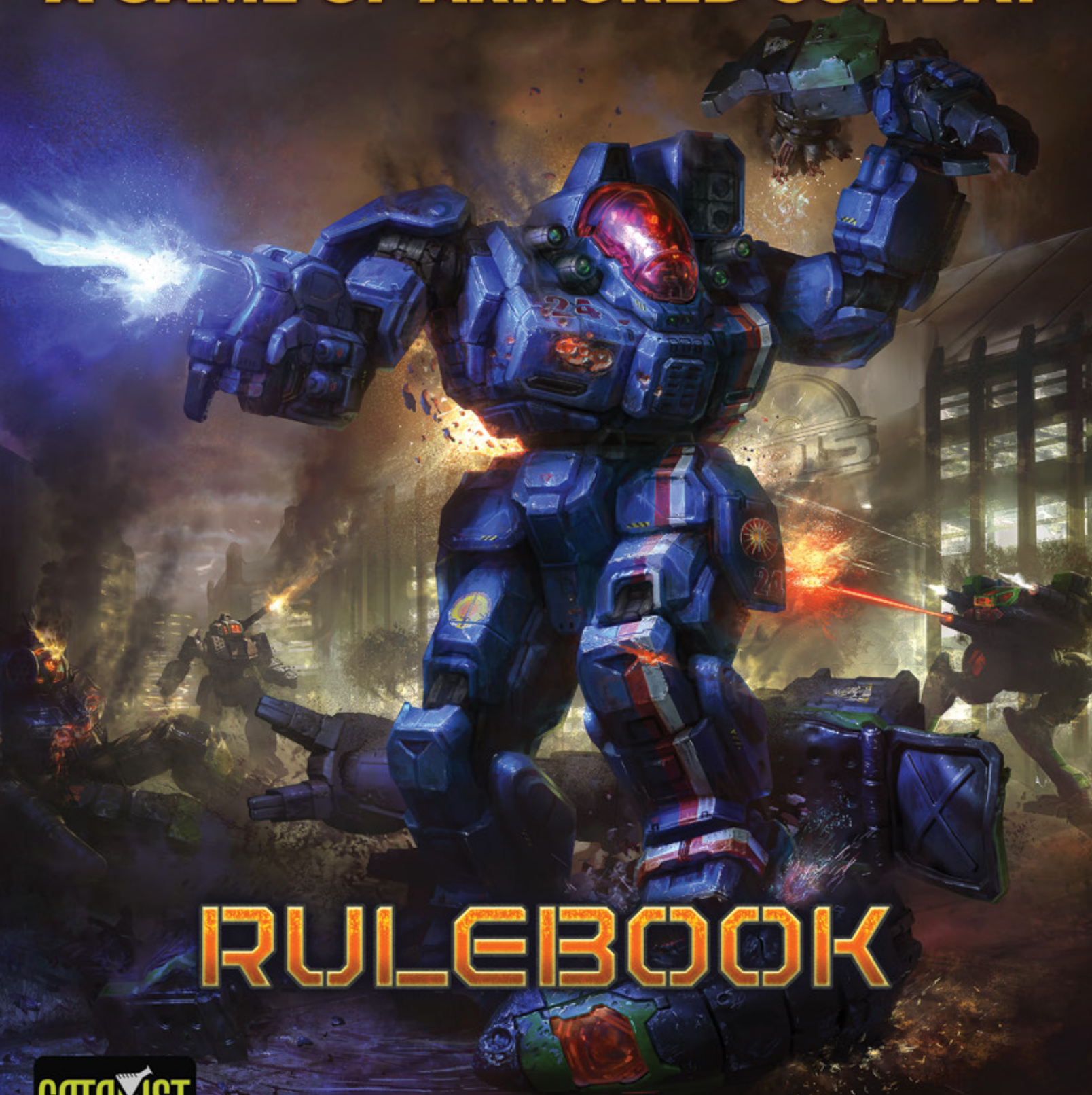
BATTLETECH™

A GAME OF ARMORED COMBAT



RULEBOOK

CATALYST game labs™

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CREDITS

Dedication

This is the ninth core *BattleTech* box set across almost thirty-five years. It is a magnificent testament to the hundreds of artists and authors that have poured their enthusiasm into one of the longest-lived science-fiction universes ever published. Not to mention the passionate, worldwide community that still loves giant 'Mechs storming across alien worlds and blowing crap up!

Humbly and gratefully—thanks to you all!

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INTRODUCTION

It is the 31st century, a time of endless wars that rage across human-occupied space. As star empires clash, these epic wars are won and lost by BattleMechs®, 30-foot-tall humanoid metal titans bristling with lasers, autocannons and dozens of other lethal weapons—enough firepower to level entire city blocks. Your elite force of MechWarriors® pilot these juggernauts into battle, proudly holding your faction's flag high, intent on expanding the power and glory of your realm!

BOX CONTENTS

Your *BattleTech: A Game of Armored Combat Box* includes:

- **Plastic Miniatures:** Eight high-quality plastic miniatures are instantly ready-to-play, without any cutting or assembly required. The plastic miniatures represent some of the most common 'Mechs found in the Inner Sphere.
- **Record Sheet Booklet:** This booklet contains fifteen pre-filled record sheets that correspond to the miniatures found in this box set. The two *Griffin* record sheets are provided for the *Griffin* miniature found in the *BattleTech Beginner Box*. Finally, this booklet also includes a blank record sheet to be used alongside the Construction chapter (see p. 49).
- **MechWarrior Cards:** These pilot cards bring to life the additional special abilities that MechWarriors bring to any battlefield.
- **BattleTech Rulebook:** This is the rulebook you're currently reading, which will convey all the rules you'll need for great 'Mech vs. 'Mech action.
- **BattleTech Primer:** This pamphlet explores a little of the history of products and skims the surface of *BattleTech*'s incredibly rich fictional setting.
- **Punchboard:** These additional playing pieces allow players to quickly increase the number of BattleMechs they're fielding in their games.
- ***Eyestorm*:** *Eyestorm* is a short story that will immerse players quickly into the *BattleTech* universe, and builds on the same storyline presented in the *Golden Rule* short story found in the *Beginner Box Set*.
- **Tables Cards:** These cards compile tables found in this introductory rulebook, to be used for ease of reference during game play; the two are identical—each player takes one!
- **Dice:** The game of *BattleTech* is played using 2 six-sided dice (see *Components*, at right).
- **Playing Maps:** The box set contains two playing mapsheets, with different maps printed on either side (see *Components*, at right).
- ***Alpha Strike* Cards:** *Alpha Strike* is an alternate, fast-playing form of *BattleTech*. The rules are not included in this box set, but players can download the free *Alpha Strike Quick-Start Rules* to give this alternate play style a try.

COMPONENTS

BattleTech often employs a number of physical components, such as the following.

COUNTERS

The punchboard terrain allows players to quickly and easily modify mapsheets, bringing additional variety to each game (see Terrain, p. 48).

DICE

BattleTech requires players to use two six-sided dice. If the situation requires the player to roll one die, the rules indicate this in shorthand as 1D6. Unless otherwise noted, the abbreviation 2D6 means the player rolls both dice and adds the results together.

MAPSHEETS

The 18- by 22-inch mapsheets used in *BattleTech* are divided into six-sided areas called hexes (short for hexagon); whether paper or other, both are called "mapsheets" and treated identically in the rules. The players use these hexes to regulate movement and combat by moving 'Mechs from hex to hex during a turn. "Playing area" refers to the total area of a given game, regardless of the number of mapsheets used.

LEVEL

The level of a hex is the height to which it rises above the prevailing terrain. All terrain has a level, but the level of each hex is independent of the type of terrain it contains, such as woods or water. If it is not marked on the map, assume a hex's level is 0.

This height is expressed in terms of levels. Level 1 is approximately six meters high, waist-high to a 'Mech. Level 2 terrain is approximately twelve meters high. This is considered as being the height of all 'Mechs for gameplay purposes. Level 3 terrain is approximately eighteen meters high, and so on.

Sublevels: Hexes with levels lower than 0 are referred to as sinkholes. These hexes are marked in sublevels that correspond to levels in reverse. For example, a Sublevel 1 hex is six meters deep, while a Sublevel 2 hex is twelve meters deep, and so on.

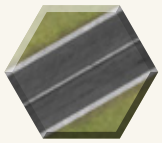
TERRAIN HEX ICONS

The forests, rivers, hills, buildings and rough areas on a *BattleTech* mapsheet represent a typical mixture of the terrain found on the habitable worlds of the Inner Sphere. The following symbols represent each type of terrain as described.

CLEAR

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

If a hex is not clearly marked as containing another terrain type, assume it is clear.



PAVEMENT

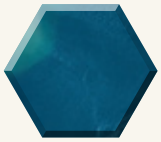
A Paved hex offers a fairly smooth and very hard surface. Paved hexes typically include roads, sidewalks, and landing fields made of asphalt, cement, or even cobblestone.

ROUGH

Rough terrain represents broken, rocky and jumbled ground. Though firm, the unevenness of this type of terrain makes it more difficult to cross than clear terrain (hence the +1 MP cost).

RUBBLE

Weapons fire, fire damage and physical damage inflicted by BattleMechs can reduce a building to a rubble terrain hex. A Rubble hex is difficult to move through (the +1 MP cost and required PSR).



WATER

Streams, rivers, swamps, ponds, and lakes are covered by Water terrain hexes. A Water hex is defined by depth levels (see *Level Change*, p. 9) and are more difficult to move through.

WOODS, LIGHT

Light Woods hexes are covered with sparse trees. 'Mechs cannot cross the hex (hence the +1 MP cost) as easily as Clear terrain. Three intervening hexes of Light Woods will block LOS.

WOODS, HEAVY

Heavy Woods hexes are thickly covered in trees, making movement even more difficult (the +2 MP cost) than Light Woods. One Light Wood and one Heavy Wood hex intervening will block LOS.

SCALE

One *BattleTech* turn is ten seconds of real time. A standard *BattleTech* mapsheet measures 18 by 22 inches. Each hex on the mapsheet represents an area 30 meters across (roughly 100 feet).

A NOTE ON REALISM AND SCALE

Given the 30-meter area of each hex stated above, players may note various oddities in the weapon ranges presented in this book, such as the fact that the standard 'Mech-scale machine gun of the distant thirty-first century only reaches out to 3 hexes (90 meters). As today's machine guns have effective ranges of some 2,000 meters, this may seem somewhat absurd.

The reason for this is simple: *BattleTech* is a game. Because *BattleTech* mapsheets are only seventeen hexes long, recreating real-world ranges on a table would require more than seven mapsheets laid end to end, for a playing space greater than twelve feet in length. Few people have that much table space. Nor would it provide players with any tactical maneuvering room: anywhere a player might move a 'Mech on the map, an attacker could hit it. As such, while we may safely assume "real" *BattleTech* weapons have exceptional ranges, range abstractions are an absolute necessity unless one is regularly able to rent a tennis court for game time.

'MECH RECORD SHEET

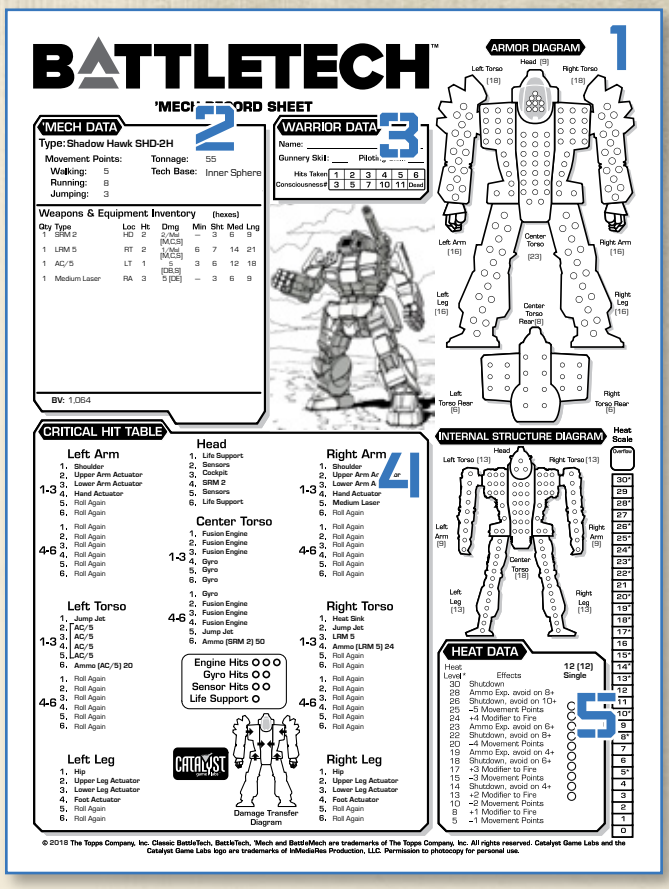
Players use a 'Mech Record Sheet to track damage done to a 'Mech during combat. A blank copy of each appears at the end of the record sheet booklet. Permission is given to reproduce these record sheets for personal use.

Open Information: Unless a scenario says otherwise, record sheets are always open information that your opponent can review at any time.

1 ARMOR DIAGRAM

The Armor Diagram on the top right-hand side of the record sheet shows the arrangement of a BattleMech's armor plating, while the Internal Structure Diagram directly below it shows the arrangement of a 'Mech's internal structure. Each circle on the Armor Diagram represents a point of armor. Circles in excess of a specific 'Mech's Armor Value are filled in prior to play. As armor is destroyed, the player marks off the appropriate circles. When all the circles in one location are filled in, damage transfers to the appropriate internal structure location, as shown on the Internal Structure Diagram. When all the circles in an internal structure location are filled in, that location is destroyed. This is covered in detail in the *Damage* chapter (see p. 30).

The Armor Diagram also shows the front and rear armor of the 'Mech's three torso locations (the arms, legs and head do not have rear armor locations). The Damage Transfer Diagram, which appears at the bottom of the Critical Hit Table, shows where the player must transfer damage when an already destroyed location takes additional damage.



For ease of reference, next to the name of each location on both the Armor Diagram, as well as the Internal Structure Diagram, a line is provided to fill in that section's starting Armor Value (or in the case of the internal structure, the starting internal structure value). For pre-generated record sheets, the number of armor points is already listed.

2 'MECH DATA

Located in the upper left-hand corner, this section of the record sheet lists the BattleMech's most important statistics, including type, tonnage, movement, and weapons inventory.

3 WARRIOR DATA

This section lists the name, skills, and condition of the MechWarrior piloting the BattleMech.

4 CRITICAL HIT TABLE

The Critical Hit Table shows the physical location of the BattleMech's critical equipment, weapons and ammunition for applying critical hits.

5 HEAT DATA AND HEAT SCALE

Located in the bottom right-hand corner of the Record Sheet, the Heat Data and Heat Scale help the player track the 'Mech's internal heat buildup, as well as indicate how many heat sinks a 'Mech mounts (circles underneath the numerical value in the Heat Data section allow players to mark off heat sinks as they are damaged). As heat builds up, the player checks off the boxes in the Heat Scale from low to high (usually with a pencil, as heat will fluctuate up and down the Heat Scale throughout a game).

At certain levels of heat buildup (noted on the Heat Scale with asterisks), corresponding information in the Heat Data section describes the heat's effect on the 'Mech's operation. The blank space marked Heat Overflow at the top of the Heat Scale is used to record heat generated in excess of 30 points.

THE MECHWARRIOR

The soldiers who pilot BattleMechs are called MechWarriors.

SKILLS

MechWarriors use two skills in combat: Piloting and Gunnery. Each skill has a rating; the lower a MechWarrior's skill rating, the better the MechWarrior is at the skill.

Piloting Skill represents a MechWarrior's ability to control his machine's movements. This skill includes keeping a 'Mech from falling down and striking targets in physical combat. Gunnery Skill helps determine how easy or difficult it is for the MechWarrior to make a successful shot using his 'Mech's ranged weapons (see *Firing Weapons*, p. 15).

DEFAULT SKILL RATINGS

The average Inner Sphere MechWarrior has a Gunnery Skill of 4 and a Piloting Skill of 5. Unless otherwise stated in the scenario being played, all MechWarriors have these skill ratings.

PILOTING SKILL ROLLS (PSRS)

When a 'Mech attempts a dangerous maneuver, or whenever the MechWarrior might lose control of the 'Mech, that 'Mech's controller must make a Piloting Skill Roll, commonly abbreviated as PSR (see *Piloting Skill Rolls*, p. 40).

Additionally, a 'Mech's base Target Number for physical attacks is equal to the Piloting Skill rating of its MechWarrior. When adjusted for movement, damage, and other factors, this number becomes the modified Target Number for such attacks (see *Physical Attacks*, p. 24).

GUNNERY SKILL RATING

The base Target Number for weapon attacks is equal to the Gunnery Skill rating of the MechWarrior making the attack (see *Firing Weapons*, p. 15).

DAMAGING A WARRIOR

Falls, ammunition explosions, heat, and other perils can wound and eventually kill a MechWarrior. See *Damaging a MechWarrior*, page 44.

PLAYING THE GAME

This chapter breaks down how to play a game of *BattleTech* from start to finish.

SETUP

Players first lay out the mapsheets as preferred or, if playing a scenario, as the scenario specifies.

Next, players choose their forces. The *Scenarios* section (see p. 45) details ready-made games, including which 'Mechs each player should field. Each 'Mech included in this box set also has a ready-to-go record sheet with all essential information.

If all players agree, custom 'Mechs can be fielded, created using the *Construction* rules on page 49.

If the scenario does not specifically state deployment details, players use the following rules:

- Both sides roll Initiative.
- The winning player chooses a side of the playing area they will enter; the losing player will enter the opposite side.
- Each 'Mech, when it is their turn to move, enters their side walking, running, or jumping, as announced by its controller, counting MP expenditure beginning with the first full hex of the playing area.

SEQUENCE OF PLAY

A *BattleTech* game consists of a series of turns, each being ten seconds of real time. Each turn consists of several smaller segments, called phases. The players execute the phases in a given order, with all players completing a phase before anyone moves onto the next phase.

Each turn includes the following phases, performed in the following order:

1. Initiative Phase
2. Movement Phase
3. Weapon Attack Phase
4. Physical Attack Phase
5. Heat Phase
6. End Phase

INITIATIVE PHASE

One player from each side rolls 2D6 and adds the results together to determine their side's Initiative. Re-roll all ties. The side with the higher result wins Initiative for that turn.

MOVEMENT PHASE

The side that lost Initiative must act first. They choose one of their 'Mechs and assign it a movement action. The side that won Initiative then does the same. Movement alternates between sides until all 'Mechs have been moved, with any Piloting Skill Rolls (see p. 40) required due to movement made the moment they are called for. If either side has more 'Mechs than the other, it may need to move more than one 'Mech at once (see *Unequal Numbers of 'Mechs*, p. 7).

Standing still is a valid movement action. A player may assign a movement action to any 'Mech that has not been destroyed, even if it is immobile. For example, a 'Mech whose warrior is unconscious can still be given a movement action, even though it cannot move, in order to use one move selection.

WEAPON ATTACK PHASE

The side that lost Initiative must act first. They choose one of their 'Mechs to declare fire first: this is called a fire selection. The side that won Initiative then does the same. Fire selection alternates between players until all fire has been declared.

If either side has more 'Mechs than the other, the players of that side may need to declare fire for more than one 'Mech at once (see *Unequal Numbers of 'Mechs*, p. 7).

See the *Combat* chapter, starting on page 13, for how to resolve attacks, and the *Damage* chapter, starting on page 30, for how to apply the damage from those attacks.

DECLARING WEAPONS FIRE

A player may declare fire with any 'Mech that has not been destroyed. For example, a 'Mech with no weapons or whose warrior is unconscious can still declare fire (in order to use up a fire selection), even though it cannot actually attack. Declaring that a 'Mech will not fire is a valid action and still uses one fire selection.

A player must declare all attacks they plan to make at this time, specifying which weapons they will fire and at what target(s). When declaring attacks, a player also declares whether their 'Mech will twist its torso or flip its arms.

Players may not change an attack declaration once made.

RESOLVING WEAPONS FIRE

After all attacks have been declared, players resolve weapons fire one 'Mech at a time. Again, the side that lost Initiative must act first.

All declared attacks must be made, even if the intended target is destroyed before all attacks against it have been resolved. This means that a 'Mech always gets to make its declared attacks for the phase, even if that 'Mech or its weaponry winds up being destroyed in that phase.

The order in which a 'Mech's weapons are rolled and resolved is up to that 'Mech's controller. The damage inflicted by each weapon hit is fully resolved, from start to finish, before moving on to the next hit. If a single weapon attack inflicts multiple hits (possible with missiles), then each hit from that attack is fully resolved before moving on to its next hit.

All weapon attacks by a 'Mech should be resolved before moving to the next 'Mech.

After all attacks have been resolved, all Consciousness Rolls required due to damage inflicted in this phase are made (see p. 44). After this comes all Piloting Skill Rolls required (see p. 40), each taking into account all modifiers resulting from damage inflicted that phase.

