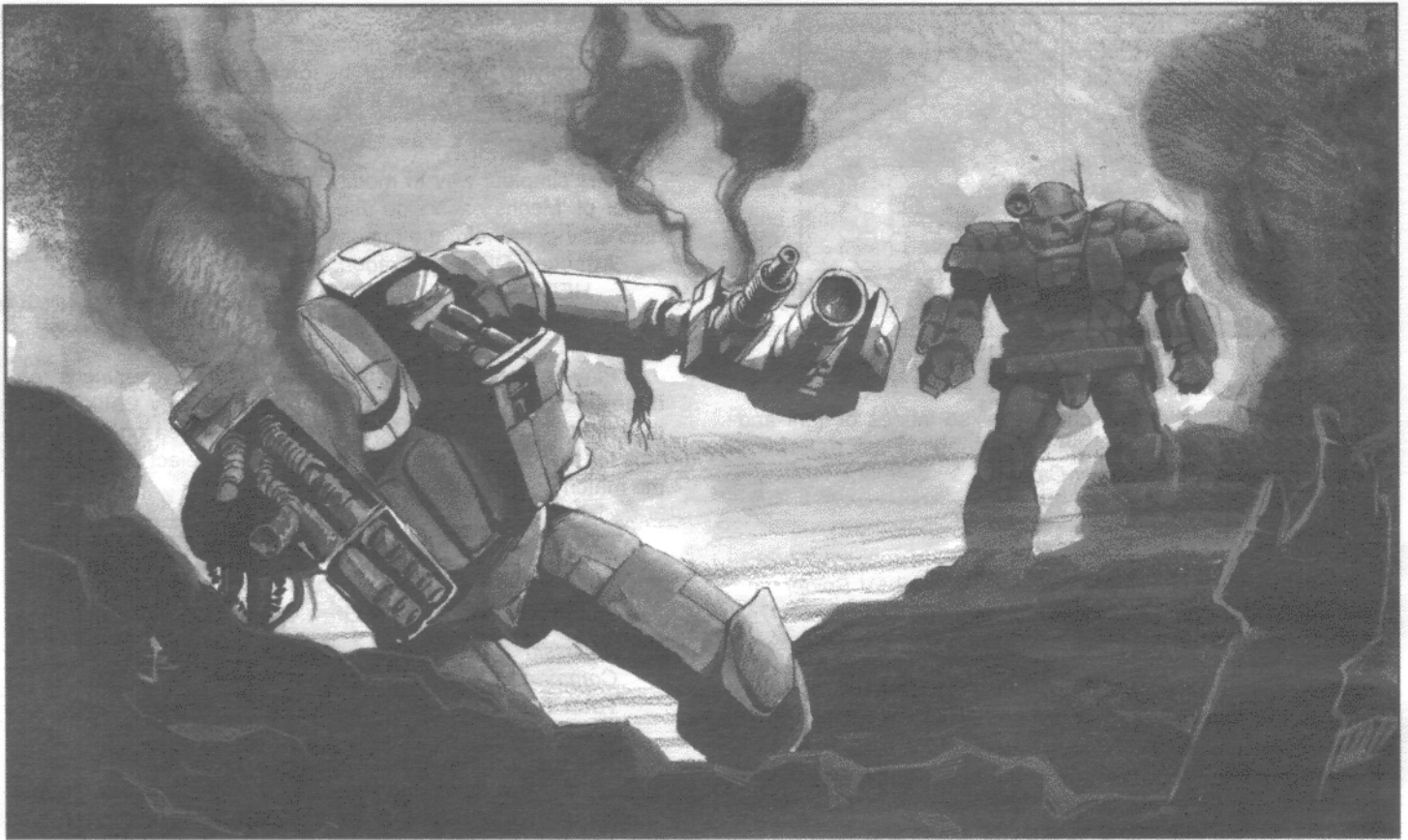
SCENARIOS

This section provides three ready-to-play game situations, called *scenarios*. Each one describes the mapsheets used for the scenario, the forces each side or player uses, as well as the victory conditions and any special rules for the scenario.

New players should start with the **Training Scenario** found in the **Introduction to BattleTech** book. After playing with the Quick-Start rules a few times, try playing the **Training Scenario** with the complete rules in this book. Then go on to the following three scenarios. Each one is longer and more complex than the previous scenario, so play them in the order they appear.

The three scenarios in this section illustrate the variety of missions you can play using the **BattleTech** game system. After you have played them, creating your own scenarios should be easy. To help you get started, each scenario includes ideas for modifying it to create new scenarios.

SCENARIO 1: FINAL EXAM

"Button up, lock down and stand by."

After three months of daily exercises, the initialization procedure has become second nature, almost tedious—until today, that is.

"We have drop clearance. Deploy at my mark."

This time the pressure is really on: two students enter the electronic arena as lance commanders, each leading a group of three junior students into simulated battle. And only one of those lance commanders will be going to the military academy battle school.

"Three, two, one, GO!"

As the virtual reality of the simulator comes into view, the 'Mechs open fire....

SITUATION

When an Inner Sphere training officer feels that his students are ready, he tests their combat and leadership skills with a "final exam." Before starting the simulated battle, he sits down with both students and gravely tells them that the military academy can only accept one cadet, and the winner of the test will be that cadet. Unfortunately, the loser will simply have to abandon his dreams of becoming a MechWarrior.

In fact, the training officer is making this all up, but the deception—which is a standard practice in the Inner Sphere—usually creates the kind of fierce competition MechWarriors will face on the battlefield.

This scenario re-creates the typical "final exam" experienced by nearly all student MechWarriors in the Inner Sphere. The scenario also simulates the lance-on-lance engagements that comprise most BattleMech warfare.

GAME SET-UP

Lay out the **BattleTech** mapsheets as shown on page 36. In the remaining scenario rules, the playing area formed by the mapsheets is called simply the *map*.
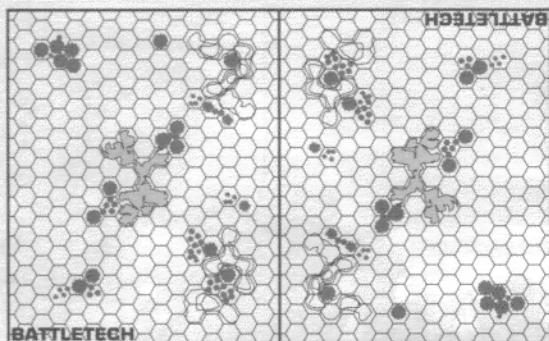
DEFENDER

The training officer has chosen mixed lances of light and medium 'Mechs for the trial and has supplied the defending lance commander with a heavy *Catapult*.