PHYSICAL ATTACK PHASE

Players repeat the steps given for the Weapon Attack Phase, except for torso twisting and arm flipping, with all damage from physical attacks taking effect before the Heat Phase. See page 24.

HEAT PHASE

Players adjust their 'Mech's heat scales to reflect any heat built up or lost during the turn and resolve any effects caused by excessive heat, such as ammunition explosions or MechWarrior damage. In particular, 'Mechs forced to shut down due to heat make their restart attempts in this phase. See the *Heat* chapter, page 37.

END PHASE

A variety of miscellaneous actions can occur during this phase, some optional and some mandatory, if applicable. An action's description will state whether it occurs during the End Phase, but the following summarizes all such actions:

- Any MechWarrior unconscious during the Initiative Phase of this turn rolls 2D6 to see if they regain consciousness (see *Damaging a MechWarrior*, p. 44).
- Torsos that were twisted return to a forward-facing position (see *Torso Twists*, p. 15).
- Reversed arms return to a forward-facing position (see *Reversing (Flipping) Arms*, p. 15).
- A pilot of a submerged 'Mech with critical damage to its life support system takes 1 damage (see *Life Support (Head)*, p. 33).
- 'Mechs can be voluntarily shut down, or restarted if voluntarily shut down in a previous End Phase (see *Shutdown*, p. 38).

VICTORY CONDITIONS

Players repeat the sequence of play given above until one side achieves victory. Under normal circumstances, the side with the last surviving 'Mech(s) on the map wins. If the last 'Mechs from each side are destroyed simultaneously in the same turn, or if the last 'Mechs from each side cannot move and have no ability to damage one another, the game is a draw. Players may set other victory conditions by mutual agreement before play begins. In addition, some scenarios may have special victory conditions of their own.

UNEQUAL NUMBERS OF 'MECHS

The Movement Phase, Weapon Attack Phase, and Physical Attack Phase require each player to alternate moving or declaring attacks with their 'Mechs. When both sides have an equal number of 'Mechs, each player simply takes a turn moving or declaring a single 'Mech's action, then the other player declares movement or an action for one 'Mech, and so on. If the number of 'Mechs on each side is not equal, however, this procedure must be altered.

If, prior to any pair of movement or attack declarations, one team has at least twice as many 'Mechs left to declare for as the other team, the team with twice as many 'Mechs declares for two 'Mechs rather than one. If one team has at least three times as many 'Mechs, it declares for three each time, and so on.

The following two tables provide examples of how this works across different force sizes.

UNEQUAL NUMBERS OF 'MECHS EXAMPLES

Move No.	Side B Units Left to Move	Side A Units Left to Move	Side B Moves	Side A Moves
1	10	18	1	1
2	9	17	1	1
3	8	16	1	2
4	7	14	1	2
5	6	12	1	2
6	5	10	1	2
7	4	8	1	2
8	3	6	1	2
9	2	4	1	2
10	1	2	1	2

Move No.	Side B Units Left to Move	Side A Units Left to Move	Side B Moves	Side A Moves
1	5	14	1	2
2	4	12	1	3
3	3	9	1	3
4	2	6	1	3
5	1	3	1	3

MOVEMENT

In the Movement Phase, BattleMechs have the opportunity to change their position on the mapsheet.

MOVEMENT MODES

'Mechs are assigned movement actions in initiative order (see *Sequence of Play*, p. 6). Every 'Mech must be assigned one (and only one) of the movement modes available to it. In general, the more hexes a 'Mech moves, the harder it is to be hit. Modes that provide more Movement Points (MP) thus help keep a 'Mech safe. However, such modes generate more heat, and make it so that a 'Mech has a harder time hitting with its own attacks.

Minimum Movement: A 'Mech that intends to use the *Minimum Movement* rule (see p. 11) must run.

STANDING STILL

A 'Mech that stands still remains in the hex in which it started the turn. It may not expend MP that turn, even to change its facing.

Choosing this mode does not make a 'Mech immobile (see *Immobile*, p. 11). However, this mode can be assigned to any 'Mech, even immobile units. As "choosing" this mode for an immobile 'Mech still uses a movement selection, this is a good way to put off assigning actions to your more useful mobile 'Mechs until later in the initiative order.

- **Target Number Modifier as Attacker:** 0
- **Target Number Modifier as Target:** 0
- **Heat Generated:** 0

WALKING

A walking 'Mech may expend a number of MP up to its Walking MP rating. 'Mechs may walk backward.

- **Target Number Modifier as Attacker:** +1
- **Target Number Modifier as Target:** Based on hexes travelled (see the Attack Modifiers Table, p. 19)
- **Heat Generated:** 1 (total, not per hex travelled)

One-Legged 'Mechs: Walking is the only movement mode beyond standing still that a one-legged 'Mech can use.

RUNNING

A running 'Mech may expend a number of MP up to its Running MP rating. A 'Mech cannot run backward.

A 'Mech's Running MP rating is equal to its Walking MP times 1.5, rounding up.

- **Target Number Modifier as Attacker:** +2
- **Target Number Modifier as Target:** Based on hexes travelled (see the Attack Modifiers Table, p. 19)
- **Heat Generated:** 2 (total, not per hex travelled)

Critical Damage: If a 'Mech uses Running MP, each of the following forces a Piloting Skill Roll (see p. 40) after its movement in order to avoid falling: critical hit to the gyro, critical hit to a hip.

If damage reduces a 'Mech's Walking MP rating, the player must recalculate its Running MP rating.

Water: 'Mechs cannot enter a Depth 1 or deeper water hex while running (whether the 'Mech is already in water or not), though a running 'Mech may change facing in one, and/or move from a water hex to a land hex.

JUMPING

Only 'Mechs that possess Jumping MP and are standing at the start of the turn may select this mode; they may then expend a number of MP up to their Jumping MP rating. As jumping features numerous exceptions to the basic movement rules, see *Jumping Movement* on page 11 for the full details.

- **Target Number Modifier as Attacker:** +3
- **Target Number Modifier as Target:** +1, plus a further modifier based on hexes travelled (see the Attack Modifiers Table, p. 19).
- **Heat Generated:** 1 heat point for every hex jumped. Using jump jets always generates a minimum of 3 heat points, no matter how far a 'Mech jumps.

Critical Damage: If a 'Mech uses Jumping MP, each of the following forces a Piloting Skill Roll (see p. 40) to avoid falling upon landing: loss of a leg, critical hit to the gyro, critical hit to a hip or any actuator in a leg location.

'Mechs lose one Jumping MP for each jump jet destroyed.

STRATEGIC

MOVEMENT DICE

Movement dice help players remember which 'Mechs moved and in what way. While not required, it is highly recommended that players use this rule, and the remainder of these rules will assume that they are doing so. (These dice are not included in this box.)

Commonly, white dice are used to mark 'Mechs that walked, black dice for those that ran, and red dice for those that jumped. The number displayed on the die is the Target Number generated as a result of the move, with "6" traditionally indicating a modifier of 0 (didn't move). The move cannot be changed once a movement die is placed.

It's best to use dice of a different size and/or color than those used for rolling attacks, to prevent confusion. After all weapon's fire is completed, remove all movement dice from the board.

MOVEMENT BASICS

After being assigned a movement mode, a 'Mech then spends the Movement Points (MP) provided. A 'Mech need not spend all its MP each turn, but no matter how few are spent, the 'Mech's movement mode does not change. MP left at the end of the turn are lost (i.e. you can't "bank" MP).

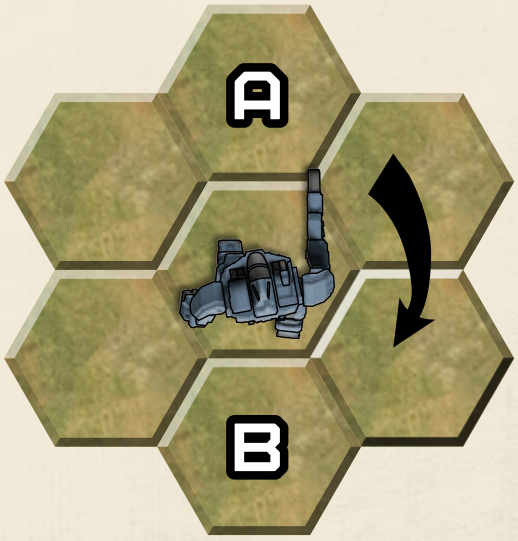
Key Reference: Movement Costs Table (see p. 10).

FACING

Every hex on the map has six edges, called hexsides. Every 'Mech must face one of those six hexsides: this is known as its facing. A 'Mech faces the way its feet are pointing.

Changing facing costs 1 MP per hexside. For example, in the diagram below, a 180-degree turn (three facings, from Hex A to Hex B) costs 3 MP. 'Mechs not clearly facing one hexside at the end of the Movement Phase must be realigned to one of the two closest hexsides by the opposing player.

Torso Twisting: If a 'Mech twists its torso (see p. 15), this only changes its weapon arcs, not its facing.



• FACING CHANGE DIAGRAM •

GROUND MOVEMENT

A 'Mech 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 without first changing its facing, as shown on the Movement Direction Diagram at right.

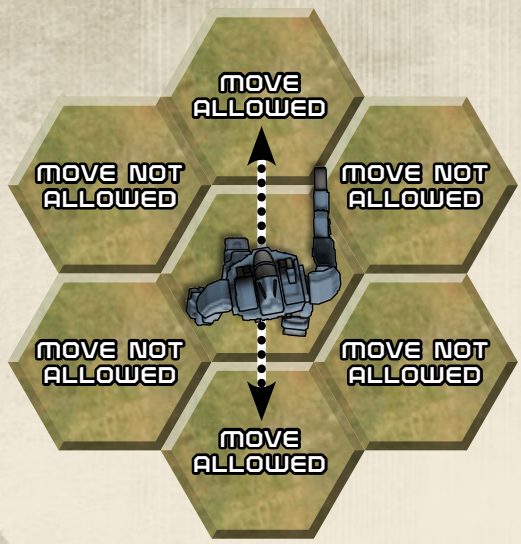
To enter a clear hex costs 1 MP. Terrain in a hex often raises this cost (see *Terrain*, at right).

Partial Hexes: 'Mechs cannot voluntarily move into or through half- or quarter-hexes. 'Mechs forced into such hexes are considered destroyed for the remainder of the scenario.

BACKWARD MOVEMENT

A 'Mech can only move backward if it uses Walking MP that turn. Such a 'Mech can move forward, backward, or both in the same Movement Phase.

'Mechs moving backward may not change levels.



• GROUND MOVEMENT DIRECTION DIAGRAM •

TERRAIN

All hexes cost at least 1 MP to enter. However, terrain often raises this MP cost, as shown on the Movement Costs Table (see p. 10). For example, entering a Heavy Woods hex costs 3 MP: the base 1 MP for entering any hex (the distance traveled), and 2 MP more for the Heavy Woods (to navigate through the trees).

Difficult Terrain: Entering a hex containing certain terrain types requires a Piloting Skill Roll (see p. 40) to see if the 'Mech falls. Such information appears on the Movement Costs Table (see p. 10).

Water: If jumping into or out of water, see page 12. Otherwise, see *Movement in Water*, page 12.

LEVEL CHANGE

When moving forward a 'Mech may change levels (or depths) by only 1 or 2 levels per hex, at an additional cost of 1 MP per level (whether up or down).

Backward Movement: 'Mechs moving backward may not change levels.

Prohibited Level Change: Even a forced level change (such as from a charge, push, or death from above attack) cannot force a 'Mech into a hex three or more levels higher than the hex it was in immediately prior.

However, a 'Mech can be forced downward any number of levels; being forced two or more levels lower results in an automatic fall. No 'Mech may "voluntarily fall" from a greater level in order to circumvent the maximum allowable level change downwards.

If a 'Mech is forced into a hex that already has a 'Mech, see *Displacement*, page 40.

OCCUPIED HEXES

A 'Mech can move through a hex occupied by a friendly 'Mech, but cannot walk or run through a hex occupied by an enemy unless it is deliberately trying to collide with that enemy 'Mech: this is a charge attack (see p. 25).

A 'Mech can never end its move in a hex with another 'Mech (friend or foe; see *Stacking*, p. 11).

MOVEMENT COSTS TABLE

Movement Action/Terrain Type	MP Cost Per Hex/Terrain Cost	Piloting Skill Roll
Cost to Enter Any Hex	1	—
Terrain Cost When Entering Any New Hex		
Clear	+0	—
Paved/Bridge	+0	—
Road	+0*	—
Rough	+1	—
Light woods	+1	—
Heavy woods	+2	—
Water		
Depth 1	+1** (Level change MP cost not included)	–1
Depth 2+	+3** (Level change MP cost not included)	+0 (+1 if Depth 3+)
Level change (up or down)		
1 level	+1	—
2 levels	+2	—
Rubble	+1	+0
Additional Movement Actions		
Facing change	1/hexside	—
Dropping to the ground	1	—
Standing up	2/attempt	+0

* If traveling along road; otherwise cost of underlying terrain.
** MP cost to move along the bottom of the water hex.

MINIMUM MOVEMENT

A 'Mech can move into the hex directly in front of it, even if it does not have the MP normally required. A 'Mech can only do this if it meets all of the following conditions:

- It has at least 1 MP to spend
- It is not prohibited from entering the hex (see *Level Change*, p. 9)
- Such movement is the only MP it expends that turn (e.g. it cannot change its facing in the same turn)

To enter a hex in this fashion, a 'Mech must use running movement. 'Mechs using this rule can enter hexes that normally could not be entered by a running 'Mech (for example, Depth 1 or greater water hexes).

Prone 'Mechs: A prone 'Mech with only 1 MP available can make a single attempt to stand using this rule. See *Standing Up*, on page 12.

IMMOBILE

An immobile 'Mech cannot make movements of any kind. Attacks against an immobile target apply a –4 Target Number modifier, and an aimed shot (see p. 21) can be made at the target.

- **The following are immobile:** buildings; hexes; 'Mechs shutdown, abandoned, missing all four limbs, or with an unconscious MechWarrior.
- **The following are not immobile:** mobile 'Mechs that choose to stand still, prone 'Mechs, 'Mechs missing two legs, 'Mechs reduced to 0 MP by actuator damage and/or heat, a 'Mech with its gyro destroyed.

Unless a situation specifically states the target is immobile, it is not.

When assigning movement actions (see *Movement Phase*, p. 6), immobile 'Mechs may still be selected, even though they can do nothing but stand still.

Piloting Skill Rolls: An immobile 'Mech forced to make a Piloting Skill Roll (see p. 40) automatically fails, unless it is prone.

STACKING

At the end of the Movement Phase (after any 'Mechs destroyed that phase are removed from play), only one 'Mech can be in any single hex. This is called the stacking limit, and no 'Mech may deliberately violate it.

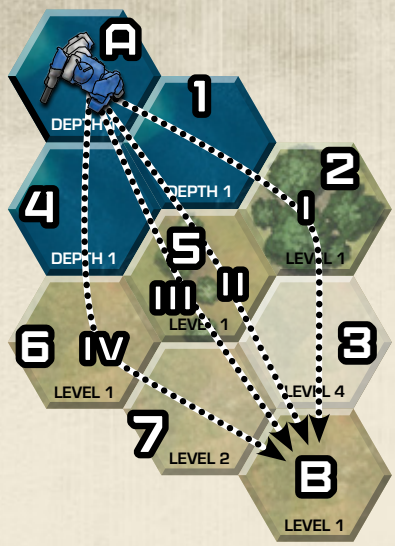
If the stacking rules are violated involuntarily, one of the 'Mechs in the hex will be forced out of that hex (see *Displacement*, p. 40).

JUMPING MOVEMENT

Jumping features numerous exceptions to the movement rules. To jump, a 'Mech must be standing at the start of the turn.

A jumping 'Mech can move 1 hex for each available Jumping MP. Terrain does not affect this MP cost: if a hex is legal to enter, it costs 1 MP to move over or into it, period. A 'Mech may jump into the same hex it began the turn in, for 1 MP.

A jumping 'Mech ignores terrain (and the presence of 'Mechs) in hexes it jumps over. As such, it need not make Piloting Skill Rolls if moving over hexes that normally force a PSR. However, it obeys



• JUMPING DIAGRAM •

In the Jumping Diagram above, the 'Mech in Hex A has a Jumping MP of 6. The 'Mech jumps to Hex B, four hexes away. Because the 'Mech is jumping, it spends only 1 MP for every hex that it moves, ignoring all terrain costs (including levels) for the hexes it passes over and for the hex in which it lands. (To reach Hex B with the facing shown by walking or running, the 'Mech would have had to spend at least 10 MP). As it lands, the player can face the 'Mech in any direction desired, at no extra cost.

The 'Mech is starting in Depth 1 water (Hex A), giving it a level of –1. Two of its jump jets are in its legs and so cannot be used, as they are submerged. Its other jump jets are located in the torsos, however, so it can still jump with a Jumping MP of 4.

At first, it appears the 'Mech could have jumped into Hex B by at least four different hex paths that are equally short (four hexes), as indicated on the diagram. There are actually two more paths (1-5-7-B and 4-5-3-B), but in this example only the primary four paths will be discussed.

Path I: 1, 2, 3, ending Hex B.
Path II: 1, 5, 3, ending Hex B.
Path III: 4, 5, 7, ending Hex B.
Path IV: 4, 6, 7, ending Hex B.

The player cannot choose Path I or II, however, because a hill in the intervening terrain (Hex 3) has a level of 4. The 'Mech has 4 Jumping MP, which would normally be enough, but as it is standing in Depth 1 water it has a starting level of –1, which means it can only jump over Level 3 terrain and lower this turn. As such, the 'Mech cannot jump over Hex 3. If Paths I or II were the only paths available, then the 'Mech could not jump to Hex B at all, because the shortest possible routes would both be illegal.

While the trees in Hex 5 rise two levels above the underlying terrain, they only rise to Level 3 (1 (underlying terrain) + 2 (trees) = 3). The 'Mech's Jumping MP equals or exceeds that level (4 Jumping MP – 1 = 3), but the 'Mech could cross that path regardless of the height of the trees, as trees do not affect jumping. As such, the player may still choose either Paths III or IV.

If the 'Mech had 5 or more Jumping MP available, it could have travelled to its destination along Paths I or II, because the 'Mech's Jumping MP (5) plus the level of the starting hex (–1) would equal or exceed the level of the intervening hilly terrain (4).

the normal rules of the hex it lands in. A jumping 'Mech also ignores facing: it can jump in any direction for the same MP cost, regardless of its initial facing, and when it lands it chooses any facing desired.

A 'Mech with at least 1 Jumping MP may jump down any number of levels. However, a 'Mech cannot enter a hex with a level higher than the sum of its current Jumping MP plus the level of the hex its jump began in.

A 'Mech can only jump to its destination hex via the shortest path (i.e. the fewest number of hexes required to get there). If more than one such path exists, the player chooses which of these paths their 'Mech takes. If all such paths are illegal (for example, there is only one path, and one of the hexes in the path has a level too high for the 'Mech to enter via jumping), the 'Mech cannot jump to the destination hex at all.

Death From Above: A 'Mech cannot jump into a hex that already contains a 'Mech unless it is making a Death From Above attack against an enemy 'Mech in that hex. See page 26 for details.

Into Water: A 'Mech cannot jump directly into water Depth 1 or deeper, but can end its jump over such a hex. If it does so, it must make a Piloting Skill Roll (see p. 40). If the PSR succeeds, the 'Mech is placed standing at the bottom of the hex. If it fails, the 'Mech tumbles to the bottom instead, falling a number of levels equal to the hex's depth (halve the resulting damage; round down).

Out of Water: Jump jets cannot be fired while submerged. As such, a 'Mech standing in Depth 1 water may not fire jump jets located in its legs. For example, a 'Mech with a Jumping MP of 5 that has one jump jet in each leg and one in each torso location may only use 3 Jumping MP when jumping out of Depth 1 water.

PRONE BATTLEMECHS

A 'Mech might drop to the ground to take cover, or be forced to the ground due to falls. Either way, such a Mech is prone. Prone 'Mechs rise 1 level above the underlying hex, and are harder to hit with and against.

DROPPING TO THE GROUND

A 'Mech may choose to drop to the ground if it did not jump that turn. This creates no additional heat, causes no falling damage, and costs 1 MP. The 'Mech drops face down with the same facing it had while standing. To regain its feet, it must attempt to stand (see *Standing Up*, at right).

MOVING WHILE PRONE

If a 'Mech begins the Movement Phase prone, it must declare whether it will walk or run before it attempts to stand (it may not jump). While prone, it can only change its facing in the hex or attempt to stand (see *Standing Up*, below).

STANDING UP

A 'Mech may attempt to stand even if missing one leg, or one arm and one leg, or both arms. A 'Mech missing both legs, or one leg and both arms, cannot. A 'Mech may attempt to stand in the same Movement Phase that it fell, as long as it has enough MP left and did not jump that turn.

Each attempt to stand, successful or not, costs 2 MP. The 'Mech's pilot must make a Piloting Skill Roll (see p. 40). If the PSR fails, the 'Mech falls again and takes additional falling damage and possible pilot damage. Use the same facing it had on the ground as its initial facing when rolling on the Facing After Fall Table (see p. 44). The 'Mech may make repeated attempts to stand as long as it has the MP required for each attempt.

When a 'Mech successfully stands, it may select any facing at no cost (regardless of its facing while on the ground), and may continue to expend any remaining MP in that phase.

Heat: Each attempt to stand creates 1 heat point.

Leg Destruction: A prone 'Mech with only one leg may still attempt to stand. However, it may only make one attempt per turn. This attempt to stand is always considered running, and can still be made even though a 'Mech with one leg can normally only walk.

As an exception to the normal rules, only one Piloting Skill Roll is ever made for this attempt, regardless of the number of PSRs that might be required by the action. All modifiers to this PSR are still cumulative, however.

Minimum Movement: A prone 'Mech with only 1 MP available can use this rule (see p. 11) to make a single attempt to stand.

MOVEMENT IN WATER

Water hexes have a depth that functions as a level change (see p. 9). 'Mechs entering water hexes must pay:

- the base 1 MP for entering a hex
- plus the MP cost for entering water of that depth (1 MP if Depth 1)
- plus the cost for any level change

Entering a water hex of any Depth greater than 0 forces a 'Mech to make a Piloting Skill Roll (see p. 40). This includes moving between water hexes, but not standing up or making facing changes within one.

A 'Mech standing in Depth 1 water has its legs submerged, and has partial cover (see p. 17). Underwater 'Mechs are completely submerged: this means a Depth 2 or deeper water hex if standing, or Depth 1 or deeper if prone.

'Mechs cannot enter a Depth 1 or deeper water hex while running (unless using *Minimum Movement*; see p. 11). However, a 'Mech can run and change facing in water and/or move from a water hex to a land hex.

Jumping: To resolve jumping into and out of water, see *Jumping Movement*, at left.

COMBAT

After all players complete the Movement Phase, 'Mechs engage in combat. BattleMechs use two forms of combat: weapon attacks and physical attacks. Weapon attacks are made in the Weapon Attack Phase, using ranged armaments such as missiles, lasers, and autocannons. For physical attacks (see p. 24), each 'Mech has a variety of options, most of which rely on the 'Mech's own weight to inflict damage.

WHAT IS A TARGET?

The target of an attack can be almost anything, even if the result will not inflict damage. For example, by firing at an empty hex, a player can expend unwanted ammunition. Regardless of the target, all effects of an attack must be taken into account (ammunition used, heat generated, multiple-target modifiers, etc.).

A player can never deliberately target a friendly 'Mech.

LINE OF SIGHT

Normally, in order to attack a target, a clear line of sight (LOS) must exist between the attacker and the target. A straight line running from the center of the attacker's hex to the center of the target's hex defines the LOS between two 'Mechs. Any hexes through which this line passes lie along the LOS, even if the line barely touches the corner of a hex. The hexes containing the attacking and target 'Mechs are *not* considered when determining LOS (see *Water Hexes*, p. 14, for the sole exception to this rule).

LOS is always mutual. That is, if you can see a target, that target can see you.

Adjacent 'Mechs: 'Mechs in adjacent hexes always have LOS to each other, unless one 'Mech is completely underwater and a 'Mech in an adjacent hex is not (see *Terrain Modifiers*, p. 17).

Indirect Fire: LRMs may be fired indirectly, as long as a valid LOS does not exist to the target (see *Indirect Fire*, p. 22).

LOS Exactly Between Two Hexes: If the LOS passes exactly between two hexes, the target 'Mech's controller decides which of the two hexes lies along the LOS (see the Line of Sight Between Two Hexes Diagram at right). If a target is not controlled by a player (for example, a building or a hex), randomly determine which of the two hexes the LOS lies along. In both cases, this LOS is used for all attacks between the attacker and that target for the rest of that turn. This choice is also used when determining attack direction (see *Attack Direction*, p. 22).

LEVELS AND HEIGHT

Apply the following rules for the purposes of terrain and LOS.

'MECH HEIGHTS

Standing 'Mechs are 2 levels in height; prone 'Mechs are 1 level in height. 'Mechs are treated as at the level of their underlying hex plus their current height when calculating LOS.

TERRAIN HEIGHT AND DEPTH

A hex's level is marked on the map. Hexes with levels higher than 0 represent hills. The higher the level number, the higher that piece of terrain.

• LINE OF SIGHT BETWEEN TWO HEXES DIAGRAM •

Water: Water hexes descend to a specific depth below the surface (from Depth 0 onwards). The depth represents the bottom of the body of water. As such, the higher the depth number, the deeper the water. Water intervenes for LOS purposes (see below) as if it is at the level of the surrounding terrain. A 'Mech in water is always at the bottom of the hex (i.e. at its full depth).

Woods: Woods rise 2 levels above the level of the underlying hex they occupy (for example, a woods on a Level 2 hex would rise 2 levels above that, reaching Level 4). 'Mechs occupying these hexes are standing on the underlying terrain, not on top of the trees.

INTERVENING TERRAIN

Terrain between the attacker and the target that lies along the LOS (not including the hexes occupied by the attacker and target) may intervene in LOS, depending on the terrain's level relative to the attacker and target. Only terrain features that have levels, such as trees and buildings, can intervene in LOS. For example, rubble itself would not intervene, though the hex containing the rubble might (depending on its underlying level).

Terrain along the LOS between two 'Mechs intervenes if:

- The level of the terrain or feature is equal to or higher than the level of both 'Mechs; or
- The level of the terrain or feature is equal to or higher than the attacker's level and adjacent to it (regardless of the level the target is on); or
- The level of the terrain or feature is equal to or higher than the target's level and adjacent to it (regardless of the level the attacker is on).

EFFECTS OF INTERVENING TERRAIN

Again, intervening terrain does not include the hexes either the attacker or target are standing in. Intervening terrain has the following effects on line of sight.

Hills: Intervening hills block LOS.

The LOS diagram at right illustrates many of the principles governing line of sight.

The BattleMech in Hex A wants to attack in this turn. It is standing in a Level 0 hex, and is therefore considered to be at Level 2 for purposes of LOS. Checking LOS for the 'Mech in Hex A to the other 'Mechs shown, we find the following conditions:

LOS to the 'Mech in Hex B passes through one light woods and one heavy woods hex, and so is blocked.

LOS to the 'Mech in Hex C passes through two light woods and a heavy woods hex, and so is blocked.

The 'Mech in Hex D is standing in a Level 1 hex, and is therefore considered to be at Level 3 for LOS purposes. Even though the LOS passes through hexes 2 and 3, those woods are at Level 2 for purposes of LOS and so do not intervene. The woods in Hex 1, however, are in the LOS and are at Level 3 for purposes of LOS. Because these woods are equal to or higher than both attacker and target, they intervene. The woods in Hex 4 are equal to or higher than the attacker and adjacent to the attacker, and so they intervene as well; only two of these light woods hexes intervene, however, and so they do not block LOS.

Finally, the 'Mech in Hex E is in a Level 3 hex, standing in Depth 1 water, and so is at Level 4 for LOS purposes. LOS is blocked by Hex 5.

Use the diagram to practice finding LOS with the other 'Mechs. Try to determine how many targets each 'Mech can see, and compare your results to the correct results that follow: Hex B has 2 targets, Hex C has 2 targets, Hex D has 3 targets and Hex E has 0 targets.

• LINE OF SIGHT DIAGRAM •

Partial Cover: While partial cover (see p. 17) conceals part of a 'Mech, it does not block LOS to that 'Mech.

Water: Intervening water blocks LOS for the purpose of these rules.

Woods: Three or more points of intervening woods block LOS. Light woods is worth 1 point, and heavy woods is worth 2 points.

INTERVENING 'MECHS

Intervening 'Mechs have no effect on LOS or attacks.

WATER HEXES

A standing 'Mech in Depth 2 or deeper water (or a prone 'Mech in Depth 1 or deeper water) is submerged. This blocks LOS to and from the 'Mech in that hex, except for physical attacks.

FIRING ARCS

If an attacker has LOS to its intended target, the attacking player then checks the firing arcs of their 'Mech's weapons to see which weapons can hit the target. There are four firing arcs as shown on the Firing Arcs diagram: the forward arc (in yellow), left side arc (in blue), right side arc (also in blue), and rear arc (in red).

Note that the firing arcs extend from the attacker to the edge of the playing area, and there are no "blind spots."

Prone 'Mechs: Arcs do not change if the attacker is prone.

FORWARD ARC

All weapons may fire into the forward arc unless they are rear-mounted. Arm-mounted weapons may fire into the forward arc plus the appropriate side arc.

Leg-Mounted Weapons: Leg-mounted weapons may not fire through a hex that provides the firing 'Mech with partial cover. The firing arc is always forward for forward-mounted leg weapons, and is not affected by torso twisting.

LEFT SIDE ARC

Weapons in a 'Mech's left arm may fire at targets in the left side arc and forward arc.

RIGHT SIDE ARC

Weapons in a 'Mech's right arm may fire at targets in the right side arc and forward arc.

REAR ARC

Only rear-mounted weapons may fire into the rear arc. Weapons that are rear-mounted will have a (R) beside their name on the record sheet's Critical Hit Table.

Leg-Mounted Weapons: Rear-facing leg-mounted weapons may not fire through a hex that provides the firing 'Mech with partial cover. The firing arc is always to the rear for rear-mounted leg weapons, and is not affected by torso twisting.

ARCS AND TORSO TWISTS

If a 'Mech twists its torso (see at right), its upper-body firing arcs are determined by the direction in which its torso is turned, not by the 'Mech's facing, as shown on the diagram. Arcs for leg-mounted weapons (and kick attacks) are always aligned with the feet.

Torso-twisting has no effect on how a 'Mech will receive damage (i.e. it only affects the 'Mech's own firing arcs; see *Attack Direction*, p. 22).

ARCS AND REVERSING (FLIPPING) ARMS

If a 'Mech flips its arms (see below), it may fire any arm-mounted weapon into the rear firing arc instead of the usual firing arcs for those weapons.

ATTACK DECLARATION

Next, the player declares their attacks. For each attack, the following must be announced:

- Which specific weapon is being fired
- Which specific target it is being fired at

Each weapon can make one attack a turn. If a player wants to make a specialized attack with it (such as an aimed shot or indirect fire), the player must announce these choices at the same time as the attack.

All attacks by all players must be declared before any are resolved.

REVERSING (FLIPPING) ARMS

A 'Mech whose record sheet does not show hand and lower arm actuators in both arms on its Critical Hit Table and that does not have any weapons split between torso and arm locations can flip its arms. After flipping its arms, a 'Mech uses the rear firing arc for arm-mounted weapons, instead of the usual firing arcs.

Both arms must lack these actuators: a 'Mech with only one applicable arm cannot reverse either of its arms. If a 'Mech that can reverse its arms loses one during a game, it can still reverse the remaining arm. However, 'Mechs equipped with hand and lower arm actuators which later lose them through damage cannot then reverse their arms..

Reversing arms occurs during attack declaration. Both arms must be reversed (unless one is destroyed). A 'Mech cannot torso twist and reverse its arms in the same turn. In the End Phase, reversed arms automatically return to the front arc.

Prone 'Mechs: Prone 'Mechs may not reverse their arms.

• FIRING ARCS DIAGRAM •

TORSO TWISTS

As part of each 'Mech's weapon attack declaration, a 'Mech can rotate its torso one hexside to the left or right while keeping its feet pointed straight ahead. This twist lasts for the remainder of the turn, affecting firing arcs for the Weapon Attack and Physical Attack Phases, but is not considered when determining hit locations.

The torso automatically returns to its forward position in the End Phase.

Prone 'Mechs: Prone 'Mechs may not torso twist

FIRING WEAPONS

Players use their 'Mechs' armament to attempt to inflict damage on targets. Each weapon is always fired individually, even if multiple weapons of the same type are mounted in the same location. See the Weapons and Equipment Table on page 55 for a full list of available weapons and the statistics for each.

MAKING THE ATTACK

When making an attack, use the G.A.T.O.R. sidebar (see p. 16), to create a final Target Number. Then roll 2D6 to see if the attack hits the target. If the result is equal to or greater than the modified Target Number, the attack hits.

If the modified Target Number is greater than 12, the shot automatically misses; rolling a 12 does not result in an automatic hit. If a player determines that their 'Mech's declared attack will automatically miss, they can choose not to make the attack, though another target may not be chosen in its place that turn.

If the modified Target Number is 2 or less, the shot automatically hits.

Resolution Order: The attacker chooses the order in which they make attack rolls for all of their 'Mech's declared attacks. From turn to turn, the attacker can change this order.

G.A.T.O.R.

The attack process is not complicated—simply a matter of rolling 2D6 and trying to equal or exceed the modified Target Number. However, it's the modified part—juggling all those numbers—that can be tricky.

After you understand the *Target Number Modifiers* section starting at right, you'll find that "GATOR" is a helpful mnemonic that reminds you what needs to be taken into account:

- **G** Gunnery Skill Rating of the attacker (the base Target Number for the attack). Then add:
- **A** Attacker movement modifier [the color of the Movement Die on your 'Mech]
- **T** Target movement modifier [the number of the Movement die on the target 'Mech]
- **O** Other modifiers (potentially a big category, but typically only includes woods, partial cover, and heat)
- **R** Range modifiers

Start with your Gunnery Skill Rating, then add all other applicable modifiers as indicated, and the result is your modified Target Number to meet or exceed on the die roll. In the Target Number Modifiers section (as well as the Attack Modifiers Table), modifiers are listed in GATOR order, beginning with the Attacker Movement Modifier.

BASE TARGET NUMBER (GUNNERY SKILL)

GATOR

The base Target Number for a weapon attack is equal to the attacker's Gunnery Skill Rating (see *Skills*, p. 5; and see the Warrior Data section of your record sheet).

TARGET NUMBER MODIFIERS

The base Target Number may be modified by several factors, including movement, terrain (woods, partial cover, and so on) and range. All modifiers are cumulative.

ATTACKER MOVEMENT MODIFIER

GATOR

The attacker's Target Number is modified by their own movement using the values in the Attack Modifiers Table (see p. 19). The attacker's movement modifier is based on the movement mode it used in the turn (Walking, Running, or Jumping), not the actual MP expended or distance moved (the color of the Movement Die on your 'Mech, *not* the number).

TARGET MOVEMENT MODIFIER

GATOR

A moving target is harder to hit, and so an attacker's Target Number is modified by its target's movement using the values in the Attack Modifiers Table (see p. 19). The target movement modifier (often abbreviated as "TMM") is based on the number of hexes traversed by the target this turn, not the number of Movement Points it spent (the number on the Movement Die on your 'Mech, *not* the color).

If the target moved both backward and forward in the turn, base the TMM on the number of hexes moved from the hex in which the 'Mech last reversed its movement. For example, if the target moved backward three hexes and then forward two hexes, the target movement modifier would be based only on the final two hexes of movement, resulting in a TMM of 0 (the Movement Die would show a 6).

If a target jumped this turn, an attacker must also apply a +1 modifier to the attack's Target Number, in addition to the modifier for the number of hexes the target moved.

DAMAGE MODIFIER

GATOR

The attacker's Target Number may suffer additional modifiers for damage to its arms or sensors, as discussed in *Critical Hits* (p. 30).

Lower Arm Actuators: 'Mechs whose record sheet did not come with lower arm actuators do not suffer actuator damage modifiers to weapon attacks, though the absent actuator still affects physical attacks.

HEAT MODIFIER

GATOR

The attacker's Target Number may suffer a modifier due to its heat build-up, as discussed in *Building Up Heat* (p. 37). The Heat Data section of the record sheet summarizes the modifiers for the effects of heat build-up.

Target Number modifiers due to heat never apply to physical attacks.

IMMOBILE TARGET MODIFIER

GATOR

Attacks against an immobile target apply a –4 Target Number modifier.

The most common immobile targets are 'Mechs which are shut down, abandoned, missing all four limbs, or possess an unconscious MechWarrior, as well as unoccupied hexes. Do not apply this modifier unless a target is specifically stated to be immobile, even if it has 0 MP.

Aimed Shot: This specialized attack can be declared against immobile targets. See page 21.

MULTIPLE TARGETS MODIFIER

GATOR

A 'Mech may engage more than one target in a turn. The only limit on the number of targets is how many weapons a 'Mech mounts.

During the attack declaration step, the attacker designates one target as the primary target. If any declared targets are in the attacker's forward arc, one must be the primary target. If the attacker is declaring attacks only against targets in the side and rear arcs, they may choose any of them as the primary target.

All targets other than the primary target, no matter how many, are secondary targets. Against secondary targets in the forward arc, apply a +1 Target Number modifier; against secondary targets in the side and rear arcs, the modifier is +2. These modifiers are not cumulative.

These rules apply regardless of where the weapons are mounted. For example, a 'Mech with three medium lasers in its right arm fires one medium laser at a target in its front arc (designated as the primary target), and the second and third medium lasers at separate targets in its right side arc. The primary target receives no multiple targets modifier, while both secondary targets in the side arc each receive a +2 Target Number modifier.

Multiple Firing Arcs: Through torso twisting, a 'Mech with both upper-body and leg-mounted weapons may have more than one firing arc at once. Regardless of its number of firing arcs, a 'Mech may only have one primary target each turn.

Physical Attacks: The multiple targets modifier does not apply to physical attacks.

PARTIAL COVER MODIFIER

GATOR

To receive partial cover, a target 'Mech must be standing adjacent to a hex one level higher than its current hex. This adjacent hex can be a hill or a building (but not a bridge), but must lie along the LOS between the attacker and target. For example, a standing 'Mech adjacent to a Level 1 hex would receive partial cover if an attacker traces LOS through that hex.

However, if the attacker has an LOS level higher than the target's LOS level, partial cover does not apply. In other words, an attacker firing downhill (regardless of how many hexes lie between attacker and target) negates its target's partial cover (unless the partial cover is being provided by water; see below).

Attacks against a target with partial cover apply a +1 Target Number modifier. In addition, if the hit location roll indicates a leg, the attack is ignored.

Prone 'Mechs: Prone 'Mechs cannot receive partial cover. However, lying prone adjacent to a level 1 hex along the LOS from an attacker would fully block LOS.

Water: A standing 'Mech in Depth 1 water receives partial cover, even versus attackers that are at a higher level than it or making physical attacks. However, if an attack could not hit the legs in the first place (for example, if the attack uses the Punch Location Table), partial cover is not applied.

Woods: These terrain types do not provide partial cover.

The Line of Sight diagram on page 14 illustrates some examples of partial cover.

The 'Mech in Hex C has partial cover from the 'Mechs in Hexes A and B. This is because it is adjacent to a level that is one level below its own LOS height, along the LOS between the 'Mech and those two 'Mechs, and the LOS height of those two 'Mechs is equal to or less than the LOS height of the 'Mech.

The 'Mech in Hex D has partial cover from the 'Mech in Hex A for the same reason. For the 'Mech in Hex B, its target in Hex D would only receive partial cover if the 'Mech in Hex B declared its attacks first—LOS passes exactly between the hexes that would allow the partial cover to intervene, meaning the target chooses the partial cover hex.

TERRAIN MODIFIERS

GATOR

Terrain can affect the probability of a successful shot by forcing the attacker to account for intervening land features and partial cover. For line of sight purposes (see p. 13), terrain modifiers in excess of +2 always result in LOS being blocked.

Death From Above: This attack (see p. 26) ignores terrain modifiers.

Light Woods: Add a +1 Target Number modifier if the target occupies a light woods hex. Apply a further +1 modifier per hex of light woods intervening between the attacker and the target (see *Intervening Terrain*, p. 13).

Heavy Woods: Add a +2 Target Number modifier if the target occupies a heavy woods hex. Apply a further +2 modifier per hex of heavy woods intervening between the attacker and its target (see *Intervening Terrain*, p. 13).

Partial Cover: Attacks against a target in partial cover (see at left) receive a +1 Target Number modifier.

Water: Water does not provide a terrain modifier. However, a standing 'Mech in Depth 1 water receives partial cover, which provides a +1 Target Number modifier to attacks against it (see *Partial Cover Modifier*, at left).

RANGE MODIFIER

GATOR

The farther away a target, the harder it is to hit. Count the hexes between attacker and target, taking the shortest path (start with the hex adjacent to the attacker, and include the target's hex). The total is the range to the target.

Each weapon's range is divided into range brackets: short, medium, and long. For example, a PPC has a range of 18 hexes. Its short-range bracket is "6", meaning that any attack made with a PPC against targets 1-6 hexes away or less is in the PPC's short range.

The range bracket a target is in determines the range modifier for an attack with that weapon against that target. A short-range shot does not modify the attack's Target Number. A medium-range shot adds a +2 Target Number modifier, while a long-range shot adds a +4 modifier. Weapons cannot hit a target beyond their long range.

Levels: Level differences are ignored when calculating range. A target one hex away but 99 levels higher than the attacker is still one hex away when determining range and range modifiers.

MINIMUM RANGE MODIFIER

GATOR

Some weapons, such as PPCs and long-range missiles (LRMs), are designed to be fired at long-range targets. If a target is too close, hitting it with such weapons is more difficult.