Lance Commander Horace (*Piloting* 5, *Gunnery* 4),
  CPLT-C1 *Catapult*
Cadet Winston (*Piloting* 5, *Gunnery* 4), SDR-5V *Spider*
Cadet Johansson (*Piloting* 5, *Gunnery* 4),
  COM-2D *Commando*
Cadet Rodriguez (*Piloting* 5, *Gunnery* 4),
  TBT-5N *Trebuchet*

Deployment

The defender chooses one BattleMech and places it on any hex along the west edge of the map, with any facing desired. Then the attacker chooses one 'Mech and places it on any hex along the east edge of the map. The players alternate placing their 'Mechs until all eight 'Mechs are on the map. Play then begins with the Initiative Phase of the first turn.

ATTACKER

To keep the test fair, the training officer has given both sides an identical selection of BattleMechs.

Lance Commander Pushkin (*Piloting* 5, *Gunnery* 4),
  CPLT-C1 *Catapult*
Cadet Shotugama (*Piloting* 5, *Gunnery* 4), SDR-5V *Spider*
Cadet Armstrong (*Piloting* 5, *Gunnery* 4),
  COM-2D *Commando*
Cadet Keenan (*Piloting* 5, *Gunnery* 4), TBT-5N *Trebuchet*

Deployment

See the defender's **Deployment**, above.

VICTORY CONDITIONS

The winner is the player or team that cripples or destroys all of the other player's or team's BattleMechs first.

SPECIAL RULES

For the purposes of this scenario, a 'Mech is considered *crippled* under the following conditions: one or both legs are destroyed, all of its weapons are destroyed, its gyro is destroyed, or it has taken two engine critical hits.

If a 'Mech exits the map for any reason, it is considered destroyed and may not re-enter the scenario.

VARIATIONS

This scenario can be replayed with any number of variations. Modifying the terrain or the forces on each side are two of many possible ways to mix it up.

Force Selection

The simplest way to modify the scenario is by altering the roster of 'Mechs each side uses. Here is one suggested alternate arrangement for the attacker's and defender's forces:

Attacker: DRG-1N *Dragon*, ENF-4R *Enforcer*,
  HER-2S *Hermes II*, JR7-D *Jenner*
Defender: CLNT-2-3T *Clint*, HBK-4G *Hunchback*,
  PNT-9R *Panther*, QKD-4G *Quickdraw*

Players can also determine their forces by setting a tonnage limit for each side and then selecting any BattleMechs they want. For example, both sides might agree on a 200-ton limit for their 'Mech lances. After the teams select their 'Mechs, the match up might look like this:

ATTACKER FORCES		DEFENDER FORCES	
BattleMech	Tonnage	BattleMech	Tonnage
Zeus	80	*Atlas*	100
Dervish	55	*Panther*	35
Assassin	40	*Jenner*	35
Commando	25	*Spider*	30
Total Tonnage = 200		**Total Tonnage = 200**	

This method may not always produce an exactly matched battle, but it is a quick and easy way to choose forces that are roughly balanced—and it gives the players more control over their forces.

Terrain

The terrain in this scenario can be varied by setting up the mapsheets differently. For example, turning the mapsheets so they are facing opposite directions will create a significantly different battlefield. Or players can place the mapsheets so that their narrow sides touch, rather than their wide sides. See the following two scenarios for examples of such layouts.

FASA also offers several different **BattleTech** map sets. Each set contains maps with different types of terrain. Any mapsheets from any **BattleTech** map set can be used in place of the standard **BattleTech** mapsheets pictured above.

SCENARIO 2: TRIAL BY FIRE

"Assault lance, report—what is your status?"

"There is no assault lance! They ambushed us as we came out of the pass. Get me out of here!"

The lone MechWarrior struggled to calm his frazzled nerves during the long seconds that passed before his comm-link crackled with his commander's response.

"Main force unable to reach your present position. Rendezvous at Drop Zone Beta."

The order was a death sentence. Beta was across enemy lines.

Back at the academy, the MechWarrior had wanted nothing more than to get into the action. Now he was in the action, all right. His father's 'Mech was ruined and his lancemates were

dead. The young MechWarrior felt panic closing in but forced it out of his mind, resolving that he would not become another casualty.

"Yes, sir! On my way…"

SITUATION

Just as a war is a series of battles, so most battles are a series of engagements. In one such engagement, a lance of novice MechWarriors is ambushed and nearly wiped out, leaving one inexperienced pilot alone with his damaged 'Mech. The only way back to his unit is across enemy lines. If he can get to the rendezvous point in time, the lone warrior can join up with the rest of his unit and withdraw for repairs. If not, he will probably be captured by the enemy.

GAME SET-UP

Lay out the **BattleTech** maps as shown.
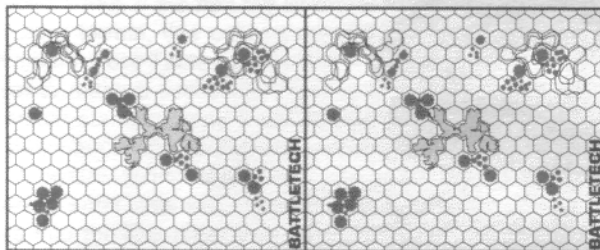
DEFENDER

The defender is a lone MechWarrior in a damaged *Zeus*. To represent damage suffered in an earlier battle, the defending player rolls hit locations on the Front side column for four attacks against the *Zeus*, each one inflicting 5 points of damage. These attacks are resolved before play begins. For these attacks, reroll any head hits and do not roll for critical hits, even if the 'Mech's internal structure is damaged.

MechWarrior Thompson (*Piloting* 5, *Gunnery* 4),
ZEU-6S *Zeus*

Deployment

After the attacker's 'Mechs are deployed, the defender may place his 'Mech anywhere within three hexes of the west edge of the map, with any facing desired.

ATTACKER

Three 'Mechs stand between the wounded *Zeus* and its rendezvous. Fortunately for the defender, they are piloted by rookie MechWarriors even greener than him.