A weapon's minimum range, if any, appears on the Weapons and Equipment Table on page 55, as well as the record sheet. If a target is within this range, use the following formula to determine the minimum range modifier: [Min. Range] – [Target Range] + 1. For

• ROLLING TO HIT DIAGRAM •

The Rolling To Hit diagram, below, illustrates how to determine a modified Target Number.

The Wolverine *has used its Running movement of 8 MP to move from Hex A to Hex B. Though it expended 8 MP in the move, it actually travelled five hexes, and so the player places a black Movement Die with a "2" showing. For the* Griffin *to move from Hex C to Hex D would require Running and since it's only two hexes, would not receive any movement modifier. As such, the player decides instead to use 2 Jumping MP to reach Hex D. It's still only two hexes so no modifier there, but since he jumped, he places a red Movement Die with a "1" showing. Finally, the* Thunderbolt *used its Walking MP of 4 to move from Hex E to Hex F. But since it also only traveled two hexes, a white Movement Die is placed next to the* Thunderbolt *with a "6" showing, meaning 0 modifier.*

The WVR-6M Wolverine *would love to fire its weapons against the* Thunderbolt *in Hex F—it didn't move enough to generate a modifier and has serious damage, particularly in the left torso pointing right at the* Wolverine. *However, because LOS passes exactly between hexes I and II, the target chooses and the defending* Thunderbolt *selects the LOS to pass through hex I, meaning LOS is blocked in both directions.*

As such, the Wolverine *is firing a medium laser and SRM 6 at the* Griffin *(they both have the same range, so even though they're different weapons, the player can figure the numbers simultaneously). The player remembers the* ***GATOR*** *principle as he begins to add up his numbers. The Base Target Number is the* Griffin *MechWarrior's Gunnery Skill of 4 (****G****ATOR). The* Wolverine *used Running movement this turn, so the Attacker Movement Modifier is +2; the black Movement Die (G****A****TOR). While the target* Griffin *only moved two hexes, because it jumped, it receives a +1; the "1" on the red Movement Die (GA****T****OR). The target has partial cover to the* Wolverine, *which adds a +1 Partial Cover Modifier (GATO****R****). Additionally, there is a light woods along the LOS between the* Wolverine *and* Griffin *which is intervening (the light woods in the Level 1 hex is not intervening), which adds a +1 Terrain Modifier (GATO****R****). The target is four hexes away, which is in the medium range for the medium laser and SRM 6, adding a Range Modifier of +2 (GATO****R****). The result is a modified Target Number of 11 [4 (Gunnery Skill) +2 (Attacker Movement) +1 (Target Movement) +1 (Partial Cover Modifier) +1 (Terrain Modifier) +2 (Range Modifier) = 11].*

The GRF-1N Griffin *is attacking back with its PPC. The* Griffin*'s MechWarrior's Gunnery Skill is 3. The* Griffin *used Jumping movement this turn, so it must add an Attacker Movement Modifier of +3; the red Movement Die. The target moved five hexes, creating a +2 Target Movement Modifier. There is a Light Woods in between the attacker and target along the LOS (again, the light woods in the Level 1 hex is below the height required to intervene), and the target is in Light Woods, creating a +2 Terrain Modifier. The range to the target is four hexes, which is in short range for the PPC. For that attack, the modified Target Number is 10 [3 (Gunnery Skill) +3 (Attacker Movement) + 2 (Target Movement) +2 (Terrain Modifier) +0 (Range) = 10].*

• MINIMUM RANGE DIAGRAM (PPC EXAMPLE: BASE TARGET NUMBER + MINIMUM RANGE MODIFIER) •

example, if a 'Mech fires a PPC at a target three hexes away, the minimum range modifier would be +1. If the target is two hexes away the modifier is +2, and if one hex away the modifier is +3.

COMBAT IN WATER

A 'Mech standing in Depth 1 water may attack 'Mechs in water with weapons not mounted in the legs. A 'Mech prone in Depth 1 water is fully submerged.

PRONE 'MECHS

Prone 'Mechs may still participate in combat.

Water: A 'Mech prone in Depth 1 water is fully submerged.

FIRING WHILE PRONE

A prone 'Mech may fire some of its weapons, as long as neither of its arms has been destroyed.

The attacker chooses one arm: no weapons in that arm can fire that turn (this includes weapons split between that arm and

ATTACK MODIFIERS TABLE

All Attacks: Weapons and Physical	Modifier
Gunnery Skill (GATOR**)**	Base Target Number
Attacker Movement Modifier (G**A**TOR)	
Movement (modifiers are cumulative)	
Stationary [White Movement Die, number 6 showing]	None
Walked [White Movement Die]	+1
Ran [Black Movement Die]	+2
Jumped [Red Movement Die]	+3
Prone	+2
Target Movement Modifier (GA**T**OR)	
Movement (modifiers are cumulative)	
Prone	–2 from adjacent hex; +1 from all others
Immobile	–4
Movement	
Moved 0–2 hexes	0
Moved 3–4 hexes	+1
Moved 5–6 hexes	+2
Moved 7–9 hexes	+3
Moved 10–17 hexes	+4
Moved 18–24 hexes	+5
Moved 25+ hexes	+6
Jumped	+1 additional
Attacker	
'Mech Damage [Damage Modifier (GAT**O**R)]	
Sensor hit	+2
Shoulder hit	+4 for weapons in arm, disregard other damaged actuators in arm
Upper or lower arm actuator (each)	+1 for weapons in arm

CONTINUED NEXT PAGE

ATTACK MODIFIERS TABLE (CONTINUED)

Weapon Attacks Only	Modifier
Attacker (continued)	
Heat [Heat Modifier (GAT**O**R)]	
0–7	None
8–12	+1
13–16	+2
17–23	+3
24+	+4
Target [Multiple Targets Modifier (GAT**O**R)]	
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2
Specialized Attacks	
Making Indirect Fire attack	+1 (+2 if the spotter also attacked this turn)
Spotting for Indirect Fire	+1
Terrain Modifiers (GAT**O**R) *(modifiers are cumulative)*	
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; see *Partial Cover Modifier*, p. 17
Depth 2	Underwater 'Mechs cannot target units that are not underwater
Partial Cover	+1; see *Partial Cover Modifier*, p. 17
Range Modifier (GATO**R**)	
Range	
Short	None
Medium	+2
Long	+4
Minimum range	[Minimum] – [Target Range] +1 (see *Minimum Range Modifier*, p. 18)

Physical Attacks Only	
Attacker	
'Mech Damage [Damage Modifier (GAT**O**R)]	
Shoulder hit	No punching or physical weapon attack with arm; no clubbing attacks; +2 to pushing attack (each)
Upper or lower arm actuator hit (each)	+2 to punching and physical weapon attack with arm; half damage for punching attack with arm; +2 to clubbing attacks
Hand actuator hit	+1 to punching attack with arm; no clubbing attacks; no physical weapon attack with arm
Hip actuator hit	No kicking attacks
Upper or lower leg actuator hit (each)	+2 and half damage to kicking attack with that leg
Foot actuator hit	+1 to kicking attack with that leg
Other Modifiers	
Charging attack	Modify for relative Piloting Skills (see *Comparative Modifier*, p. 25)
Unintentional charge	+3
Death from above attack	Modify for relative Piloting Skills (see *Comparative Modifier*, p. 25)

the corresponding torso; which arm is chosen may be changed each turn). No leg-mounted weapons can be fired either. All other weapons may be fired, using the same arc as if it were standing and facing that direction. A prone 'Mech cannot torso twist.

Add a +2 Target Number modifier to weapon attacks made while prone, in addition to any other applicable modifiers. For example, if a 'Mech runs (+2 modifier) and then drops prone in the same turn it makes a weapon attack, it receives a +4 Target Number modifier.

ATTACKING PRONE 'MECHS

A prone 'Mech is an easier target if in an adjacent hex, but a more difficult target at longer ranges. Apply a –2 Target Number modifier to attacks made against a prone 'Mech from an adjacent hex. If the attacker is not adjacent, apply a +1 modifier.

For example, if a 'Mech runs seven hexes and then drops prone, attacks against it by non-adjacent 'Mechs receive a +4 Target Number modifier (+3 for moving seven hexes, +1 for firing at non-adjacent prone 'Mech = 4); adjacent 'Mechs would receive a +1 Target Number modifier (+3 for entering seven hexes, –2 for firing at an adjacent prone 'Mech = 1).

SPECIALIZED ATTACKS

Several specialized attacks, such as indirect fire, have their own rules and Target Number modifiers, as outlined below.

AIMED SHOT

Players may announce that they are aiming for a specific hit location when declaring a weapon attack, but only against immobile targets (see *Immobile Target Modifier*, p. 17). Missiles cannot make an aimed shot.

Apply the –4 immobile Target Number modifier to the attack (unless aiming for the head; see below). If the attack hits, the attacker rolls 2D6: on a 6, 7, or 8, the shot hits the designated location. If not, the attacker rolls normally on the appropriate Hit Location Table (and so may hit the designated location after all).

This rule cannot be used with physical attacks.

Head Shots: If aiming at a 'Mech's head, the immobile target modifier is *not* applied, *and* an additional +3 modifier is added.

Partial Cover: If a target has partial cover, you can only aim for locations that are not behind cover. Do not apply the Target Number modifier for partial cover, and if a leg location is rolled when assigning a hit, re-roll until a non-leg hit location is rolled.

INDIRECT FIRE

LRM launchers may be fired indirectly. Indirect fire allows a 'Mech without a direct line of sight to a target to attack that target. An attacker with valid LOS to a target cannot make an indirect fire attack against that target.

Another friendly 'Mech must have a valid line of sight to the target: this friendly 'Mech is referred to as the spotter. In order to choose to be a spotter, a 'Mech must not have charged or launched a Death From Above attack that turn; any other action is fine. A spotter can spot for any number of attackers against a single target, but can only spot to one target a turn.

An indirect fire attack applies the following modifiers:

- All standard modifiers for attacker and target movement;
- All standard modifiers for the spotter's movement;
- Terrain modifiers and partial cover based on line of sight from the spotter, not the firing 'Mech;
- +1 for indirect fire;
- Range modifier based on the range between the attacker and target, including minimum range modifiers;
- Finally, if a spotter makes any attacks during the Weapon Attack Phase of a turn that it also spots, apply a +1 Target Number modifier to those attacks, as well as an additional +1 modifier to the indirect fire attack.

Aimed Shots: No indirect fire attack may be an aimed shot.

Partial Cover: Damage from indirect fire always strikes the target and not the partial cover, even if it hits a leg location; see *Partial Cover Modifier*, p. 17). The exception is if the partial cover is provided by water: in this case, the indirect fire strikes the water and does no damage.

ROLLING TO HIT

Once the player has determined all Target Number modifiers for the attack, they make a roll to see if the attack is successful. For each weapon attack, the player rolls 2D6. If the result is equal to or greater than the modified Target Number, the attack succeeds.

Players choose the order they roll, and the order they resolve the damage (which can be different), for all their 'Mech's declared attacks; resolve all attacks against one target before moving on to attacks by the same 'Mech against another target. From turn to turn, this order can differ at the player's discretion.

AMMUNITION EXPENDITURE

Ballistic and missile weapons have a limited amount of ammunition. Weapons that require ammunition indicate the number of shots available for that weapon per ton of ammo carried in the Ammo per Ton column of the Weapons and Equipment Table (see p. 55).

SHOTS

All weapons that require ammunition have their ammo stored in ammo bins. Each ammo bin provides a varying number of shots, depending on the weapon. For example, one ton spent on ammo provides an ammo bin containing twenty shots for an AC/5, or five

shots for an AC/20. Missile ammunition works differently, in that a single shot for a missile launcher is always one firing of all the missile tubes of that launcher. For example, a ton of SRM 4 ammo provides an ammo bin containing twenty-five shots (with four missiles fired every shot). A single ton of LRM 20 ammo provides an ammo bin containing six shots (with twenty missiles fired every shot). Put simply, each time a weapon that requires ammunition fires, regardless of its type or size or number of missile tubes, it uses one shot of that weapon's ammunition.

A weapon can draw ammo from any ammo bin that carries the exact ammunition for that weapon. The ammo need not be in the same location as the weapon on the Critical Hit Table of the 'Mech Record Sheet. For example, an LRM 15 in the left arm of a 'Mech can use LRM 15 ammo carried in any location, but cannot use LRM 5, 10, or 20 ammo. In addition, if multiple ammo slots of the correct type exist, a player can draw ammo from any slot desired in a turn, switching slots each turn at their discretion. For example, take a 'Mech with an LRM 15 and three LRM 15 ammo bins: two in the right arm and one in the left torso. The 'Mech fires the LRM 15 in each of three consecutive turns. Each turn, its controller can remove one shot from any one of the three LRM 15 ammo bins.

Similarly, multiple weapons of the exact same type (e.g., all LRM 5s, or all LRM 15s, but not all LRMs in general) can share ammunition bins. For example, a 'Mech with two AC/5s can have just one ton of AC/5 ammo to share between both, and firing both means that two shots are drawn from the single ammo bin.

As damage can cause ammunition to be lost or even to explode, it is very important to track which bin each shot is fired from. For 'Mechs with multiple ammo bins for a single weapon type, be careful not to make the mistake of assigning all ammunition to a single "pool". For example, If a player's 'Mech has three tons of AC/5 ammo (20 shots per ton), they would not write on the 'Mech's record sheet that it has 60 AC/5 shots. Instead, they would note that it has three separate bins of 20 shots each, with each bin's ammo count recorded separately on the Critical Hit Table.

Ammunition Use Timing: Ammo expended in a turn is marked off when attack declarations are made.

HIT LOCATION

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

ATTACK DIRECTION

When an attack hits a 'Mech, it hits from the target's front, rear, left, or right side. Use the direction of a standing 'Mech's feet to determine its facing, disregarding any torso twists it has made that turn.

Ray wishes to fire upon an enemy 'Mech. He draws a straight line between the center of the attacking 'Mech and the center of the target 'Mech. After looking at the Attack Direction diagram for the 'Mech, Ray determines that the attack crosses the left side, meaning that all his attacks against that target this turn will use the Left Side column of the Hit Location Table.

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 Attack Direction Diagram to find the side of the 'Mech hit by the attack. If the straightedge crosses at the intersection of two hexsides, the target chooses which side is hit by the attack before the attacking player makes the hit location roll.

Prone 'Mechs: If the target 'Mech is prone, use the hexside the top center of the 'Mech is pointing at as its facing. Any damage to a prone 'Mech from outside sources such as weapons fire is treated as if the 'Mech was standing with that facing.

DETERMINING HIT LOCATION

To determine the location of a hit, the player rolls 2D6 and consults the appropriate column of the Hit Location Table (see right).

As with resolving attack rolls, the attacker chooses the order in which they determine hit locations (and resolve damage to the target) for all of their 'Mech's declared attacks. From turn to turn, the attacker can change this order.

It is vital that every hit location roll be made one at a time. If a 'Mech hits with multiple weapons in a single attack, it is tempting to just roll a bunch of dice and so try to resolve all hit locations at once. This is wrong, as the order in which attacks hit is very important, even if a 'Mech hits with multiple of the same weapon. This is explained further in the *Damage* chapter (beginning on p. 30).

Critical Hit: A roll of 2 when determining hit location creates the chance for a critical hit in the torso location rolled, even if the armor remains intact in that location (see *Through-Armor Critical Hit*, under *Critical Hits*, p. 30).

Partial Cover: Remember that, as described in *Partial Cover Modifier* (see p. 17), if a 'Mech has partial cover and the hit location of an attack against that 'Mech indicates a leg, the attack strikes the cover instead.

• ATTACK DIRECTION DIAGRAM (WHITE HEXES = TARGET'S CHOICE) •

HIT LOCATION TABLE

Roll (2D6)	Left Side	Front/Rear	Right Side
2*	Left Torso [critical]	Center Torso [critical]	Right 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	Center Torso	Right Torso
8	Center Torso	Left Torso	Center 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. 31.

CLUSTER HITS TABLE

Roll (2D6)	Weapon Size						
	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

MISSILE ATTACKS

Each shot in a missile attack contains multiple projectiles. Even if a 'Mech is hit with a missile attack, not every missile in the flight may hit the 'Mech. The attacker determines how many of the missiles hit the target by rolling 2D6 and consulting the Cluster Hits Table (see p. 23).

First, find the Weapon Size of the missile launcher on the top row of the table (e.g. for a SRM 4, use the 4 column; for a LRM-15, use the 15 column). 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.

A Catapult *fires its LRM 20. The attack is successful, and so the attacking player must now determine how many of his 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 Cluster Hits Table, then reads across the row to the 20 Weapon Size column, which shows that 12 missiles reached their target.*

SRMs: On the record sheet, the Damage column lists it as "2/Msl", meaning two points of damage per missile. The attacker rolls a separate hit location for each short-range missile (SRM) that hits.

LRMs: On the record sheet, the Damage column lists it as "1/Msl", meaning one point of damage per missile. The attacker makes one hit location roll for every 5 long-range missiles (LRMs) that hit the target. Group the missiles that hit into lots of 5; in other words, after rolling on the Cluster Hits Table on page 23, form as many 5-point Damage Value groupings as possible, assigning any remaining points to one smaller lot, and determine a hit location for each lot.

In the previous example, the Catapult *hit its target with 12 missiles from its LRM 20 attack. 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 5-point Damage Value groupings, plus one 2-point Damage Value grouping. 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 left arm. The remaining 2-point group strikes the target's right leg.*

DAMAGE RESOLUTION

Only after all weapon attacks have been made is the damage caused as a result of those attacks applied. As such, damage dealt in a Weapon Attack Phase never affects attacks made that same phase (the attacks are all made before the gameplay effects of damage caused as a result are applied).

All Piloting Skill Rolls required due to weapon attacks are made at the end of the Weapon Attack Phase (i.e. after all attacks that phase), applying any modifiers resulting from damage inflicted that phase. See page 40 for details. Once this is done, players then proceed to the Physical Attack Phase.

See the *Damage* chapter, pages 30-36, for how to resolve damage.

PHYSICAL ATTACK MODIFIERS TABLE

Attack Type	Modifier
Charging	+0
Clubbing	–1
Death From Above (DFA)	+0*
Kicking	–2
Punching	+0
Pushing	–1
Physical Weapon	See p. 28

*All the normal attack modifiers apply, including the attacker's jumping movement, but the roll is not modified for terrain.

PHYSICAL ATTACKS

Physical attacks take place in the Physical Attack Phase. This phase occurs after the Weapon Attack Phase is complete. As such, all weapon fire, as well as all damage and effects from that fire, is resolved before any physical attacks are made in a turn.

'Mechs can make seven different types of physical attacks: charging (see p. 25), clubbing (see p. 26), death from above (DFA) (see p. 26), kicking (see p. 28), physical weapon attacks (see p. 28), punching (see p. 28), or pushing (see p. 29).

In order to make a physical attack, a 'Mech must be adjacent to its target (unless specified otherwise) and the target must be in a valid arc, as described in the rules for each attack.

The rules for physical attacks assume that attacker and target are 'Mechs standing at the same level. Special rules regarding different levels or prone 'Mechs appear on page 25.

Initiative and Displacement: A 'Mech can only be the target of one charge, death from above, or push attack in a turn. If one of these attacks is declared against a 'Mech, it cannot be targeted by any other attack of these types that turn.

If one 'Mech's charge, push, or DFA attack would displace the target of another 'Mech's physical attack, the 'Mech with the lower Initiative (i.e. the first to move) resolves its physical attack first. If both attackers are on the same side, the controlling player(s) may determine which attack is resolved first. If no valid target exists, the attack automatically fails.

Multiple Physical Attacks: A 'Mech may only make a single type of physical attack in a single turn. Even if a 'Mech mounts two physical weapons (identical or otherwise), it can only make a single physical weapon attack. However, when making a single punch attack, a player can punch with one or two arms (see *Punch Attacks*, p. 28).

MAKING A PHYSICAL ATTACK

The base Target Number for a physical attack is equal to the attacking 'Mech's Piloting Skill Rating (see *Skills*, p. 5).

The modified Target Number equals the base Target Number plus the modifier for the specific physical attack as noted on the Physical Attack Modifiers Table above. All standard modifiers for weapon attacks apply; the sole exceptions are heat and sensor modifiers, which never apply.

Physical attacks are not Piloting Skill Rolls: modifiers that only affect Piloting Skill Rolls do not affect physical attacks, and vice versa.

As with weapon attacks, if the modified Target Number is 2 or less, the physical attack automatically hits. If the modified Target Number is greater than 12, the physical attack automatically misses: in this case, the player can choose not to make the attack, thereby avoiding the possible need to make a Piloting Skill Roll for a failed attack.

COMPARATIVE MODIFIER

Whenever a 'Mech charges or conducts a death from above attack on another 'Mech, subtract the target's Piloting Skill from that of the attacker's, and use the result as a modifier to the Target Number. This applies even if the target is unconscious.

CRITICAL DAMAGE

Critical damage to a 'Mech's arms or legs adds modifiers to the Target Numbers of physical attacks. See the Attack Modifiers Table, page 19, for a list of these modifiers.

DIFFERENT LEVELS

The rules for punching, clubbing, physical weapon, kicking, and charging attacks assume that the opposing 'Mechs are at the same level.

A 'Mech may make a physical attack against another 'Mech only if the level of the underlying hexes of both 'Mechs are within one level of each other. The Different Levels Table shows which types of physical attacks can be made in various situations. Players must use different Hit Location Tables to determine the location of damage from punching, clubbing, physical weapon, or kicking attacks against an opponent on various levels.

PHYSICAL ATTACKS AND PRONE 'MECHS

Prone 'Mechs cannot make physical attacks against other 'Mechs.

Kicks and death from above attacks may be made against a prone 'Mech, as can club and physical weapon attacks. Prone 'Mechs are always treated as adjacent to their attacker for these purposes (and thus the attacker gains the –2 Target Number modifier for attacking an adjacent prone 'Mech).

Determine the location of successful attacks using the appropriate column of the Hit Location Table (see p. 23). Always determine damage inflicted by death from above attacks against prone 'Mechs using the Rear column of the table, based on the hex side as if it were standing.

Different Levels: A prone 'Mech one level higher than the attacking 'Mech can also be hit by punch, club, and physical weapon attacks. These attacks also use the Hit Location Table (unless noted otherwise for physical weapon attacks). A prone 'Mech one level lower may not be the target of a kick.

PHYSICAL ATTACKS AND WATER

A 'Mech standing in Depth 1 water may make any physical attack. However, a physical attack cannot be made against a fully-submerged 'Mech, unless the attack begins underwater as well.

For example, a 'Mech standing in Depth 1 water adjacent to a prone 'Mech in Depth 1 water can only make a kick attack, since the kick attack occurs completely underwater. The standing 'Mech cannot make a DFA against the prone 'Mech because a portion of the attack would take place outside the water.

Any physical attack that occurs underwater inflicts half its standard damage (round down).

Partial Cover: Depth 1 water provides partial cover to a standing 'Mech against physical attacks other than kicks. Such an attack made against a 'Mech in Depth 1 water by an attacker that is itself not fully submerged adds the +1 Target Number modifier for partial cover. If the attack resolves to the legs, it is ignored.

Note that if a 'Mech on Level 0 kicks a 'Mech in Depth 1 water, the target 'Mech would not receive partial cover, because, as per the Different Levels Table (see below), such an attack is resolved using the Punch Location Table. As such, the part of the 'Mech receiving the attack does not have cover.

Depth 2+ Water: A 'Mech standing in Depth 2 (or deeper) water can make any physical attack, except for a death from above.

CHARGE ATTACKS

Base Target Number: Piloting Skill (comparative modifier; see left).

In order for a 'Mech to charge, it must not have jumped that turn. A charging 'Mech cannot make any weapon attacks that turn.

Charge attacks are declared in the Movement Phase, not the Physical Attack Phase. It is not necessary to move in a straight line to charge, or to use Running movement. All that is required is that the attacker has enough MP to enter the hex the target occupies, and can legally do so. The attacker stops one hex away from the target and only then declares the charge: when resolving any action against the charging 'Mech between that moment and the time the charge is finally resolved, treat the 'Mech as in that hex and having only moved that far. It does not actually finish its movement and enter the target hex until the Physical Attack Phase.

DIFFERENT LEVELS TABLE

Target is:	Allowed Physical Attack
Standing 'Mech 1 level higher	Charge, Punch (Kick Table), Club (Kick Table), Physical Weapon (Kick Table)
Standing 'Mech 1 level lower	Charge, Kick (Punch Table), Club (Punch Table), Physical Weapon (Punch Table)
Prone 'Mech 1 level higher	Punch, Club, Physical Weapon
Prone 'Mech 1 level lower	None

Note: A 'Mech can always make a death from above attack if it has the necessary Jumping MP, provided the target is valid.

Like all other physical attacks, charges are resolved during the Physical Attack Phase. This means the attacker can only charge 'Mechs that have finished their movement. It also means a charging 'Mech cannot itself be the target of a charge or death from above attack, because the charging 'Mech's movement will not be finished until the end of the Physical Attack Phase.

If the attacking 'Mech falls during the Weapon Attack Phase, its charge automatically misses; resolve the fall normally at the end of the Weapon Attack Phase. If the target falls during the Weapon Attack Phase, the charge attack is not made and so the attacker does not move into the target's hex.

Multiple Attacks: A 'Mech may only be the target of one charge, death from above, or push attack in a given turn.

Shutdown Targets: When determining targets for a charge attack, 'Mechs that began the turn shutdown or with unconscious pilot are treated as though they already took their movement actions, regardless of what order their actions actually occur.

CHARGE DAMAGE

If the attack succeeds, both 'Mechs take damage. Round all fractional damage up.

- **Damage to target:** Divide the charging 'Mech's weight by 10. Multiply this by the number of hexes moved (not MP spent) by the attacker in the Movement Phase. Do not count the hex the target is in. If the attacker moved both backward and forward that phase, base the number of hexes it moved from the hex in it last reversed its movement. If the attacker fell in the Movement Phase, no hexes it moved before the fall apply.
- **Damage to attacker:** 1 point of damage for every 10 tons the target weighs.

Divide all damage into 5-point Damage Value groupings (any leftover damage becomes its own grouping). The attacking player then rolls each grouping's hit location separately. For example, a 17-point charge forms three 5-point groupings and one 2-point grouping, and each grouping is a separate hit.

A 65-ton Catapult *moves 5 hexes and declares a charging attack against a 45-ton 'Mech (it has the required 1 MP left over to enter the target's hex). If the charging attack is successful, the target takes 33 points of damage (6.5 for the* Catapult*'s tonnage multiplied by 5 for the number of hexes it moved, rounded up). The* Catapult *itself suffers 5 damage (45 / 10, rounded up).*

LOCATION AFTER CHARGE

If the charge misses, the attacking 'Mech chooses to move into the hex to the right or left of the attacker's forward arc. If one of those hexes is prohibited terrain, the other hex must be chosen; if both are prohibited, the attacker does not move.

If the charge succeeds, the attacker then advances into the target's hex. If the target 'Mech is not destroyed, it is displaced into the adjacent hex in the direction that the attacker charged it. If this displaces the target 'Mech into a hex two or more levels lower than its current hex, it automatically falls the full height (see *Falling*, p. 42). Regardless, if a 'Mech is already in the hex it is displaced into, see *Displacement*, on page 40.

If the target would be displaced into prohibited terrain, neither the attacker nor target moves. The exception is if the target would be pushed off the playing area, which is allowed. All other effects occur, however, including any Piloting Skill Rolls required to avoid falling.

FALLS

After any successful charging attack, the attacking and target 'Mechs must make Piloting Skill Rolls with a +2 Target Number modifier, or fall in the hexes they currently occupy (unless they've already fallen due to displacement).

CLUB ATTACKS

Base Target Number: Piloting Skill –1.

To attack another 'Mech with a club, the target must be in the attacker's forward firing arc. The attacking 'Mech:

- cannot have fired any arm-mounted weapons in the same turn
- must have both its shoulder actuators undamaged
- must have two undamaged hand actuators

A club occupies both of the 'Mech's hands.

A successful attack with a club does 1 point of damage for every 5 tons that the attacking 'Mech weighs. Roll normally on the Hit Location Table.

Missing Actuators: A 'Mech must have two undamaged hand actuators to use a club. Apply a +2 Target Number modifier to the attack for each damaged upper or lower arm actuator.

FINDING A CLUB

A 'Mech may not fire weapons or make physical attacks during the turn that it picks up a club.

Limb Clubs: Any 'Mech arm or leg that has been blown off through critical hits or has fallen off as a result of side torso destruction is left in that hex and may be used as a club.

Tree Clubs: If the 'Mech is in a woods hex, it may uproot a tree and use it as a club. Uprooted trees only last for one successful club attack.

DEATH FROM ABOVE ATTACKS

Base Target Number: Piloting Skill (comparative modifier; see p. 25).

A jump-capable 'Mech can leap onto its target, a risky maneuver that brings the full weight of the machine crashing down on the victim's head.

Death from above (DFA) attacks are declared in the Movement Phase, not the Physical Attack Phase. The attacker stops one hex away from the target and only then declares the DFA: when resolving any action against the 'Mech making the DFA attack between that moment and the time the DFA is finally resolved, treat the 'Mech as in that hex and having only moved that far. It does not actually finish its movement and enter the target hex until the Physical Attack Phase.

The attacker spends the usual Jumping MP needed to reach the target's hex, but must have enough MP available to clear any height requirement (the level of the hex the target is in, plus two if the target 'Mech is standing, as a standing 'Mech is always two levels high). For example, to make a DFA attack from a Level 0 hex against a 'Mech standing one hex away on a Level 3 hill would only cost 1 MP, but the attacking 'Mech would need at least 5 Jumping MP available to make the attack. See *Jumping Movement*, page 11.

When calculating the modified Target Number for a DFA, the attacker must always apply the +3 modifier for jumping movement: it is not already included. However, do not apply any terrain modifiers.

Like all other physical attacks, DFA attacks are resolved during the Physical Attack Phase. This means the attacker can only DFA a 'Mech that has finished its movement. It also means a 'Mech making a DFA attack cannot itself be the target of a DFA, since its movement will not be finished until the Physical Attack Phase.

A 'Mech making a DFA cannot be the target of physical attacks, but may be the target of weapon attacks.

Multiple Attacks: A 'Mech may only be the target of one charge, death from above, or push attack in a given turn.

Shutdown Targets: When determining targets for a DFA attack, 'Mechs that began the turn shutdown or with unconscious pilot are treated as though they already took their movement actions, regardless of what order their actions actually occur.

Stacking: A 'Mech executing a DFA attack does not count as in any hex for stacking purposes until it lands (see *Stacking*, p. 11).

WEAPON ATTACK PHASE

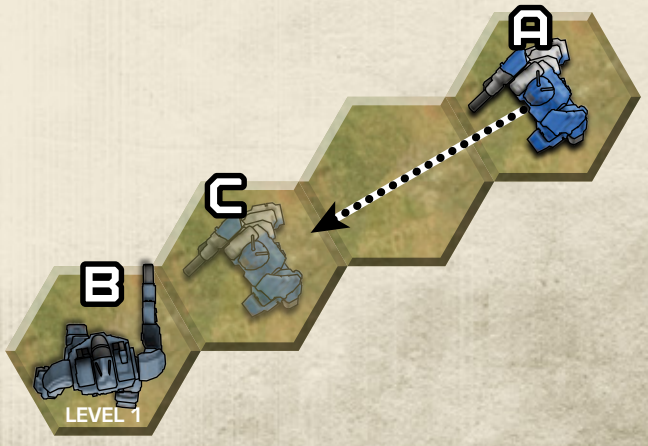
The attacker cannot make weapon attacks in the same turn it executes a DFA.

During the Weapon Attack Phase, the attacker is considered adjacent to the target hex along the path that the attacker travels during the jump, and facing the target hex. If the path of the jump passes exactly between two hexes adjacent to the target, the attacker must choose which one they occupy. For purposes of determining LOS, the attacker is considered to be in the air above its hex, standing two levels higher than either the target's hex or the level of the hex the attacker occupies, whichever is higher.

If the attacking 'Mech fails a Piloting Skill Roll in the Weapon Attack Phase (or would automatically fall), the DFA automatically misses. Resolve the attacker's falling damage and ending location per the rules under *Falls After DFA*, at right.

DFA DAMAGE TO TARGET

To determine damage to the target inflicted by a death from above attack, divide the weight of the attacking 'Mech by 10 and multiply the result by 3, rounding fractions up. For example, a 55-ton *Griffin* inflicts 17 points of damage points of damage.



• DEATH FROM ABOVE DIAGRAM •

Damage from a DFA is not assigned to a single location. Instead, divide all damage from the attack into 5-point Damage Value groupings (leftover damage, if any, becomes its own grouping). The attacking player then rolls once on the Punch Location Table for each grouping (see p. 28). For example, a 12-point DFA forms two 5-point groupings and one 2-point grouping, and each grouping is assigned as a separate hit. Determine attack direction as though the attack had come from the attacking 'Mech's starting hex.

Prone 'Mechs: Resolve successful death from above attacks against a prone 'Mech on the rear column of the Hit Location Table (see p. 23).

DFA DAMAGE TO ATTACKER

If a DFA hits, divide the attacker's weight by 5, then divide the result into 5-point Damage Value groupings (as explained above). Consult the Front column of the Kick Location Table to find the hit location for each grouping (see p. 28) and apply this to the attacker.

LOCATION AFTER DFA

A DFA is completed in the Physical Attack Phase. In that phase, the attacker lands in the target's hex. If the DFA succeeds, the target (if not destroyed) is displaced one hex in the direction opposite the attack.

If the DFA fails, the target chooses any legal adjacent hex and moves to it, even if immobile or prone. Unlike normal, this can be an occupied hex. If the target 'Mech is displaced into a hex two or more levels lower than its current hex, it automatically falls the full height (see *Falling*, p. 42). Regardless, if a 'Mech is already in the hex it is displaced into, see *Displacement*, on page 40.

Prohibited Terrain: If the target 'Mech would be displaced into prohibited terrain, another hex must be chosen as close as possible to the original hexside through which the target 'Mech would have moved. For example, if a target 'Mech would be displaced through hexside A, but A is prohibited, its controller then looks at hexsides B or F to see if those hexes are passable, then at hexsides C or E, then finally at hexside D. If two equally distant hexes are open, such as B or F, the controller chooses either one. The exception is if the target would be pushed off the playing area, which is allowed.

If all the surrounding hexes contain impassable terrain, the target 'Mech cannot be displaced. For example, the target 'Mech may be on Level 0 terrain surrounded by Level 3 or higher hills. In this case, if the attack succeeds, the target is destroyed. If the attack fails, the attacker is destroyed.

FALLS AFTER DFA

After a successful death from above attack, the attacker makes a Piloting Skill Roll (see p. 40), with a +4 Target Number modifier. If the displacement resulting from a successful DFA did not already

In the Death from Above Diagram at left, the Griffin *is making a DFA attack from Hex A against a* BattleMaster. *The* Griffin*'s path during the jump is shown in the illustration. During the Weapon Attack Phase, the* Griffin *is considered to be in Hex C, as though it were standing on a Level 3 hill (the target hex's level +2). The* BattleMaster *may fire against the* Griffin*'s front side with any weapons it can bring to bear at a range of 1. Other 'Mechs on the map can check for LOS and fire as though the* Griffin *were in Hex C with an LOS height of Level 4.*

KICK LOCATION TABLE

Roll (1D6)	Left Side	Front/Rear	Right Side
1–3	Left Leg	Right Leg	Right Leg
4–6	Left Leg	Left Leg	Right Leg

cause the target 'Mech to fall, then it must make a PSR as well (with a +2 modifier instead). If either 'Mech fails its PSR, it takes damage as from a 0-level fall.

On an unsuccessful attack the attacker automatically falls, taking damage as though it had fallen 2 levels. Roll on the Facing After Fall Table to determine facing (see p. 44), but the Hit Location for this damage is always the rear.

KICK ATTACKS

Base Target Number: Piloting Skill –2.

A 'Mech cannot kick with a leg if it fired weapons mounted in that leg that turn. To make a kicking attack, both hip actuators must be undamaged, and the target must be in the kicking 'Mech's forward arc (based on its actual facing; ignore torso twists).

Kicks have a Damage Value of 1 point for every 5 tons of the attacking 'Mech's weight, assigned as a single damage grouping. Determine the damage location by rolling 1D6 and consulting the appropriate column of the Kick Location Table, if the target is standing.

If a 'Mech is kicked, it must make a Piloting Skill Roll (see p. 40). If a 'Mech attempts a kick attack and misses, it must make a PSR.

Critical Damage: Reduce kick damage by half for each upper and lower leg actuator damaged on the attacking 'Mech (rounding down); this is cumulative. For example, an attacker with two leg actuators damaged reduces its kick damage to 1/4 its base value.

PHYSICAL WEAPON ATTACKS

Base Target Number: Piloting Skill –1.

'Mechs can be equipped with a variety of arm-mounted melee weapons, the most common being the hatchet. A 'Mech cannot use a physical weapon in an arm if it fired weapons mounted in that arm that turn. The target of a physical weapon attack must be in the 'Mech's forward arc, or in the side arc corresponding to the arm in which the weapon is mounted.

By default, a hatchet rolls on the regular Hit Location Table. However, when the player declares the hatchet attack, they may also declare that it will use the Punch or Kick Hit Location Table instead. If so, apply a +4 Target Number modifier in addition to the standard –1 modifier (so a total of +3; note that the +4 modifier does not apply when forced to roll on a Punch/Kick Location Table due to attacks from different levels; see p. 25).

A hatchet deals 1 point of damage for every 5 tons the attacking 'Mech weighs. Assign all its damage as a single damage grouping.

Punch Attacks: If a 'Mech mounts a physical attack weapon in an arm, it cannot make a punch attack with that arm as long as that physical attack weapon is intact.

PUNCH LOCATION TABLE

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

PUNCH ATTACKS

Base Target Number: Piloting Skill.

A 'Mech cannot punch with an arm if it fired weapons mounted in that arm that turn. A 'Mech may punch with one or both arms each turn; a separate attack roll is made for each arm. All punch attacks must be made against targets in the attacking 'Mech's forward or side firing arcs. If the target is in the right or left arc, only the right or left arm, respectively, may punch.

A punch attack has a Damage Value of 1 for every 10 tons (or fraction of) that the attacker weighs, assigned as a single damage grouping. Reduce the damage by half for each upper or lower arm actuator damaged or not present, with these effects being cumulative (so if both arm actuators are missing or damaged, reduce the attack damage to one-quarter). Round fractions down, to a minimum of 1.

Determine the damage location by rolling 1D6 for each punch and consulting the appropriate column of the Punch Location Table Table, if the target is standing on the same level.

Multiple Targets: A 'Mech can make two punches at two different targets (including targets in different arcs) and ignores the secondary target modifier.

Missing/Destroyed Actuators: A 'Mech cannot make a punch attack with an arm if the shoulder actuator in that arm has suffered critical damage.

'Mechs lacking a hand on the punching arm (whether by damage or by design) add a +1 Target Number modifier, as for a hand actuator critical hit. 'Mechs lacking a lower arm actuator on the punching arm (whether by damage or by design) must add a further +2 Target Number modifier, as for a lower arm actuator critical hit. In addition, as noted above, the punch inflicts only half the standard damage (round down).

A Catapult *with Piloting Skill Rating 5 punches a* Thunderbolt*, standing in light woods, once, on its right side. Because the* Catapult *has no lower arm actuator, the player adds a +2 Target Number modifier and reduces the normal damage by half (rounding down).*

Neither 'Mech moved, and so the modified Target Number is 9: 5 (Piloting Skill Rating) + 2 (no lower arm actuator) + 1 (no hand actuator) + 1 (light woods) = 9. The player rolls a 9 and hits the target.

The Catapult *weighs 65 tons, so its punch has a normal Damage Value of 7 (65 divided by 10, rounded up), but the missing actuator reduces this to 3 (7 divided by 2, rounded down). The attacking player rolls a 3 on the Punch Location Table, which means the attack hits the target's center torso.*

PUSH ATTACKS

Base Target Number: Piloting Skill –1.

A 'Mech uses both arms to make a push attack against its target, which must be another standing 'Mech. Pushing attacks can only be made against a target in the hex directly in front of the attacker (based on the orientation of its feet, not its upper body; a torso twist does not change what can be the legal target).

A 'Mech may make no arm-mounted weapon attacks in the turn that it makes a push attack. The target 'Mech cannot be performing a charge or death from above attack this turn. It must also be at the same level as the attacker.

A successful push attack does not damage the target. Instead, it displaces the target into the adjacent hex in the direction that the attacker pushes it. The attacking 'Mech moves into the hex formerly occupied by its target (unlike a charge, this does not require additional MP expenditure). The defender must then make a Piloting Skill Roll (see p. 40) or fall in the hex it was forced into.

If the target 'Mech is displaced into a hex two or more levels lower than its current hex, it automatically falls the full height (see *Falling*, p. 42). Regardless, if a 'Mech is already in the hex it is displaced into, see *Displacement*, on page 40.

Multiple Attacks: A 'Mech may only be the target of one charge, death from above, or push attack in a given turn.

If two 'Mechs attempt to push each other, resolve both attempts. If both attacks fail, nothing happens. If both attacks succeed, neither 'Mech moves, and both must make Piloting Skill Rolls or fall. If only one push attack succeeds, resolve it as usual.

Prohibited Terrain: If the target would be displaced into prohibited terrain, neither the attacker nor target moves. All other effects occur, including any PSRs required to avoid falling. The exception is if the target would be pushed off the playing area, which is allowed.

Shoulder Actuators: Apply a +2 Target Number modifier to push attacks for each damaged shoulder actuator the attacker has.