Sergeant Hoffmann (*Piloting* 5, *Gunnery* 5),
JM6-S *JagerMech*
MechWarrior Adjani (*Piloting* 6, *Gunnery* 5),
CDA-2A *Cicada*
MechWarrior Lucas (*Piloting* 6, *Gunnery* 5),
COM-2D *Commando*

Deployment

The attacker sets up first. He can place his 'Mechs on any Clear Level 0 hexes within six hexes of the east edge of the map, with any facing desired.

VICTORY CONDITIONS

The game ends in victory for the defender if the *Zeus* can move off the east edge of the map or destroy all of the attacking 'Mechs. If the *Zeus* is destroyed, the game ends in victory for the attacker.

SPECIAL RULES

The attackers are unprepared for the arrival of the *Zeus* in their area. To simulate their surprise, the defender automatically wins the Initiative in the first turn.

The defending 'Mech may safely exit the map at the east edge only. If it leaves the map at any other edge, the attacker wins the scenario.

Any attacking 'Mech that exits the map is considered destroyed.

VARIATIONS

Playing the scenario as a chase is a simple way to vary it. All of the rules stay the same, but the attackers do not deploy on the map. Instead, the defender places his 'Mech on the map first, then receives one turn of movement. The attackers enter the map during the Movement Phase of the second turn. Each attacking 'Mech enters the map from the west edge and starts its movement off the board, so the first hex the 'Mech enters counts as its first hex of movement.

SCENARIO 3: DIVIDE AND CONQUER

Explosions shook the ground as the battle raged to a fever pitch. The two companies tore into one another with all the firepower they could muster, vaporizing armor and fusing the components beneath.

Slowly but surely the attackers drove a wedge into the defending force, driving it apart. The attacking force destroyed half of the defending 'Mech force, but lost two-thirds of its own 'Mechs in the process.

Unwilling to surrender and with no reinforcements within range, both commanders grimly ordered their remaining 'Mechs to hold their ground.

SITUATION

The attackers have managed to divide the defending force. This development gives the attackers a definite advantage, because they can concentrate their fire on one group of defenders before the remaining defenders come within range.

GAME SET-UP

Lay out the **BattleTech** mapsheets as shown.
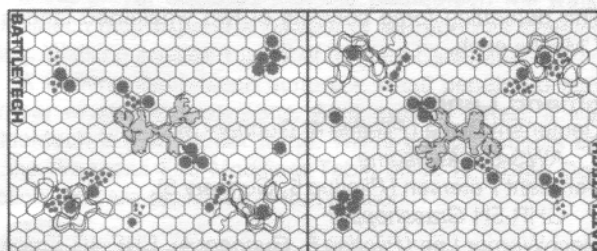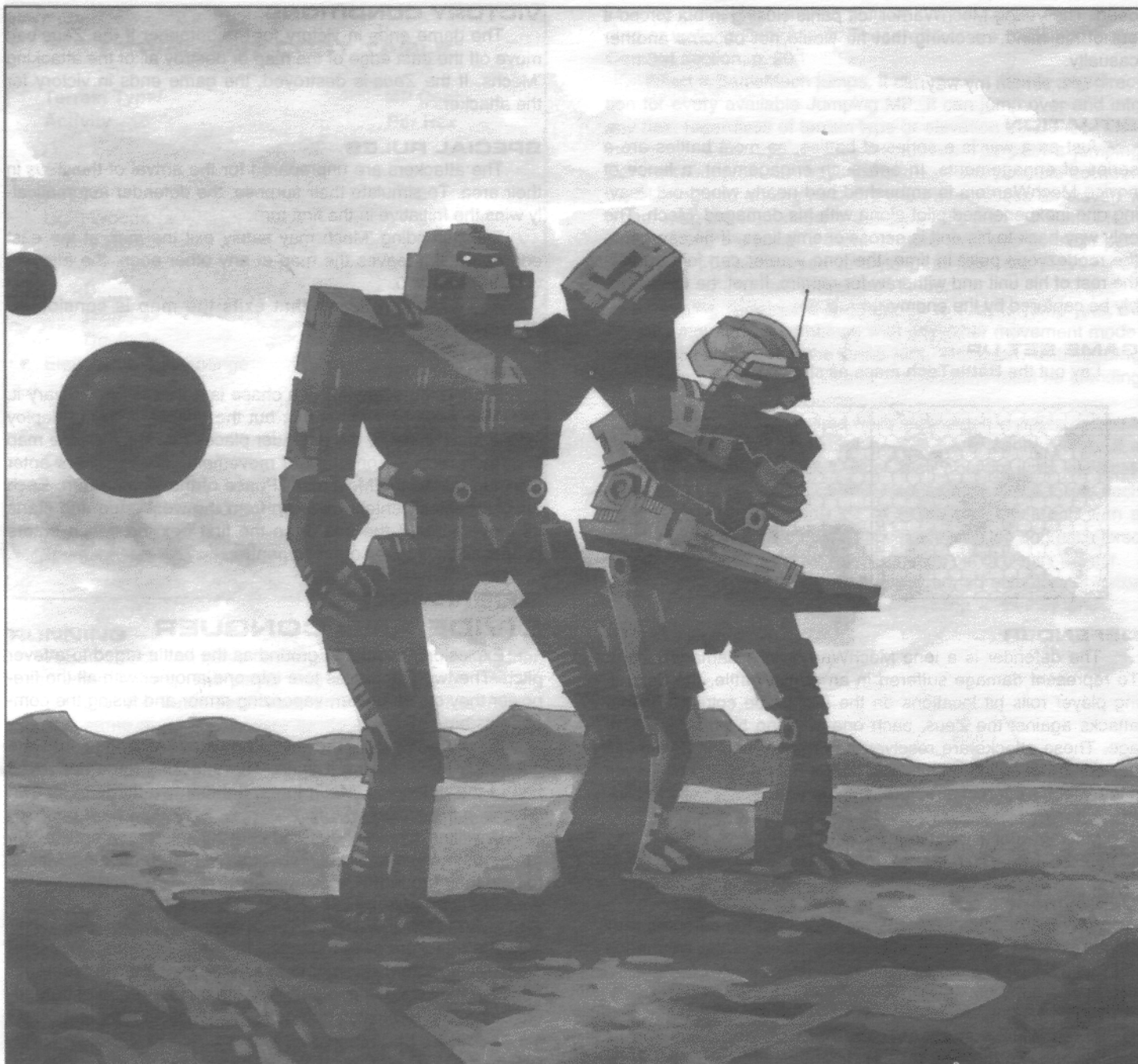
DEFENDER

The defending force consists of two weakened lances of three 'Mechs each.