DAMAGE RESOLUTION

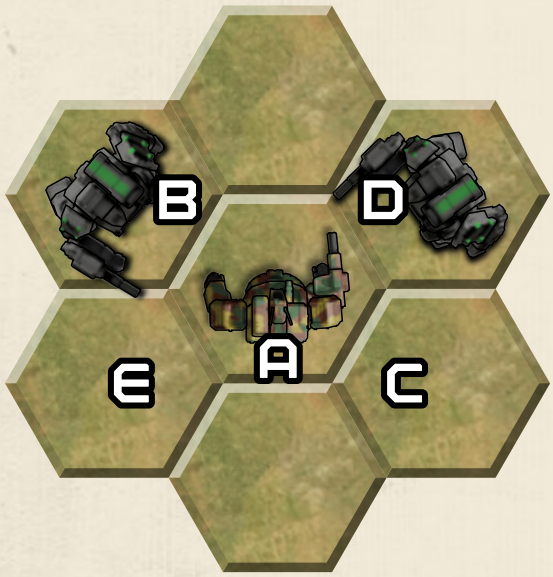
Only after all physical attacks have been made is the damage caused as a result of those attacks applied. As such, damage dealt in a Physical Attack Phase never affects attacks made that same phase (the attacks are all made before the gameplay effects of damage caused as a result are applied).

All Piloting Skill Rolls required due to physical attacks are made at the end of the Physical Attack Phase (i.e. after all attacks that phase), applying any modifiers resulting from damage inflicted that phase. See page 40 for details. Once this is done, players then proceed to the Heat Phase.

See the *Damage* chapter, pages 30-36, for how to resolve damage.

If in the Pushing diagram below, the 'Mech in Hex A is successfully pushed by the 'Mech in Hex B, it moves into Hex C. If the 'Mech in Hex A is successfully pushed by a 'Mech in Hex D, it is forced into Hex E. Of course if one push is successful, the other 'Mech could not then attempt a push attack.

In both cases, the pilot of the target 'Mech must make a Piloting Skill Roll to remain standing, and its attacker advances into Hex A. The 'Mech in Hex A cannot push either of its opponents because neither of them is directly in front of it.



• PUSHING DIAGRAM •

DAMAGE

This chapter explains how to apply damage to BattleMechs, and deal with the variety of special effects that can occur as a result of it.

Every weapon does a specific amount of damage, defined as Damage Value, which appears under the Damage Value column on the Weapons and Equipment Table on page 55, as well as the record sheet. Follow the step-by-step procedure outlined in *Damage Resolution* below to determine the effects of damage.

Attacks: It is very important to remember that all attacks in a phase must be declared and made *before* any of the hit locations and damage from those attacks is resolved. Rather than attacking with and resolving damage for for one weapon or one 'Mech at a time, damage resolution comes after *all* attacks by *all* 'Mechs in a given phase.

DAMAGE RESOLUTION

Damage from any source is first applied to the armor of the location damaged (if the location is one of the three torso locations, the appropriate facing is damaged). Once the armor of a location/facing is gone, any further damage to there is dealt to the internal structure of that location. Each time a location has its internal structure damaged, a critical hit in that location is possible (see *Critical Hits*, at right). Once the internal structure of a location reaches zero, that location is destroyed, along with everything inside it (see *Destroyed Locations*, p. 34). After a location is destroyed, further damage that would have been applied to that location transfers inwards to its neighboring location (see *Transferring Damage*, p. 34).

RESOLUTION ORDER

The order in which damage is applied is important. If resolving multiple hits on a single 'Mech, be sure that everyone is aware of what order the hits are being resolved. The attacker chooses the order in which they determine hit locations (and resolve damage) for each of their 'Mech's successful attacks. From turn to turn, the attacker can change this order.

It is also important to understand that, when applying damage, every single hit is completely resolved—both the damage dealt and any critical hits inflicted—before moving on to the next hit. This includes single attacks that result in multiple hits, such as cluster weapons. For example, if a SRM-2 strikes a 'Mech, and both missiles from that attack hit, then the hit location and damage from the first missile is resolved, the attacker determines whether any critical hits occur, resolves each hit that occurs separately, and only then does play move on to resolve the second missile from that attack.

DAMAGE TIMING

There is a very important distinction between resolving damage and applying its gameplay effects.

Damage dealt by attacks made in the Weapon Attack or Physical Attack Phases (including critical hit effects) is resolved as it happens. *However, damage dealt by attacks never affects any other attack made in the same phase. All attacks declared in a phase get to be made.* This is true even if a 'Mech is destroyed before the time comes to resolve damage from the attacks it declared and hit with earlier that phase. In other words, attack damage is recorded as hits are resolved, but it does not affect the target until all attacks declared that phase have been resolved.

Displacement and Falls: Unlike attacks, the gameplay effects of damage from displacement and falls are applied immediately, rather than at the end of the phase.

Piloting Skill Rolls: The gameplay effects of damage are always applied before any PSRs resulting from that damage. For example, if a foot actuator is destroyed in the Weapon Attack Phase, this forces a PSR. The standard +1 modifier for losing a foot actuator is applied to that PSR, as well as to any other PSRs called for that phase (and the rest of the game, of course).

> *In the midst of resolving damage in the Weapon Attack Phase, a 'Mech's right torso is destroyed.*
>
> *As far as resolving damage goes, the torso is gone immediately. This means that the right arm also falls off immediately. If, when resolving any remaining hits that phase, any are scored against the 'Mech's right arm, they will transfer to the right torso (since, as far as damage resolution is concerned, the arm fell off the instant the torso was destroyed). And, since the right torso was also destroyed, the damage will transfer further inward, to the center torso (as per the Damage Transfer Diagram on page 34).*
>
> *In terms of gameplay effects, all this destruction has absolutely no effect on any weapons located in the arm or torso that the target 'Mech had declared that it was firing that phase. This is because all declared attacks must be resolved. Only at the end of the phase are the arm and torso truly gone. Even if the 'Mech was blown to pieces, it still makes any attacks it already declared.*

CRITICAL HITS

If a location takes one or more points of internal structure damage, but is not outright destroyed, the attacker checks for critical damage by rolling 2D6 and consulting the Determining Critical Hits Table (see p. 31). On an 8 or higher, the target 'Mech takes critical damage: the higher the roll, the greater the damage. Consult the 'Mech's Critical Hit Table to determine the effects (see *Applying Critical Hits*, p. 31).

If a location is destroyed, rather than just damaged, no check for critical hits in that location is made unless it contains one or more explosive slots. In that case, any resulting critical hits that strike explosive slots in that location are resolved as normal (see *Ammunition*, p. 32); hits that do not are always discarded.

The effects of critical hits, such as Piloting Skill Roll modifiers, are cumulative unless specifically stated otherwise, and last for the remainder of the game. Certain critical hits may force a PSR: if the critical hit also applies a modifier to this PSR, that modifier is in addition to any other modifiers unless stated otherwise.

Multiple Locations: If a single hit damages the internal structure of multiple locations, critical damage is resolved for each of those locations.

DETERMINING CRITICAL HITS TABLE

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 attack strikes the torso.

Through-Armor Critical Hit: A roll of a 2 on the Hit Location Table provides a chance for a critical hit, even if the attack did not damage internal structure (though the attack must still have dealt at least 1 point of damage). This is known as a through-armor critical (TAC) hit.

The chance for a TAC hit is in addition to the normal check for critical hits resulting from damage to the internal structure, and applies even if a 'Mech has no armor left in that location. For example, a hit location result of 2 against a 'Mech with no torso armor left requires two rolls on the Determining Critical Hits Table, one for the TAC hit and one for damaging the internal structure.

If a TAC hit is scored on an already-destroyed left or right torso, the chance for a TAC transfers to the center torso along with the damage.

APPLYING CRITICAL HITS

When critical damage occurs, the attacker rolls for each critical hit to determine which slot in the damaged location the hit affects. The target player marks off this damage on their 'Mech's Critical Hit Table. It is possible that some locations can be blown off completely, even if they still have internal structure remaining. The exact procedure depends on the location damaged.

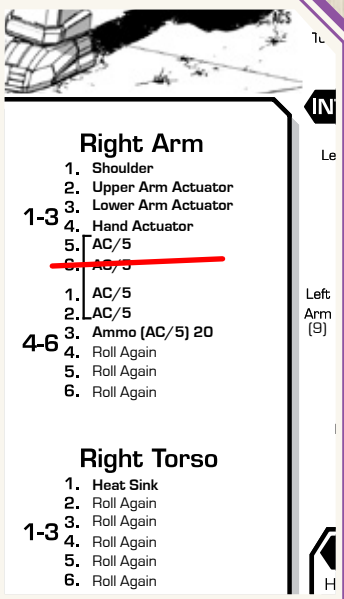
Head or Leg Hits: If the critical hit strikes the 'Mech's head or legs, roll 1D6, find the result on the Critical Hit Table, and mark off the damage. If the slot rolled is an inapplicable slot (see right), roll the die again. If all slots in the location are inapplicable, then consult *Transferring Criticals* (see right).

Torso or Arm Hits: The Critical Hit Table for these locations is divided into two blocks of six slots, with the first block labelled "1–3" and the second block "4–6". When assigning a critical hit to these locations, the attacker first rolls 1D6. This identifies which block of slots in that location takes the hit: on a result of 1–3, the hit is assigned to the first block of six slots, while on a result of 4–6, the hit is assigned to the second block. The attacker then rolls another 1D6. The result of this roll identifies the specific slot in that block that takes the hit. If the slot rolled is an inapplicable slot (see at right), roll both dice again (not just the last die).

If one of the blocks of six is filled entirely with inapplicable slots, simply ignore that block and only roll 1D6 when assigning a critical hit to that location, just as if you were assigning a leg or head critical. If all slots in the location are inapplicable, then consult *Transferring Criticals* (see right).

Multi-slot Components: Some items take up multiple slots on the Critical Hit Table. A single critical hit disables any item or structural component except the engine, gyro, or sensors, regardless of its number of slots. Critical hits on additional slots occupied by the item have no further effect, but soak up the hit: the critical is assigned to the slot, but no further effects occur.

A Wolverine takes a critical hit to its right arm. The attacking player rolls the first die, and the result is 5. This means the critical hit affects a slot in the second half of the Critical Hit Table for the right arm (the block labelled "4–6"). The attacking player then rolls the second die and gets a 4. It turns out that's an inapplicable slot, so the attacking player rolls both dice again. This time the result is a 2 (meaning the upper section) and a 6; the defending player notes the critical hit on that slot by crossing it out (as well as crossing it out in the 'Mech Data section), knowing it just destroyed the AC/5.



Multiple Critical Hits: If multiple critical hits result from a roll on the Determining Critical Hits Table, resolve each critical hit completely before moving on to the next one.

Inapplicable Slots: If a critical hit roll would apply damage to a slot for which any of the following applies, it is an inapplicable slot and the player rolls again:

- the slot has already taken a critical hit
- the slot is empty

(On pregenerated record sheets, empty slots are labelled "Roll Again", and the words in slots that cannot take critical damage always appear fainter than the words in a slot filled with equipment that can, and are italicized.)

For an inapplicable torso or arm hit, the attacker rolls both dice again, not just the last die. If all slots in the location are inapplicable, then consult *Transferring Criticals* (see below).

TRANSFERRING CRITICALS

If a critical hit cannot be applied to a location, it might transfer to another location. This depends on the situation at the time of the hit.

If all possible slots in the damaged location suffered critical hits in previous phases or turns, or are otherwise inapplicable slots (see above), the critical hit transfers to the next location per the Damage Transfer Diagram. Critical hits to the center torso and head never transfer.

If all possible slots in the damaged location were not hit in previous phases, any excess critical hits do not transfer and are lost.

Destroyed Locations: Critical hits that occur when a location is destroyed (rather than just damaged) never transfer.

In the Weapon Attack Phase, the internal structure of a BattleMaster*'s right torso is damaged. The attacker must immediately roll to determine critical hits before resolving any further weapons fire. The attacker rolls a 12, resulting in three critical hits. The right torso of the* BattleMaster *mounts three medium lasers, two of which were destroyed in a previous turn, and so one critical hit destroys the final medium laser. As all possible slots in the location were not hit before this phase, the two excess critical hits do not transfer and are lost.*

In the Physical Attack Phase of the same turn, the internal structure of the BattleMaster*'s right torso is damaged again. A 10 is rolled for determining critical hits, resulting in two critical hits. As all possible slots in the damaged location took critical hits before this phase, both critical hits transfer to the* BattleMaster*'s center torso.*

CRITICAL HIT EFFECTS

Critical hit types are arranged alphabetically by item; the location of the item on the 'Mech (head, leg, torso, arm) is noted in parentheses in this section.

AMMUNITION

If a critical hit destroys a slot carrying ammunition, the ammo explodes. The MechWarrior takes 2 points of damage (wounds) as a result of the feedback received through their neurohelmet. In addition, the 'Mech takes damage to its internal structure.

A critical hit to an ammo slot only explodes the ammo in that slot. The explosion deals damage equal to the ammo's Damage Value times the shots remaining. Missile ammo explodes with a force equal to the number of missiles remaining times their Damage Value. For example, one ton of machine gun ammo explodes with a force of 400 points of damage (2 x 200), while one ton of SRM-2 ammo explodes with a force of 200 points of damage (2 x 2 x 50). Calculate the total Damage Value of all ammo currently carried in the slot and apply that total to the Internal Structure Diagram (ammunition explosion damage starts the damage resolution process at Step 2, as described on p. 36). Which usually destroys any 'Mech.

Because an ammunition explosion damages the internal structure of the location where it explodes, a roll to determine critical hits is necessary.

Empty Bins: If an empty ammunition slot takes a critical hit, the hit is still applied there, but no further damage or effects occur.

ARM BLOWN OFF (ARM)

This critical hit occurs when the player rolls a 12 on the Determining Critical Hits Table for an arm hit, and is automatic (neither player may choose to roll the three critical hits instead). The hit blows the arm off.

When an arm is blown off in this way, ammunition in that arm does not explode. Though the limb is destroyed, none of the armor or structure on the limb is lost (this is relevant when calculating whether the 'Mech will be required to make a Piloting Skill Roll for having taken 20+ points of damage that phase).

An arm blown off by a critical hit remains in the hex in which it was lost and may be used as a club (see *Club Attacks*, p. 26).

COCKPIT (HEAD)

A critical hit to the cockpit destroys that slot, kills the MechWarrior, and destroys the 'Mech. Remove the 'Mech from the map in the end of the phase in which it was destroyed.

ENGINE (TORSO)

'Mech engines have 3 points of shielding. Each critical hit to an engine slot destroys 1 point of shielding. As shielding is destroyed, the amount of heat escaping from the 'Mech's fusion drive increases.

The first hit increases the 'Mech's heat build-up by 5 points per turn. The second adds another 5 points of heat build-up per turn for a total of 10 points per turn. A 'Mech is destroyed if it suffers three engine hits (remember to count engine slots present in the 'Mech's side torsos, if any). Remove the 'Mech from the map at the end of the phase in which it was destroyed.

FOOT ACTUATOR (LEG)

This critical hit destroys the muscle (actuator) in the foot. For each foot actuator damaged, reduce the 'Mech's Walking MP by 1. Recalculate its Running MP accordingly by multiplying the new Walking MP by 1.5, rounding up.

PSR Modifiers: +1 each (for all subsequent PSRs). The 'Mech's controller must make a PSR at the end of the phase in which the critical hit occurred.

Additionally, a PSR is required whenever the 'Mech jumps; the roll is made at the end of the 'Mech's movement.

Target Number Modifiers: +1 to all kick attacks.

GYRO (TORSO)

The gyroscope keeps the 'Mech upright and able to move. The first hit to a gyro damages it, and the second destroys it.

When a 'Mech's gyro is destroyed, the 'Mech automatically falls and cannot stand up again; the usual Piloting Skill Roll made to avoid damaging the MechWarrior in the fall (see p. 43) applies a +6 Target Number modifier for the destroyed gyro.

'Mechs with a destroyed gyro may make weapon attacks per *Firing While Prone* (see p. 19), and may change facing by one hexside per turn provided they have at least 1 MP available. A 'Mech with a destroyed gyro is not considered immobile.

PSR Modifiers: +3 if damaged (for all subsequent PSRs), +3 if destroyed (cumulative). The 'Mech's controller must make a PSR at the end of the phase in which the first critical hit occurred, unless the 'Mech received a second gyro hit in the same phase (in which case it automatically fell and so the PSR is unnecessary). A damaged gyro forces a PSR every time the 'Mech runs or jumps, made at the end of the 'Mech's movement.

HAND ACTUATOR (ARM)

A critical hit to the hand actuator destroys the muscles controlling the 'Mech's wrist and hand. The 'Mech can no longer make physical weapon or clubbing attacks with that arm.

Target Number Modifiers: +1 to all punches made with that arm.

Missing Actuators: Some 'Mechs are designed without one or both hand actuators. The Target Number modifier for punch attacks given above still applies to such 'Mechs (i.e. whether the actuator is destroyed or merely absent is irrelevant in this case).

HEAD BLOWN OFF (HEAD)

A hit blows off a 'Mech's head when the player rolls a 12 on the Determining Critical Hits Table for the head hit location (see *Head Destruction*, p. 34). This destroys the 'Mech.

HEAT SINKS

A critical hit to a heat sink destroys it and reduces the 'Mech's ability to dissipate heat. For example, if a 'Mech with 16 heat sinks has three of its heat sinks destroyed, it can now only dissipate 13 points of heat per turn.

HIP (LEG)

A critical hit to a 'Mech's hip freezes the affected leg in a straight position. The 'Mech's Walking MP is cut in half (round down). Recalculate its Running MP accordingly by multiplying the new Walking MP by 1.5, rounding up.

After a hip critical hit, ignore any other critical hit modifiers from previous turns on that leg (other leg critical hits this turn or later still apply). This means it is possible for a 'Mech's performance to improve after a hip critical hit if it had suffered earlier critical hits to the same leg: locked in a straight position, the leg serves as a sort of crutch, making movement easier in some cases than moving on a number of free-flexing yet damaged actuators.

A critical hit to the second hip reduces the 'Mech's MP to 0, but the 'Mech is not considered immobile.

PSR Modifiers: +2 per hip critical hit; this modifier overrides all other critical hit modifiers from that leg. The 'Mech's controller must make a PSR at the end of the phase in which the critical hit occurred.

Additionally, a PSR is required every time the 'Mech runs or jumps; the roll is made at the end of the 'Mech's movement.

JUMP JET (LEG/TORSO)

For each critical hit to a jump jet, reduce the 'Mech's Jumping MP by 1.

LEG BLOWN OFF (LEG)

This critical hit occurs when the player rolls a 12 on the Determining Critical Hits Table for a leg location hit, and is automatic—the player may not choose to roll the three critical hits instead (see *Leg Destruction*, p. 34).

When a leg is blown off in this way, ammunition in that leg does not explode. Though the limb is destroyed, none of the armor or structure on the limb is lost (this is relevant when calculating whether the 'Mech will be required to make a Piloting Skill Roll for having taken 20+ points of damage that phase).

A leg blown off by a critical hit is left in the hex it was lost in and may be used as a club (see *Club Attacks*, p. 26).

LIFE SUPPORT (HEAD)

Any critical hit knocks out this system permanently and leaves the pilot vulnerable to increased heat; the other critical slot can still take damage, but the hit has no additional effect. The MechWarrior takes 1 point of damage at the end of every Heat Phase that the 'Mech's Heat Scale is between 15 and 25; if the Heat Scale is 26 or higher, the MechWarrior takes 2 points of damage instead.

A life support critical hit also eliminates the 'Mech's internal air supply. If the 'Mech is submerged (standing in Depth 2 or deeper water, or prone in Depth 1 or deeper water) in the End Phase of any turn, the pilot takes 1 point of damage.

LOWER ARM ACTUATOR (ARM)

This critical hit destroys the actuator in the 'Mech's lower arm. Damage from punches with this arm is halved (round down).

Target Number Modifiers:

- +1 to all weapons firing from that arm.
- +2 to any punches or physical weapon attacks with that arm.
- +2 to all clubbing attacks.

Designed with Missing Actuators: Some 'Mechs are designed without one or both lower arm actuators. Such 'Mechs do not suffer the weapon attack modifier for the missing actuators, though the Target Number and damage modifiers to physical attacks still apply.

LOWER LEG ACTUATOR (LEG)

This critical hit destroys the muscle (actuator) in the lower leg. For each lower leg actuator critical hit, reduce the 'Mech's Walking MP by 1. Recalculate its Running MP accordingly by multiplying the new Walking MP by 1.5, rounding up.

Additionally, for each lower leg actuator critical hit, all kick attacks inflict half the standard damage (round down).

PSR Modifiers: +1 each (for all subsequent PSRs). The 'Mech's controller must make a PSR at the end of the phase in which the critical hit occurred.

Additionally, a PSR is required every time the 'Mech jumps; the roll is made at the end of the 'Mech's movement.

Target Number Modifiers: +2 to all kick attacks.

SENSORS (HEAD)

Critical hits to a 'Mech's sensors make weapon attacks increasingly difficult. Critical hits to sensors do not affect physical attacks.

Target Number Modifiers: +2 to all weapon attacks after the first hit. A second sensor hit makes it impossible for the 'Mech to fire its weapons. In both cases, physical attacks are unaffected.

SHOULDER (ARM)

A critical hit to this actuator freezes the shoulder joint. The 'Mech may not punch or make physical weapon attacks with that arm, nor may it make clubbing attacks.

Target Number Modifiers:

- +4 to all weapons firing from that arm (overrides all other weapons fire modifiers from critical hits to that arm).
- +2 to all pushing attacks.

UPPER ARM ACTUATOR (ARM)

This critical hit destroys the actuator in the 'Mech's upper arm. Damage from punches with the arm is halved (round down).

Target Number Modifiers:

- +1 to all weapons firing from that arm.
- +2 to all punches and physical weapon attacks with that arm.
- +2 to all clubbing attacks.

UPPER LEG ACTUATOR (LEG)

This critical hit destroys the muscle (actuator) in the upper leg. For each upper leg actuator damaged, reduce the 'Mech's Walking MP by 1. Recalculate its Running MP accordingly by multiplying the new Walking MP by 1.5, rounding up.

Additionally, all kick attacks inflict half the standard damage (rounding down).

PSR Modifiers: +1 each. The 'Mech's controller must make a PSR at the end of the phase in which the critical hit occurred.

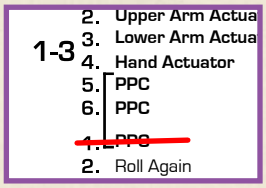
Additionally, a PSR is required every time the 'Mech jumps; the roll is made at the end of the 'Mech's movement.

Target Number Modifiers: +2 to all kick attacks.

WEAPONS AND EQUIPMENT

When a weapon or piece of equipment receives a critical hit, it is rendered useless for the remainder of the game. If the item takes up more than one critical slot, its remaining slots are not also marked off: each can still be hit by subsequent critical hits. This has no effect other than to absorb the critical hit.

For example, a PPC fills three critical slots. The PPC is disabled as soon as one of its three critical slots takes a hit, leaving its remaining two slots able to take critical hits but otherwise resulting in a useless weapon.



DESTROYED LOCATIONS

If a location is destroyed, all components in that location are also destroyed, including all armor (which counts towards the 20+ damage forcing a PSR). In addition, the destruction of the head, leg, or torso locations has further effects, detailed below.

Critical Hits: If a location is destroyed by the elimination of internal structure, and it contains one or more ammo slots, the 'Mech's controller must still check for critical hits in that location (see *Critical Hits*, p. 30).

Limb Clubs: An arm or leg blown off through critical hits or that fell off due to side torso destruction remains in the hex in which it was lost and may be used as a club (see *Club Attacks*, p. 26).

HEAD DESTRUCTION

If a head has all its internal structure destroyed, the MechWarrior inside is killed and the 'Mech is destroyed. Remove the 'Mech from the map in the end of the phase in which it was destroyed.

LEG DESTRUCTION

When a standing 'Mech loses a leg, the 'Mech automatically falls and ends its movement for that turn. Apply a +5 modifier to all Piloting Skill Rolls: this replaces all other PSR modifiers generated by damage to that leg. If the 'Mech stays prone, it can still change its facing one hexside per turn; it is considered to have walked if it changes its facing.

A prone 'Mech with one leg may attempt to stand on its remaining leg in subsequent turns. However, it may only make one attempt per turn, and this attempt to stand is always considered running. In an exception to the normal rules, only one PSR is required for this attempt, even if damage or other factors means that the attempt would normally require two or more PSRs (though all modifiers from any such factors still apply). If the 'Mech manages to stand, it has a Walking MP of 1 (this overrides all MP increases) and cannot run; over heating can reduce that Walking MP to 0. The 'Mech may still jump, but the pilot must make a Piloting Skill Roll with a +5 modifier each time the 'Mech lands.

A 'Mech that loses both of its legs automatically falls (if not already prone). While not considered immobile (see p. 11), the 'Mech has 0 MP available. It cannot change hexsides or attempt to stand, though it can still attempt to prop itself up to fire if it has both arms.

Minimum Movement: Although a one-legged 'Mech can no longer run, the one exception is that it can still use the *Minimum Movement* rule and can therefore try to stand even though it doesn't have the 2 MP required (which always counts as running; see p. 11).

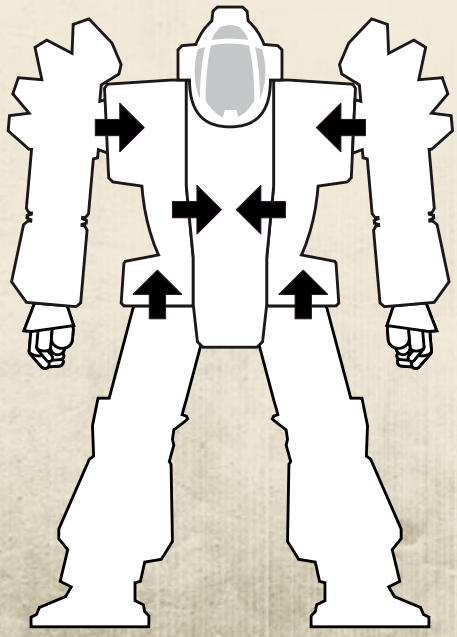
TORSO DESTRUCTION

Left/Right Torsos: If a 'Mech's right or left torso has all of its internal structure destroyed, the corresponding arm is blown off immediately (see *Arm Blown Off*, p. 32). Additional damage dealt in the same phase that would have struck that arm or torso automatically transfers to the center torso.

Center Torso: If the center torso is destroyed, the entire 'Mech is destroyed. Remove the 'Mech from the map in the end of the phase in which it was destroyed. If the center torso was destroyed by an ammunition explosion the MechWarrior is killed as well.

TRANSFERRING DAMAGE

Once a location has been destroyed, all further damage to that location transfers directly to the next location inward. This occurs both when there is leftover damage from the attack that destroyed the location, and when damage occurs from hits that later strike the destroyed location. The damage is first applied to the armor of the location transferred to, unless it came from an ammunition explosion (see below).



• DAMAGE TRANSFER DIAGRAM •

Damage to a missing arm or leg transfers to the torso on the same side (so left leg or arm damage transfers to the left torso, while right arm or leg damage transfers to the right torso). Additional damage to a destroyed side torso location transfers to the center torso. Damage from a destroyed head or center torso does not transfer. The Damage Transfer Diagram illustrates this principle, and the diagrams below explore it in more detail.

Damage dealt to the rear hit zone (see *Determining Hit Location*, p. 22) that transfers inward transfers to the appropriate rear torso facing. For example, damage from the rear that hits a missing left leg is transferred to the left rear torso.

Ammunition Explosion: Damage from ammunition explosions transfers to the internal structure of the next location inward, bypassing the armor entirely.

DESTROYING A 'MECH

A 'Mech is considered destroyed and out of the game if any of the following occur:

- its MechWarrior dies (caused by destruction of the 'Mech's cockpit or head location, or if six MechWarrior wounds are taken).
- its engine is destroyed (caused by it suffering three engine hits, or the destruction of its center torso location).

Destroyed 'Mechs are removed from the map in the end of the phase in which they were destroyed, and have no further effect on game play.

MechWarrior Survival: A MechWarrior dies if the head or the head's cockpit slot is destroyed, or if their 'Mech's center torso is destroyed by an ammunition explosion.

STEP-BY-STEP DAMAGE

The following offers a thorough walkthrough of damage resolution. It assumes that you're familiar with the rest of this chapter.

To apply damage, begin with the amount of damage inflicted and its hit location, and start at Step 1. Answer each question yes or no, and follow the instructions.

If a head, leg, or torso location is destroyed, see the separate sections for each of these events for additional information (on p. 34).

Damage Transfer: Remember that there is no damage transfer from the head or center torso locations. If a step below would call for transferring damage from one of these two locations inward, the attack is finished instead, and the remaining damage is lost, because the 'Mech is destroyed..

See *Transferring Damage*, page 34, for more detail.

1. DOES THE LOCATION/FACING HAVE ARMOR?

Yes: Check off one armor circle on the Armor Diagram in the location (or facing, if a torso location) for every point of damage the hit deals, until all damage is applied or all armor in the location/facing is destroyed. Go to Step 2.

No: Go to Step 2, answering "Yes".

2. IS THERE DAMAGE REMAINING?

Yes: Check off one internal structure circle on the Internal Structure Diagram in that location for every point of damage remaining, until all damage is applied or all internal structure in the location is destroyed. Go to Step 3.

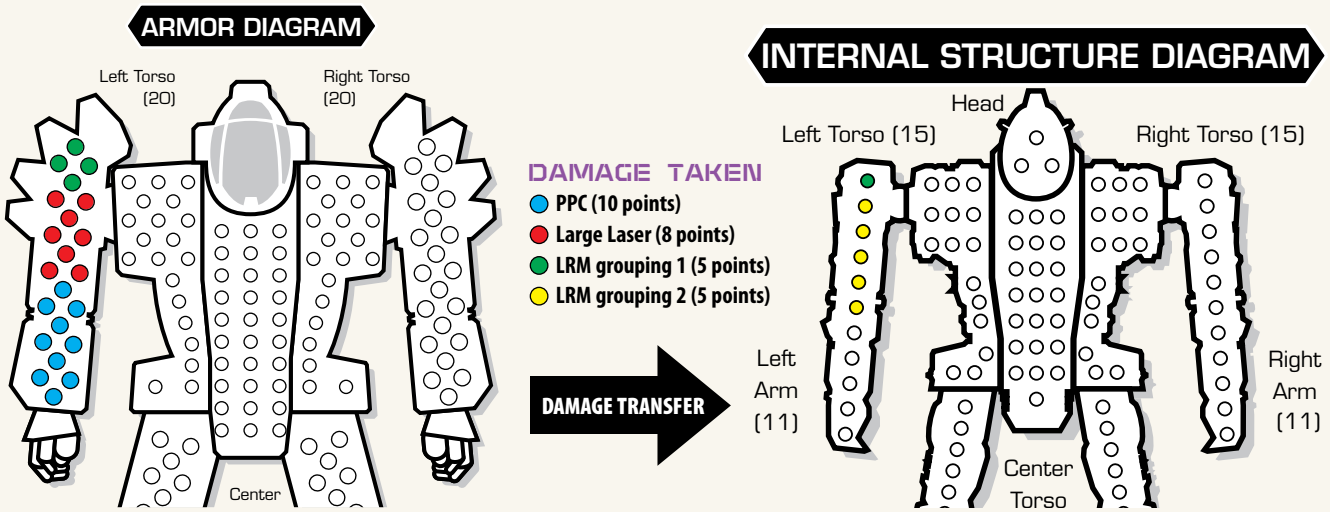
No: Attack is finished.

A Grasshopper*'s left arm is hit by a PPC (Damage Value 10), a large laser (Damage Value 8), and two 5-point groupings of long-range missiles (Damage Value 1 per missile hit, so 5 damage per grouping). Before this turn, the 'Mech had its full Armor Value of 22 in that arm.*

The PPC hit reduces the Armor Value by 10, so the Grasshopper*'s player fills in ten armor circles. The laser hit does 8 points of damage, and so the player fills in eight more circles, leaving four. The first missile grouping reduces the Armor Value by another 5 points, but since the* Grasshopper*'s remaining Armor Value is 4, that leaves 1 point of damage that the location's armor cannot absorb.*

The remaining 1 point of damage from the first missile grouping transfers to the arm's internal structure, and so the player fills in one circle on the Internal Structure Diagram, leaving ten circles out of the original eleven, and the attacker immediately makes a roll on the Determining Critical Hit Table (see p. 31), applying effects, if any. The last missile grouping reduces the arm's internal structure by another 5 points. The player fills in five more circles on the Internal Structure Diagram, once again immediately makes a roll on the Determining Critical Hits Table, and applies the effects, if any.

If the Grasshopper*'s left arm takes another 5 or more points of damage, the arm will be destroyed.*



3. DOES ANY INTERNAL STRUCTURE REMAIN IN THE LOCATION?

Yes: Go to Step 4.

No: Go to Step 5.

4. AT THE START OF THIS PHASE, DID THE LOCATION HAVE ANY COMPONENTS THAT COULD TAKE A CRITICAL HIT?

Yes: Immediately roll once on the Determining Critical Hits Table, page 31. Apply any resulting critical hits to that location. Critical hits that cannot be applied are discarded. Go to Step 6.

No: Immediately roll once on the Determining Critical Hits Table, page 31. Apply any resulting critical hits to the next location inward (if any; see the Damage Transfer Diagram on p. 34). Go to Step 6.

5. IS THERE AMMUNITION IN THE LOCATION?

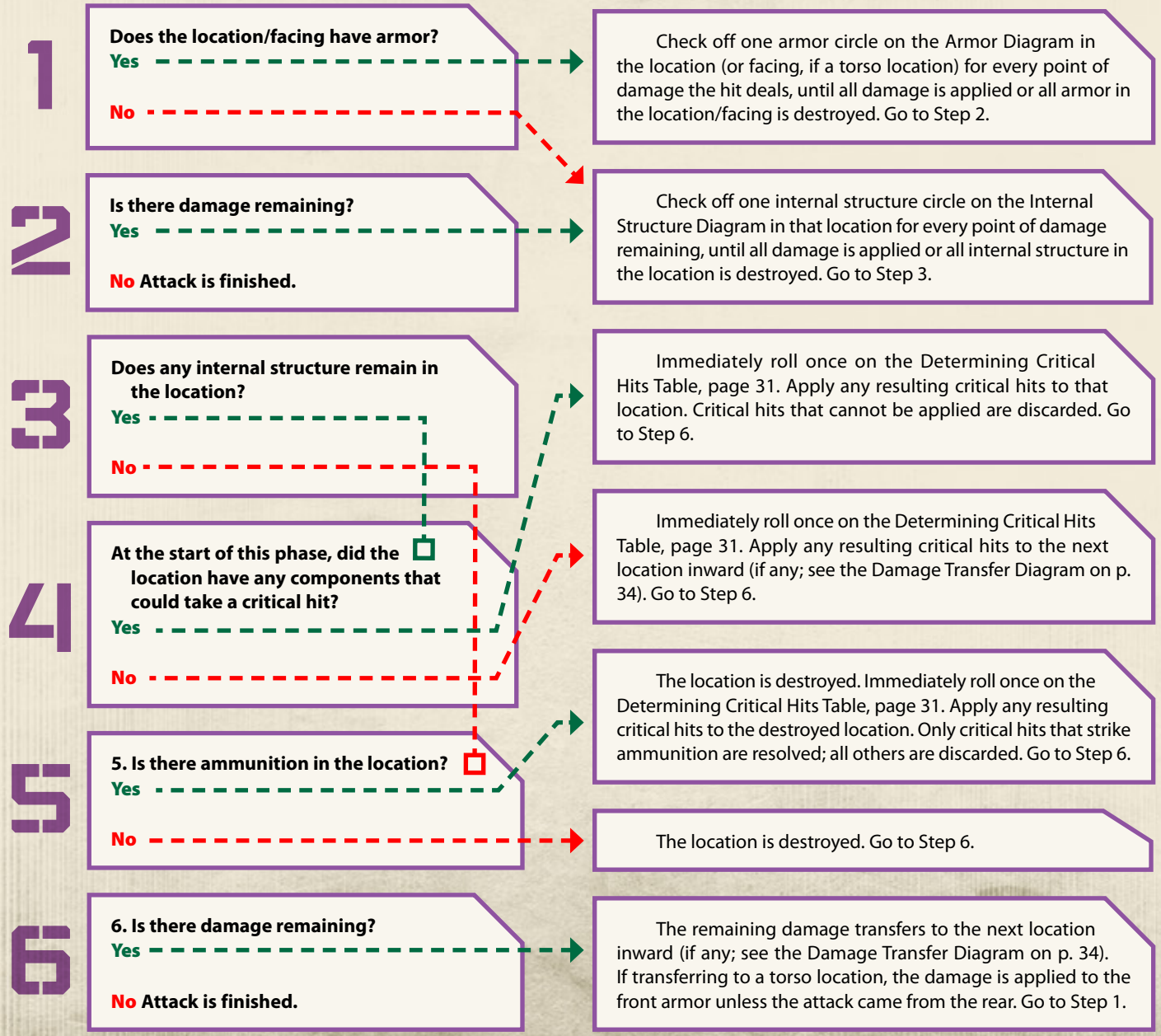
Yes: The location is destroyed. Immediately roll once on the Determining Critical Hits Table, page 31. Apply any resulting critical hits to the destroyed location. Only critical hits that strike ammunition are resolved; all others are discarded. Go to Step 6.

No: The location is destroyed. Go to Step 6.

6. IS THERE DAMAGE REMAINING?

Yes: The remaining damage transfers to the next location inward (if any; see the Damage Transfer Diagram on p. 34). If transferring to a torso location, the damage is applied to the front armor unless the attack came from the rear, in which case it is applied to the rear. Go to Step 1.

No: Attack is finished.



HEAT

Heat build-up is a BattleMech's greatest limiting factor. Though a 'Mech dissipates heat through its heat sinks, heat builds up when it moves or fires its weapons, and a high rate of activity can produce more heat than a 'Mech can dissipate. A warrior who pushes their 'Mech past its limits eventually must pay the price.

HEAT POINTS

The more heat points a 'Mech builds up, the greater its heat. A player tracks their 'Mech's heat points using the column of boxes on the 'Mech Record Sheet labelled "Heat Scale". The Heat Scale records heat levels from 0 to 30 heat points. The "Overflow" box is used to track heat levels above 30.

The Heat Point Table indicates the number of heat points generated by various actions and damage. It also shows the number of heat points a 'Mech can dissipate through its heat sinks and by standing in a water hex. As the 'Mech's heat reaches various levels on the Heat Scale, the 'Mech suffers the adverse effects listed for those levels.

BUILDING UP HEAT

Various activities build up heat at different rates. They can be broadly broken down into three categories: Movement, Weapons and Equipment, and Other.

MOVEMENT HEAT

Walking: Walking generates 1 heat point, no matter how many MP the 'Mech expends or how many hexes it moves.

Running: Running generates 2 heat points, no matter how many MP the 'Mech expends or how many hexes it moves.

Jumping: Jump jets generate 1 heat point per Jumping MP expended, with a minimum of 3 heat points. For example, when a 'Mech jumps 1, 2 or 3 hexes, it generates 3 heat points. If it jumps 4 hexes, it generates 4 heat points; if it jumps 6 hexes, it generates 6 heat points; and so on.

Standing Up: Each attempt to stand creates 1 heat point, in addition to the heat generated by the movement mode the 'Mech is using that turn.

HEAT POINT TABLE

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (min. of 3 per turn)
Attempting to stand	+1 per attempt
Weapons fire	Per entry in the Weapons and Equipment Table, p. 55, and on the record sheet
Heat sink	–1 per operational heat sink –1 additional per operational heat sink under water (maximum 6 points)
First engine hit	+5 per turn
Second engine hit	+10 (total) per turn

WEAPONS AND EQUIPMENT HEAT

Most weapons generate heat points when used. These sources are too many to summarize here: the Weapons and Equipment Table on page 55 lists the heat an item generates (also found on the record sheets).

OTHER HEAT

Engine Critical Hits: The first engine hit to a 'Mech generates 5 points of heat per turn. The second hit raises this to 10 (total) points of heat per turn. This is not applied if the 'Mech is shut down.

DISSIPATING HEAT

Heat sinks are the primary way in which a 'Mech rids itself of heat. Each heat sink dissipates 1 heat point per turn.

Water: Submerged heat sinks dissipate twice as much heat. A 'Mech standing in Depth 1 water has its leg-mounted heat sinks submerged. A 'Mech standing in Depth 2 or deeper water or prone in Depth 1 or deeper water has all of its heat sinks submerged (even those in the engine). No more than 6 additional heat points per turn can be dissipated due to water.

HEAT DATA

Heat Level*	Effects	Heat Sinks:
30	Shutdown	22
28	Ammo Exp. avoid on 8+	Single

• HEAT DATA AND HEAT SINKS •

RECORDING HEAT BUILD-UP

During each turn's Heat Phase, each player adds up the heat points built up by their 'Mech. They then subtract the heat dissipated by heat sinks. The result may be positive or negative. Add this number to the current level of heat shown on the Heat Scale. If the result is negative, adjust the Heat Scale downward; if the result is positive, adjust it upward. The Heat Scale cannot drop below 0.

Overflow Heat: Mark any heat generated beyond 30 in the "Overflow" box on the record sheet, which will still need to be dissipated in future turns.

EFFECTS OF HEAT

Excessive heat can injure a MechWarrior. It also causes a 'Mech to function less efficiently: the 'Mech moves more slowly, fires less accurately, and may shut down or even explode. Some of these effects are permanent; others disappear as the 'Mech cools.

Heat Timing: The 'Mech suffers heat effects after players have adjusted the heat level for the turn as described above in *Recording Heat Build-up*.