Command Lance

Lieutenant Blake (*Piloting* 4, *Gunnery* 3),
   AWS-8Q *Awesome*
Sergeant Petersen (*Piloting* 5, *Gunnery* 3),
   GHR-5H *Grasshopper*
MechWarrior Lee (*Piloting* 5, *Gunnery* 4), ENF-4R *Enforcer*

Recon Lance

Sergeant Alvarez (*Piloting* 4, *Gunnery* 4), CLNT-2-3T *Clint*
MechWarrior Theissen (*Piloting* 5, *Gunnery* 4),
   CDA-2A *Cicada*
MechWarrior Jones (*Piloting* 5, *Gunnery* 4),
   SDR-5V *Spider*

Deployment

The defender sets up first. The 'Mechs of the command lance can be placed along the map's west edge in any hexes that lie within 6 hexes of the map's north edge. The 'Mechs of

the recon lance can be placed along the map's east edge in any hexes that lie within 6 hexes of the map's south edge.

ATTACKER

The attacking force consists of a single lance pieced together from the remnants of Seymore's Company.

Captain Seymore (*Piloting* 4, *Gunnery* 3), AS7-D *Atlas*
Lieutenant Marks (*Piloting* 4, *Gunnery* 4), DRG-1N *Dragon*
MechWarrior Kanazawa (*Piloting* 5, *Gunnery* 4),
    DV-6M *Dervish*
MechWarrior O'Rourke (*Piloting* 5, *Gunnery* 4),
    JR7-D *Jenner*

Deployment

The attacker sets up after all the defending 'Mechs are set up. He can attack the defender's lances in any order he likes. If he wants to attack the recon lance first, he can set up his 'Mechs in the northeast corner of the east mapsheet, in the row of hexes numbered 1510 through 1517. If he wants to attack the command lance first, he can place his 'Mechs in the southwest corner of the west mapsheet, in the row of hexes numbered 1510 through 1517.

VICTORY CONDITIONS

The winner is the team that cripples or destroys all of the opposing team's BattleMechs first.

SPECIAL RULES

For the purposes of this scenario, a 'Mech is considered crippled under any of the following conditions: one or both legs are destroyed, all of its weapons are destroyed, its gyro is destroyed, or it has taken two engine critical hits.

If a 'Mech exits the map for any reason, it is considered destroyed and may not re-enter the scenario.

To reflect the defenders' disrupted command structure, the defending team must subtract 2 from all of its Initiative rolls.

VARIATIONS

For a smaller (and shorter) game, remove the *Grasshopper*, *Cicada* and *Dragon* and follow all other rules.

If three players want to try the scenario, two players can share command of the defending side. In this case, each defending player controls one of the defender lances, and the two players take turns rolling Initiative for their side. If at any time the two players cannot agree on which 'Mech to move or declare fire with, both roll 2D6. The player with the higher result decides the defending side's action for the remainder of that phase.

For a more challenging (and longer) game, play the scenario under nighttime conditions. In this case, all weapon attack to-hit numbers receive an additional +2 modifier. (Adding nighttime conditions is a simple way to vary almost any **BattleTech** scenario.) Alternatively, players can introduce fog conditions. Fog conditions can be simulated simply by increasing the to-hit modifiers for certain ranged attacks. Short-range and physical attacks receive no special modifiers (fog does not affect such close-range attacks), but any medium-range attack receives a +3 modifier instead of the standard +2 modifier, and any long-range attack receives a +6 modifier.

INTERNAL STRUCTURE TABLE

Total 'Mech Tonnage	Tons of Internal Structure	Center Torso Boxes	L/R Torso Boxes	L/R Arm Boxes	L/R Leg Boxes
10	1	4	3	1	2
15	1.5	5	4	2	3
20	2.0	6	5	3	4
25	2.5	8	6	4	6
30	3.0	10	7	5	7
35	3.5	11	8	6	8
40	4.0	12	10	6	10
45	4.5	14	11	7	11
50	5.0	16	12	8	12
55	5.5	18	13	9	13
60	6.0	20	14	10	14
65	6.5	21	15	10	15
70	7.0	22	15	11	15
75	7.5	23	16	12	16
80	8.0	25	17	13	17
85	8.5	27	18	14	18
90	9.0	29	19	15	19
95	9.5	30	20	16	20
100	10.0	31	21	17	21

CONSTRUCTION

The following system makes it possible for players to construct unique BattleMechs using any legal mix of speed, armor and weapons they desire. These designs can then be pitted against other custom and standard machines on the battlefield.

In order to design a BattleMech, a player will need a piece of scratch paper, a pen, the Weapons and Equipment Table, and a blank BattleMech Record Sheet. BattleMech design requires the player to perform the following steps in the order given. Each step is fully explained in the following sections.

1. Choose Tonnage
2. Determine Engine Rating
3. Add Control Components
4. Allocate Tonnage for Internal Structure
5. Determine Jump Capability
6. Add Extra Heat Sinks
7. Add Armor
8. Add Weapons and Ammunition
9. Complete Critical Hit Table
10. Allocate Armor Points
11. Complete the Record Sheet

1. CHOOSE TONNAGE

BattleMechs weigh between 10 and 100 tons (increasing in increments of 5 tons). Within these limits, the player may choose any tonnage. 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 amount.

2. DETERMINE ENGINE RATING

Each BattleMech carries one fusion plant to power its movement and other systems. The relative output of this power plant is measured by its engine rating. A BattleMech's engine rating is determined by the 'Mech's weight and desired speed. Multiply the BattleMech's tonnage by the desired Walking MP. The result is the 'Mech's engine rating.

Tonnage x Desired Walking MP = Engine Rating

The Fusion Engine Table lists the tonnage taken up by engines rated 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 provides room to add other components and systems.

3. ADD CONTROL COMPONENTS

Every BattleMech must have a cockpit, which contains 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 remaining tonnage.

FUSION ENGINE TABLE

Engine Rating	Engine Manufacturer	Tonnage	Engine Rating	Engine Manufacturer	Tonnage
10	Omni	0.5	210	GM	9.0
15	GM	0.5	215	Core Tek	9.5
20	Pitban	0.5	220	DAV	10.0
25	Omni	0.5	225	VOX	10.0
30	Nissan	1.0	230	Leenex	10.5
35	VOX	1.0	235	GM	11.0
40	GM	1.0	240	Pitban	11.5
45	GM	1.0	245	Magna	12.0
50	DAV	1.5	250	Magna	12.5
55	VOX	1.5	255	Strand	13.0
60	Leenex	1.5	260	Magna	13.5
65	Nissan	2.0	265	Vlar	14.0
70	Omni	2.0	270	GM	14.5
75	GM	2.0	275	Core Tek	15.5
80	VOX	2.5	280	Vox	16.0
85	DAV	2.5	285	Pitban	16.5
90	DAV	3.0	290	Omni	17.5
95	Nissan	3.0	295	GM	18.0
100	Hermes	3.0	300	Vlar	19.0
105	DAV	3.5	305	GM	19.5
110	GM	3.5	310	Magna	20.5
115	GM	4.0	315	GM	21.5
120	GM	4.0	320	Pitban	22.5
125	Vlar	4.0	325	VOX	23.5
130	Magna	4.5	330	VOX	24.5
135	Hermes	4.5	335	Leenex	25.5
140	Leenex	5.0	340	VOX	27.0
145	Omni	5.0	345	Vlar	28.5
150	GM	5.5	350	Magna	29.5
155	GM	5.5	355	LTV	31.5
160	LTV	6.0	360	Hermes	33.0
165	VOX	6.0	365	Hermes	34.5
170	DAV	6.0	370	Magna	36.5
175	Omni	7.0	375	GM	38.5
180	GM	7.0	380	GM	41.0
185	GM	7.5	385	LTV	43.5
190	DAV	7.5	390	Magna	46.0
195	Nissan	8.0	395	Hermes	49.0
200	Nissan	8.5	400	LTV	52.5
205	Vlar	8.5			

4. ALLOCATE TONNAGE FOR INTERNAL STRUCTURE

The internal structure takes up 10 percent of a BattleMech's total weight. The Internal Structure Table shows the number of tons of Internal Structure required by every BattleMech of a given weight, and the number and allocation of the BattleMech's internal structure boxes. The head's internal structure is not listed on the table, because all BattleMech heads have 3 internal structure boxes.

Mark out any extra boxes on the Internal Structure Diagram of the record sheet.

5. DETERMINE JUMP CAPABILITY

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 Jumping MP desired, as shown in the Jump Jet Weight Table, p. 43. A BattleMech cannot be constructed with Jumping MP greater than its Walking MP.

Each jump jet gives the BattleMech 1 Jumping Movement Point, so that a BattleMech with 4 jump jets would have a Jumping MP of 4.
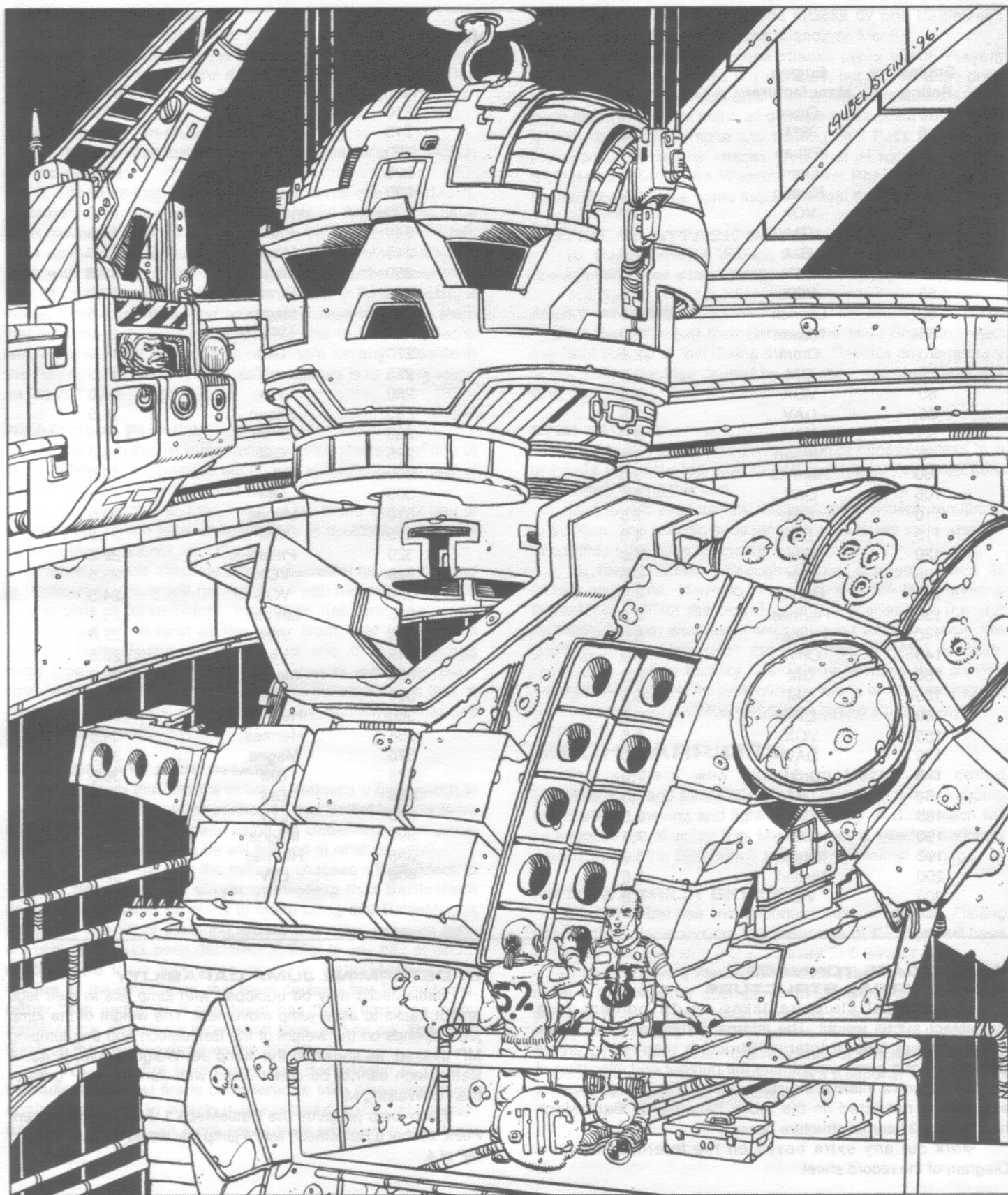
Subtract the total weight of the BattleMech's jump jets from the 'Mech's remaining tonnage.

6. ADD EXTRA HEAT SINKS

Heat sinks dissipate heat produced by movement, weapons fire and other actions. Every BattleMech comes equipped with 10

JUMP JET WEIGHT TABLE

'Mech Tonnage	Jump Jet Weight
10–55	.5 tons/Jumping MP
60–85	1 ton/Jumping MP
90–100	2 tons/Jumping MP

integral heat sinks that do not take up tonnage. However, most BattleMechs need more than 10 heat sinks to get rid of excess heat efficiently. Extra heat sinks can be acquired at the cost of 1 ton per heat sink.

7. ADD ARMOR

Armor helps protect the BattleMech's internal structure and critical components. For each ton of armor, the BattleMech has 16 Armor Points.

Determine the total number of Armor Points the BattleMech will carry. These points will be assigned to the BattleMech's locations in Step 10. Armor must be added in 1/2- or 1-ton lots.

8. ADD WEAPONS AND AMMUNITION

Every weapon placed on a BattleMech weighs a certain amount, as shown in the Tons column of the Weapons and Equipment Table. Select the weapons that the new BattleMech will carry. Add at least one ton (1/2 ton for machine guns) of ammunition for each class of missile launcher or ballistic weapon (except one-shot weapons, which can have no additional ammo). This required extra ammunition provides a varying number of shots, depending on the launcher or weapon. Note that certain pieces of equipment must be assigned to specific locations on the BattleMech's Critical Hit Table.

Detailed descriptions of the weapons and equipment used in BattleMech construction appear in the **Equipment** section, p. 47.

9. COMPLETE CRITICAL HIT TABLE

Each record sheet includes a Critical Hit Table with blanks for every part of the BattleMech's body. Certain sections of this table are already filled in, because certain components and equipment must be located in specific body segments. In this step, the player assigns the BattleMech's additional heat sinks, jump jets and weapons to different parts of its body and places them in a slot for that location on the Critical Hit Table.

Remember that certain items take up more than one critical slot on the table. These items should be specially noted on the tables, because a critical hit to any one of these slots destroys the entire component or piece of equipment, and further hits to other slots assigned to the same item have no additional effects.

Assign one critical slot on either a leg or torso location to each jump jet's exhaust port.

Only a portion of the BattleMech's heat sinks require critical slots. A number of heat sinks equal to the engine rating divided by 25 (round down) are assumed to be an integral part of the engine. These heat sinks are destroyed only if the engine is totally destroyed, and so cannot take critical hits. For example, if the player adds 5 heat sinks (for a total of 15) to a BattleMech carrying an engine rated at 210, 8 of these sinks (210 ÷ 25) are considered integral to the engine and do not have to be assigned to critical slots. The other 7 [10 (free) + 5 (extra) – 8 (unallocated)] must be assigned to critical slots.

The number of blank critical slots remaining on the table for a given location limits the number of weapons and other equipment that may be placed in that location. Many weapons take up more than one critical slot, as shown on the Weapons and Equipment Table. For example, if a 'Mech's center torso has

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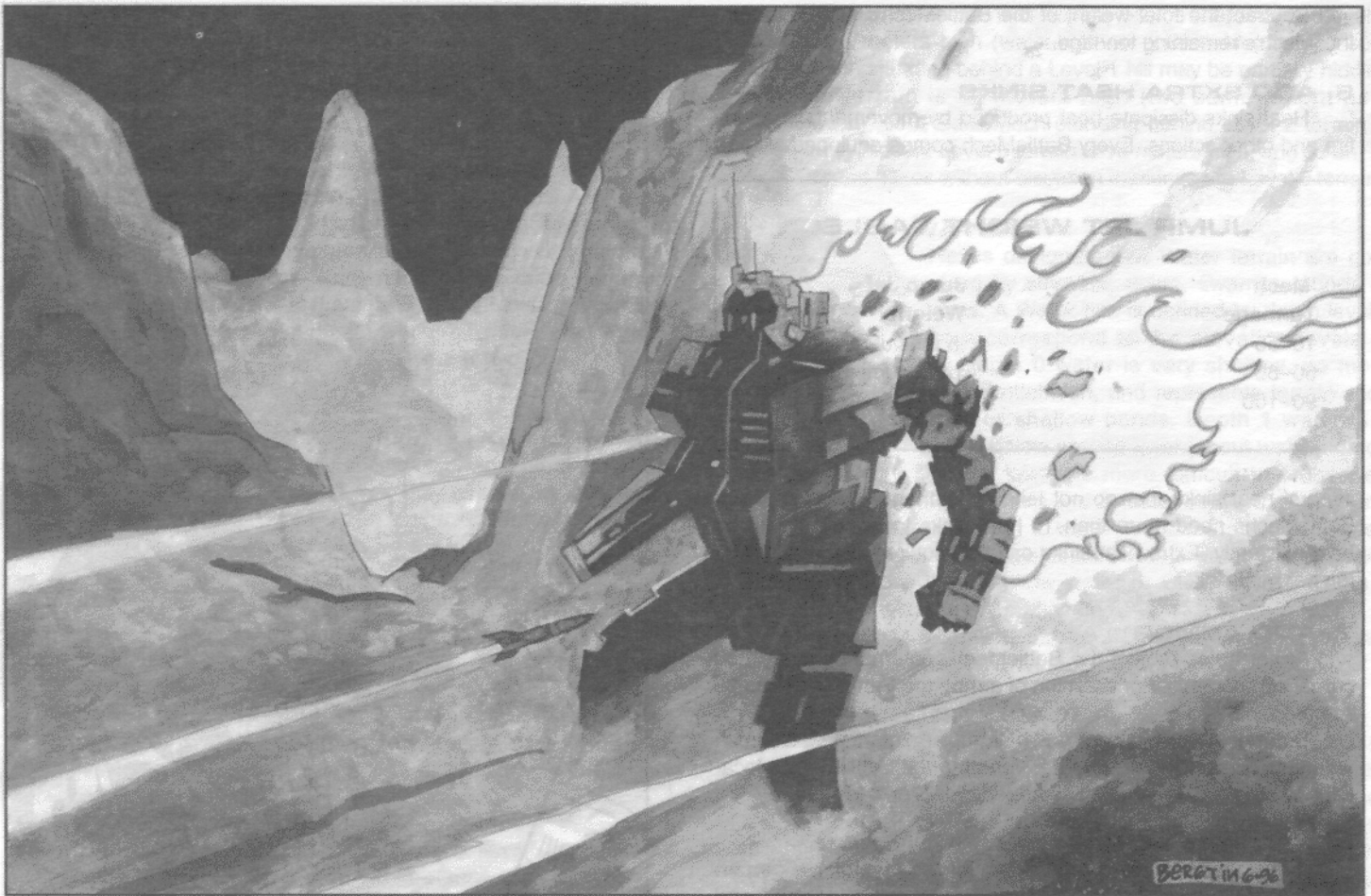
only 2 slots left empty on its Critical Hit Table, it cannot be fitted with a PPC, because a PPC takes up 3 spaces. However, a player may choose to remove arm actuators from his design to free up more critical slots. Only hand and lower-arm actuators may be removed in this fashion. BattleMechs lacking these actuators suffer penalties when making certain types of physical attacks, as explained in **Combat**, p. 27.

The critical slots for AC/20-type weapons can be split between two adjacent locations. For all other weapons and equipment, all critical slots must be in a single location.

Each ton of ammunition occupies 1 critical slot, but that slot need not be in the same body location as the weapon that uses the ammo. Note that though machine gun ammo can be acquired in half-ton lots, a critical slot can accommodate a full ton of MG ammo.

10. ALLOCATE ARMOR POINTS

Divide the total Armor Points carried by the BattleMech among the eleven different locations shown on the Armor Diagram. The player chooses the exact number of Armor Points used to protect a given area, but the number of Armor Points in a single location may not exceed twice the number of internal structure boxes in that location. For example, if a BattleMech has 10 internal structure boxes in its left arm, then the left arm can carry no more than 20 Armor Points. The only exception to this rule is that all BattleMechs may place up to 9 Armor Points on their heads.

Note that the center, left and right torso locations mount 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 number of the location's Internal Structure boxes.

Use the Armor Diagram on the record sheet to indicate the number of Armor Points protecting each part of the BattleMech's body. Mark out any extra armor boxes.

11. COMPLETE THE RECORD SHEET

Complete the record sheet by listing the BattleMech's 'Mech Data and Warrior Data.

WEAPONS AND EQUIPMENT TABLE

Type	Heat	Damage	Minimum	Short Range	Medium Range	Long Range	Tons	Critical	Ammo
Energy Weapons									
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	—
Ballistic Weapons									
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
Flamer (Vehicle)	3	2	—	1	2	3	.5	1	20
Machine Gun	0	2	—	1	2	3	.5	1	200
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
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
Other Equipment									
Hatchet	0	*	—	—	—	—	**	**	—
Heat Sink	–1	—	—	—	—	—	1	1	—

*Mech Tonnage ÷ 5

**Mech Tonnage ÷ 15
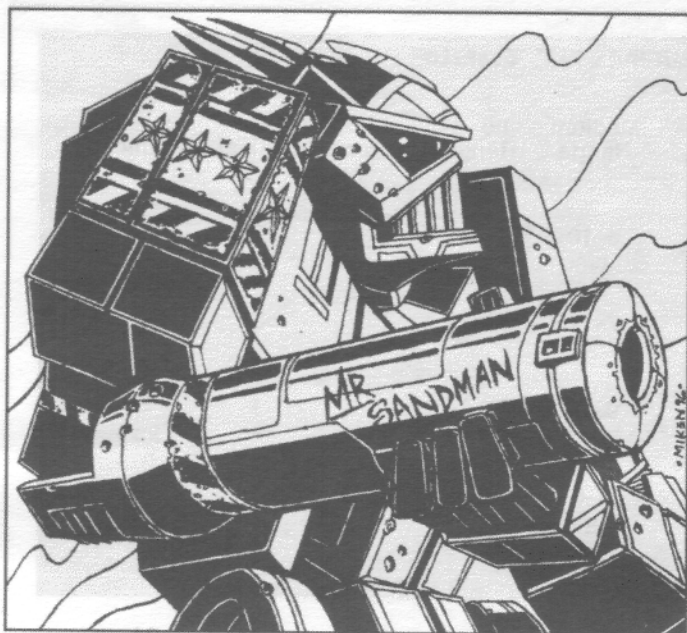
EQUIPMENT

This section describes and provides rules for the most common weapons and equipment used by Inner Sphere forces. Although recovered Star League weapons and equipment are beginning to surface, these items are still quite rare and expensive in 3049, and so they are not listed here. Rules for advanced weapons and equipment can be found in **CityTech, Second Edition**. The statistics for heat produced, Damage Value, range, and tonnage of each weapon and piece of equipment appear in the Weapons and Equipment Table in Construction, p. 45.

AUTOCANNON

An autocannon is a rapid-firing, auto-loading weapon that fires high-speed streams of high-explosive, armor-piercing shells. Light autocannon barrels range from 30 to 90 millimeters in diameter, and heavy autocannon barrels may be 80 to 120 millimeters in diameter or larger.

FLAMER

Under normal circumstances, a flamer does not cause heat damage to a target. However, if all players agree, they may choose to add 2 to a target BattleMech's Heat Scale for the turn in which it is hit by the flamer attack, rather than doing 2 points of damage.

HATCHET

Some BattleMechs come equipped with hatchets. Like other weapons, hatchets account for part of a BattleMech's weight and take up one or more locations on the Arm section of the Critical Hit Table. To use the hatchet, a BattleMech must have a functioning hand actuator in the arm in which the hatchet is mounted.

A BattleMech uses a hatchet to make physical attacks per standard clubbing attack rules, but can make this attack with only one arm, rather than the two needed to swing a club. This means the target can be in the arm firing arc corresponding to the arm in which the hatchet is mounted.

Though a BattleMech may mount two hatchets, one in each arm, it can only make one hatchet attack per turn. Weapons mounted on the arm not carrying the attacking hatchet may be fired in the turn's Weapon Attack Phase. Hatchets weigh one ton for each fifteen tons (or fraction thereof) of the BattleMech's total weight. Hatchets take up one critical location for each ton that they weigh.

Hits on a hatchet critical location represent damage to the shaft of the weapon. If a hatchet critical location is hit, the weapon can no longer be used.

HEAT SINKS

Heat sinks are devices designed to protect an engine and other components frcm heat build-up by dissipating a certain amount of heat generated by a 'Mech's engine and weapons. Standard heat sinks dissipate 1 point of heat per turn.

LASER

Laser is an acronym for "Light Amplification through Stimulated Emission of Radiation." When used as a weapon, a laser damages its target by concentrating extreme heat on a small area. BattleMech lasers are designated as small, medium, and large lasers.

LONG-RANGE MISSILES (LRM)

LRM racks fire indirect salvos of high-explosive missiles at distant targets.

MACHINE GUN

Though rarely carried by BattleMechs, the high rate of fire produced by machine guns makes them excellent anti-infantry weapons.

PARTICLE PROJECTOR CANNON (PPC)

A particle projector cannon (PPC) consists of a magnetic accelerator that fires high-energy proton or ion bolts. These bolts cause damage through both impact and high temperature. PPCs are among the most effective weapons available to BattleMechs.

SHORT-RANGE MISSILES (SRM)

SRMs are direct-trajectory missiles with high-explosive or armor-piercing explosive warheads. They are accurate only at ranges of less than 300 meters but are more powerful than LRMs.

SINGLE-SHOT MISSILE LAUNCHERS

BattleMechs sometimes carry a single-shot version of a standard missile launcher. Such a system is designated by OS (one-shot) following the missile nomenclature, such as LRM-20 (OS).

The player does not purchase any ammunition for this launcher because it can be fired only once during the game. 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.

PILOTING SKILL ROLL TABLE

BattleMech's Situation	Modifier
Damage to BattleMech	
BattleMech takes 20+ Damage Points in one phase	+1
BattleMech reactor shuts down	+3[1]
Leg/foot/hip actuator destroyed	+1
Gyro hit	+3
Gyro destroyed	Automatic Fall
Leg destroyed	Automatic Fall
Physical Attacks on BattleMech	
BattleMech was kicked	0
BattleMech was pushed	0
BattleMech was charged/death from above attack	+2
Unit's Actions	
BattleMech missed kick	0
BattleMech charging	+2
BattleMech death from above attack	+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 jumping with damaged leg actuators	per Additional Modifiers, below
MechWarrior trying to avoid damage when his BattleMech is falling	+1/ level fallen

[1] Only during the turn that the reactor shuts down. If the MechWarrior must make a Piloting Skill Roll for a 'Mech with a shut-down reactor, the BattleMech automatically falls.
[2] Automatic fall if death from above attack is unsuccessful.

Additional Modifiers	Modifier
Per leg/foot actuator previously destroyed	+1
Per hip also/previously destroyed	+2
Gyro also/previously hit (automatic fall if 2 previous hits)	+3
Leg previously destroyed	+5[3]

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

HEAT POINT TABLE

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	Per Weapons and Equipment Tables
Heat Sink	−1 per operational heat sink
	−1 additional per heat sink under water (6 HP maximum)
First Engine Hit	+5 per turn
Second Engine Hit	+10 (total) per turn

MOVEMENT COST TABLE

Terrain Type/ Activity	MP Cost Per Hex
Clear	1
Rough	2
Light Woods	2
Heavy Woods	3
Water	
Depth 0	1
Depth 1	2[1]
Depth 2+	4[1]
Elevation/Depth Change (up or down)	+1/level
Other Activities	
Facing Change	1/hexside
Dropping to the Ground	1
Standing Up	2/attempt

[1] Piloting Skill Roll required to prevent falling.

DIFFERENT ELEVATIONS TABLE

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)

Note: A death from above attack can always be made if the BattleMech has the necessary Jumping MP.

BATTLEMECH KICK LOCATION TABLE

Die Roll Result	Left Side	Right Side	Front/Rear
1-3	Left Leg	Right Leg	Right Leg
4-6	Left Leg	Right Leg	Left Leg

DETERMINING CRITICAL HITS TABLE

Dice Roll (2D6)	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/Roll 3 Critical Hit Locations*

* Roll 3 Critical Hit Locations if the section struck is a torso.

FACING AFTER A FALL TABLE

Die Roll (1D6)	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Rear
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

BATTLEMECH HIT LOCATION TABLE

Dice Roll (2D6)	Left Side	Front/Rear	Right Side
2*	L. Torso (critical)	C. Torso (critical)	R. 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	C. Torso	Right Torso
8	C. Torso	Left Torso	C. 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

*A result of 2 may inflict a critical hit. Apply damage to the armor in that section in the normal manner, but the attacking player also rolls once on the Determining Critical Hits Table.

WEAPONS FIRE MODIFIERS TABLE

Attacker	
Movement	
Stationary	None
Walked	+1
Ran	+2
Jumped	+3
BattleMech Damage	
Sensor Hit	+2
Shoulder	+4 for weapons in arm
Arm Actuator (each)	+1 for weapons in arm
Heat	
8–12	+1
13–16	+2
17–23	+3
24+	+4
Prone	+2

Range and Terrain	
Range	
Short	None
Medium	+2
Long	+4
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 Location Table +1 to hit for BattleMech firing from Water hex
Depth 2	BattleMechs cannot fire into or out of Depth 2+ water
Target	
Partial Cover	+3 (use BattleMech Punch Location Table)
Prone	−2 from adjacent hex; +1 from all others
Secondary Target	+1
Immobile	−4
Movement	
Moved 0–2 hexes	0
Moved 3–4 hexes	+1
Moved 5–6 hexes	+2
Moved 7–9 hexes	+3
Moved 10+ hexes	+4
Jumped	+1

MISSILE HITS TABLE

Dice Roll (2D6)	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

Number of Missiles Fired

BATTLEMECH PUNCH LOCATION TABLE

Die Roll (1D6)	Left Side	Front/Rear	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

BATTLETECH

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