MOVEMENT

At 5, 10, 15, 20, and 25 heat points, subtract the number indicated from the 'Mech's Walking MP. For example, at anywhere from 5 to 9 heat points, subtract 1 from the 'Mech's Walking MP. Remember that Running MP is 1.5 times the current Walking MP; if the Walking MP is reduced, the player must also recalculate their 'Mech's Running MP, rounding fractions up.

This effect is not cumulative with any previous heat-caused Movement Point loss. For example, when a 'Mech's heat build-up reaches 5 on the Heat Scale, its Walking MP is reduced by 1. When the build-up reaches 10 on the Heat Scale, reduce Walking MP by 2 total, not by 2 more MP.

When the Heat Scale drops below the point at which these effects occur, the 'Mech regains 1 Walking MP, though previous applicable losses remain in force. For example, if the heat falls below 10 on the Heat Scale but remains at or above 5, the 'Mech continues to suffer –1 MP until the heat drops below 5.

Jumping: Reductions in Walking MP from heat build-up do not affect a 'Mech's Jumping MP.

WEAPON ATTACKS

At 8, 13, 17, and 24 heat points, add the number indicated to the 'Mech's Target Number for weapon attacks. For example, at 8 heat points, add 1 to all weapon attack Target Numbers for as long as the heat remains at or above 8. As with movement, these effects are not cumulative, and disappear when heat build-up is reduced.

These penalties apply only to weapon attacks, not physical attacks.

SHUTDOWN

At 14, 18, 22, 26, and 30 heat points, a 'Mech attempts to shut down its power plant automatically as a safety procedure.

A conscious MechWarrior can override the power plant's safety shutdown procedure, as indicated by the "Avoid" Target Number listed with the effect, though shutdown cannot be avoided at 30 or more heat points. If their 'Mech's Heat Scale is at or above 14, the player rolls 2D6 once during the Heat Phase. If the roll result is equal to or greater than the highest Avoid Target Number corresponding to the 'Mech's heat level, the pilot avoids shutdown for that turn. If heat accumulation reaches two or more trigger levels in one turn, roll 2D6 only once, against the highest Avoid Target Number.

If a 'Mech shuts down, a Piloting Skill Roll (see p. 40) is immediately required, with a +3 Target Number modifier (any other PSR required while the 'Mech is shutdown automatically fails). Additionally, the 'Mech becomes immobile (see p. 11). Its equipment ceases to function except for heat sinks and life support, and it cannot attack or take any other action. Engine critical hits do not generate heat while a 'Mech is shut down.

For every turn that the 'Mech is shut down, its heat sinks dissipate heat as normal, and the player may attempt to restart the power plant during each subsequent turn's Heat Phase (it must spend one entire turn—heat phase to heat phase—shut down). To do this, the player rolls 2D6. If the result is equal to or greater than the highest current Avoid Target Number, the player can restart the power plant. A 'Mech may move and fire in the turn following the turn in which the power plant is restarted. When the heat drops below 14 on the Heat Scale, the power plant restarts automatically, even if the pilot is out of action.

Aimed Shot: Other players can target a shut down 'Mech with aimed shots (see p. 21).

Overflow Heat: A 'Mech's heat level must be below 30 before a restart can occur.

Voluntary Shutdown: Players may elect to voluntarily shut down a 'Mech during any End Phase. They may then restart the power plant in any subsequent End Phase, provided they first pass any Shutdown Avoid checks due to heat (if needed).

• HEAT DATA TABLE, WITH COLOR-CODED EFFECTS OVERLAY •

HEAT DATA

Heat Level*	Effects
30	Shutdown
28	Ammo Exp. avoid on 8+
26	Shutdown, avoid on 10+
25	–5 Movement Points
24	+4 Modifier to Fire
23	Ammo Exp. avoid on 6+
22	Shutdown, avoid on 8+
20	–4 Movement Points
19	Ammo Exp. avoid on 4+
18	Shutdown, avoid on 6+
17	+3 Modifier to Fire
15	–3 Movement Points
14	Shutdown, avoid on 4+
13	+2 Modifier to Fire
10	–2 Movement Points
8	+1 Modifier to Fire
5	–1 Movement Points

Movement Effect | Weapon Attack Effect

Shutdown Effect | Ammunition Effect

AMMUNITION

If a 'Mech with unemptied bins of ammunition reaches 19 points or higher on the Heat Scale, one of these bins may explode. To avoid an explosion, the 'Mech's controller must roll 2D6 once and meet or exceed the Target Number of the highest Ammo Explosion threshold reached; a 'Mech with 19-22 heat would need to roll a 4 or higher, 23-27 heat a 6 or higher, and 28-30 heat an 8 or higher to avoid.

When an overheated 'Mech's ammo explodes, the ammunition critical slot with the most destructive ammo per shot explodes first. Ammo per shot is defined as the Damage Value done by one turn's worth of shots. For example, the ammo per shot of a machine gun slot has a Damage Value of 2, a LRM-15 a Damage Value of 15, and a SRM-6 a Damage Value of 12. If a 'Mech carries two ammo slots with equivalent per-shot Damage Values, the 'Mech's controller chooses which ammo explodes.

All of the appropriate ammo type in a single critical slot explodes. If more than one critical hit slot holds the appropriate ammo type, the one with the most shots remaining explodes. If two or more locations have an equal number of shots remaining, randomly determine which one explodes.

Resolve the explosion following the rules in *Critical Hit Effects*, page 32. An ammunition explosion has no effect on any 'Mech other than the one that suffered it.

MechWarrior Damage: Ammunition explosions automatically injure the MechWarrior, inflicting 2 points of damage (wounds) and forcing two Consciousness Rolls (see p. 44).

DAMAGE TO MECHWARRIORS

If a 'Mech's life support system takes one or more critical hits, its MechWarrior suffers damage when the 'Mech's heat levels are high. The MechWarrior takes 1 point of damage (wound) at the end of every Heat Phase that the 'Mech's Heat Scale is between 15 and 25; if the Heat Scale is 26 or higher, the MechWarrior takes 2 points of damage instead.

An Awesome *begins a turn with a Heat Scale level of 4. During the turn, the 'Mech fires three PPCs and walks (generating 31 heat points). It only has 26 standard heat sinks working, which dissipate 26 heat points, leaving 5 to build up. During the Heat Phase, these 5 points are added to the 4 already on its Heat Scale, bringing the total to 9. In the next turn, the 'Mech must reduce its Walking MP by 1 (giving it a Walking MP of 2 and a Running MP of 3) and add +1 to its Target Number for weapon attacks (but not physical attacks).*

If the 'Mech repeats these actions in the next turn, the player must add 5 more heat points to the Heat Scale, bringing the total to 14. Now the player must make a 2D6 roll of 4 or higher to avoid shutdown. Even if they manage this, the Awesome*'s Walking MP is still reduced by 1 more, to Walking MP of 2 (Running MP of 3), until its heat falls below 10 on the Heat Scale. At the same time, the 'Mech applies a +2 Target Number modifier to its weapon attacks.*

OTHER ACTIONS

While events such as movement or combat generally occur at fixed intervals, there are several important events that can occur at a variety of points in a *BattleTech* turn. Rules that can apply in multiple phases are covered in this chapter.

PILOTING SKILL ROLLS (PSR)

MechWarriors must make Piloting Skill Rolls (PSRs) under a variety of circumstances. A PSR is usually made to avoid falling: unless stated otherwise, failing one means the 'Mech falls.

The Piloting Skill Roll Table (see p. 41) lists the events that require a PSR. A PSR is required every time one of these events occurs (the exact moment when the PSR is made is explained under *Piloting Skill Roll Timing*; see p. below).

If a 'Mech is required to make multiple Piloting Skill Rolls at the same time (e.g. a 'Mech is kicked and takes 20 damage from that kick, both of which force a PSR), each PSR is rolled one at a time, but all modifiers are cumulative and apply to all rolls. If one of these PSRs fails, any remaining PSRs in that sequence are ignored.

Immobile 'Mechs and Unconscious Warriors: 'Mechs that are immobile or that have an unconscious warrior automatically fail any required PSRs, if they were standing.

'Mech Damage: If a 'Mech takes 20 or more damage points in a single phase, it makes only one PSR for this, regardless of the final damage total it took that phase.

Prone 'Mechs: A prone 'Mech ignores all PSRs required to avoid falls, except when attempting to stand.

MAKING PILOTING SKILL ROLLS

Piloting Skill Rolls use the MechWarrior's Piloting Skill as the base Target Number, modified by the following:

- all indicated modifiers for the event
- all modifiers applied by other events which have already occurred in the same phase
- all modifiers applied due to Preexisting Damage (as seen on the Piloting Skill Roll Table)

The result is the modified Target Number.

To make a Piloting Skill Roll, the player rolls 2D6. If the result is equal to or greater than the modified Target Number, the roll succeeds. If the result is less than the modified Target Number, the roll fails, which almost always means the 'Mech falls.

A player cannot choose to intentionally fail a Piloting Skill Roll.

PILOTING SKILL ROLL TIMING

Exactly when a Piloting Skill Roll is made depends on the phase of the turn and the action that triggers it.

Movement Phase: Piloting Skill Rolls required due to a movement action (trying to stand up, entering water or rubble, etc.) are made immediately following the action. As such, if a PSR is required due to entering a hex and is failed, the 'Mech falls in that new hex that triggered that PSR.

Multiple rolls may be required during movement. For example, if a 'Mech wants to move through three hexes of Depth 1 water, a PSR is made immediately after each hex is entered.

Attack Phases: Piloting Skill Rolls due to attacks made in the Weapon or Physical Attack phases are made at the end of the phase the attacks occurred in (i.e. after all attacks that phase). Apply all modifiers resulting from damage that phase.

Consciousness Rolls: Consciousness Rolls are made immediately upon triggering. If both a Consciousness Roll and a PSR are required at the same time, the Consciousness Roll comes first.

Displacement: Any PSR required due to displacement (see below) happens immediately, regardless of the phase.

MechWarrior Damage: Any PSR made to see if a MechWarrior is damaged by a fall (see p. 43) is made immediately, before applying any damage caused by the fall.

> *During the Weapon Attack Phase, a 'Mech whose MechWarrior has a Piloting Skill of 5 takes 40 points of damage and loses two lower leg actuators. At the end of the phase, the player makes three Piloting Skill Rolls: one for taking 20 or more points of damage, and two more for losing two leg actuators. The modified 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 'Mech is kicked in the leg by two other 'Mechs, losing another actuator and taking 20 more points of damage. At the end of the phase, the player must make four more Piloting Skill Rolls: two for getting kicked twice, one for losing a leg actuator, and one for the 20 points of damage. The modified Target Number for each of the four rolls is 9: 5 (Piloting Skill) + 2 (existing actuator damage) + 1 (another damaged leg actuator) + 1 (20+ points of damage).*

DISPLACEMENT

A 'Mech forced into another hex is displaced. This typically occurs due to charge, push, and death from above attacks.

If a 'Mech is displaced into a hex of the same level, or one or two levels higher, check if the newly-entered hex contains another 'Mech. If so, see *Domino Effect*, on page 42.

If a 'Mech is displaced downward, what happens depends on how many levels down the 'Mech is displaced, and if the newly entered hex is occupied by another 'Mech:

- If the hex the 'Mech is displaced into has no other 'Mech in it, and is one level lower, follow the normal rules called for by the action that caused the displacement.
- If the hex the 'Mech is displaced into contains another 'Mech, and that hex is one level lower, a domino effect occurs (see p. 42).
- If the hex the 'Mech is displaced into has no other 'Mech in it, and is two or more levels lower, an automatic fall occurs (see *Falling*, p. 42).
- If the hex the 'Mech is displaced into contains another 'Mech, and that hex is two levels or more lower, then an accidental fall from above occurs (see p. 44) and that 'Mech is displaced.

PILOTING SKILL ROLL TABLE

Situation	Modifier
Damage to 'Mech	
'Mech takes 20+ damage points in one phase	+1
'Mech fusion reactor shuts down	+3[1]
Leg/foot actuator destroyed	+1
Hip actuator destroyed	+2
Gyro hit	+3
Gyro destroyed	Automatic fall[2]
Leg destroyed	Automatic fall[3]
Physical Attacks Against 'Mech	
'Mech was kicked	0
'Mech was pushed	0
'Mech was successfully charged/hit by death from above	+2
'Mech's Actions	
Missed kick	0
Made a successful charging attack	+2
Made a successful death from above attack	+4[4]
Entered Depth 1 water hex	–1

Situation	Modifier
Entered Depth 2 water hex	0
Entered Depth 3+ water hex	+1
Attempted to stand	0
Entered rubble hex	0
Jumped with damaged gyro or leg/foot/hip actuators	per Preexisting Damage, below
Jumped with destroyed leg	per Preexisting Damage, below
Ran with damaged hip or gyro	per Preexisting Damage, below
Special Cases	
MechWarrior trying to avoid damage when their 'Mech is falling	+1/every level above 1
Unintentional charge	+3
Preexisting Damage	
Per leg/foot actuator previously destroyed	+1
Per hip actuator previously destroyed	+2[5]
Gyro previously hit	+3
Leg previously destroyed	+5[6]

[1]Only during the phase that the reactor shuts down. If the MechWarrior must make a Piloting Skill Roll for a 'Mech with a shutdown reactor, the 'Mech automatically falls; in either case, if the 'Mech falls, the warrior automatically takes 1 point of damage (see *Falling Damage to a MechWarrior*, p. 43).

[2]The modifier for a destroyed gyro is +6 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.

[3]The modifier for a destroyed leg is +5 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.

[4]Automatic fall if death from above attack is unsuccessful.

[5]Ignore all modifiers from previous critical hits on that leg.

[6]Do not add modifiers for other damaged actuators in the leg.

Actions that cause a displacement often call for a Piloting Skill Roll by the 'Mech being displaced. Any fall that results is a 0-level fall that occurs in the hex the 'Mech is displaced into. However, if a 'Mech is displaced down two or more levels, any such PSR is ignored, as the 'Mech automatically falls; the fall distance is calculated from the 'Mech's level before the fall as normal.

Destroyed 'Mechs: A 'Mech destroyed by an action that would also displace it (like a charge) does not resolve any displacement.

Forced Off-Board: A 'Mech displaced into a partial hex or off the playing area is considered destroyed for the scenario.

Prohibited Displacement: A 'Mech cannot be displaced into a hex three or more levels higher than the hex it was moved from. In such a case, the displacement cannot occur, and neither the target nor attacking 'Mech move, unless the action specifically states otherwise. All other effects of the displacing action occur.

Timing: Displacement (including any resulting PSRs and damage) is resolved immediately after the action that caused it, regardless of what phase it is. If any damage was inflicted by the action that caused the displacement, apply it before resolving the displacement, even though the phase has not yet ended.

If a physical attack might cause displacement, and in doing so interrupt another physical attack, the 'Mech with the lower Initiative (i.e. the first to move) resolves its physical attack first. If both attackers are on the same side, the controlling player(s) may determine which attack is resolved first. If no valid target exists, the attack automatically fails. A displacement can also mean a planned physical attack can no longer occur.

DOMINO EFFECT

If a 'Mech is forced into a hex occupied by another 'Mech, the 'Mech already in the hex (known as "the target 'Mech") is forced out of that hex. This is called a domino effect. The target 'Mech immediately makes a Piloting Skill Roll.

If the target 'Mech fails its PSR, it is displaced into the hex in the direction opposite the hexside where the intruding 'Mech entered the hex. The target 'Mech then falls in that hex.

Dodging a Domino Effect: If the target 'Mech's PSR is instead successful, *and* the domino effect also originates from one of the target's four side hexes, then the target can dodge the domino effect by immediately moving one hex directly forward or backward, so long as all of the following are true:

- it is mobile
- it is standing
- it has enough MP unspent that turn to move into the hex
- it did not jump that turn
- the hex being moved to does not already have a 'Mech in it

As usual, the 'Mech cannot move backward if it ran that turn.

If the target 'Mech's PSR is successful but it cannot dodge, it is still forced into the next hex as noted above, but does not fall.

Multiple Domino Effects: If a 'Mech is the target of a domino effect, and there is another 'Mech in the hex it is displaced into, another domino effect occurs. Such domino effects continue as long as 'Mechs remain in hexes adjacent to one another in the direction of the effect.

If there is no legal hex for the last 'Mech in a multiple domino effect chain to be displaced into, it is destroyed.

• DISPLACEMENT DIAGRAM •

In the Displacement diagram above, the 'Mech in Hex A is displaced one level down into Hex B. The 'Mech already in Hex B makes an immediate Piloting Skill Roll. It has no MP left. As such, whether it passes or fails it will in turn be forced into Hex C.

The 'Mech already in Hex C does have MP left, and the displaced 'Mech is coming from one of its side hexes, so the 'Mech in Hex C can try to dodge. First, its controller must make a PSR. If its roll fails, it is forced into Hex D and falls (and if another 'Mech was in that hex, the domino effect would continue).

If its PSR is successful (and it did not run that turn), it may move one hex directly backward, into Hex E, ending the domino effect. If the 'Mech had 2 or more MP left, it could instead move forward into the light woods in Hex F. If it had no MP left, however, it would be forced into Hex D.

FALLING

If a 'Mech falls, it suffers damage and its MechWarrior may be injured as well.

LOCATION AFTER A FALL

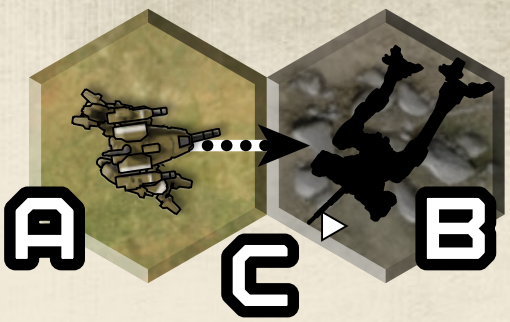
When a 'Mech falls while moving from one hex to another, it falls in the hex it was moving into. If a fall occurs because of an attack or any other combat-related reason, the 'Mech falls in the hex it occupies.

Unless stated otherwise, 'Mech falls are 0-level falls; this includes 'Mechs that fall due to jumping. However, if a 'Mech is displaced downwards two or more levels (see *Displacement*, p. 40), subtract the level of the hex the 'Mech landed in from the level of the hex it was in immediately prior to the fall: this is the number of levels it fell.

Falling and Collisions: If a 'Mech falls two or more levels into a hex occupied by another 'Mech, the two 'Mechs may collide (see *Accidental Falls From Above,* p. 44).

FACING AFTER A FALL

When a 'Mech falls, it takes damage and its facing may change. This facing change determines the Hit Location Table used when assigning damage from the fall. To determine the 'Mech's facing after



• FALLING DIAGRAM •

In the Falling Diagram above, a player wants their 'Mech in Hex A to move into Hex B. As soon as the player enters the rubble hex, they must make a Piloting Skill Roll. The roll fails, and so the 'Mech's controller rolls 1D6 and consults the Facing After Fall Table. A result of 3 means the 'Mech is now facing two hexsides to the right (clockwise) of its original facing and takes the damage from the fall on its right side (i.e. it uses the right side column of the Hit Location Table). It lies prone and face down in the rubble hex, facing hexside C.

the fall and where the 'Mech takes damage, roll 1D6 and consult the Facing After Fall Table (see below).

A fallen 'Mech lies prone and face down. 'Mechs that fall on their sides or rear automatically roll over to lie face down after taking damage from that fall.

Damage Arc for Prone 'Mechs: If the target 'Mech is prone, use the hexside its head is pointing at as its facing. Any damage to a prone 'Mech from outside sources such as weapons fire is treated as if the 'Mech was standing with that facing.

FALLING DAMAGE TO A 'MECH

A fall deals damage equal to 1 point for every 10 tons that the 'Mech weighs (rounding up), multiplied by the number of levels plus 1 that the 'Mech fell. Divide the damage into 5-point Damage Value groupings (assigning any remaining points of damage to an undersized grouping), and then determine a hit location for each grouping. For example, a 'Mech that suffers 33 points of falling damage takes six 5-point hits and one 3-point hit, each assigned as a separate hit. Use the appropriate column of the Hit Location Table (see p. 23), as specified by the Facing After Fall Table (see below).

If the fall occurs during the Movement Phase, resolve the damage as it happens.

Water: If a 'Mech falls when standing in Depth 1 or greater water, it suffers normal falling damage divided by 2 (round down).

A 'Mech above the water's surface that falls into water suffers normal falling damage divided by 2 for hitting the water's surface, and also normal falling damage divided by 2 for the fall from the water's surface to the bottom of the water hex. Damage for hitting the water's surface equals tonnage/10 (round up) x (# of levels fallen + 1)/2). Normal damage for hitting the bottom of the water hex equals tonnage/10 (round up) x (depth of water hex + 1)/2. Damage is resolved separately; round any fractional final damage values down.

FACING AFTER FALL TABLE

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

A prone BattleMaster *attempts to stand. The MechWarrior fails the Piloting Skill Roll, and so the 'Mech falls again in the same hex. This means the 'Mech fell 0 levels. The player rolls a 1 on the Facing After Fall Table and finds that the 'Mech landed on its front, so the damage locations are rolled on the Front column of the Hit Location Table.*

The BattleMaster *suffers 9 points of damage (85 tons divided by 10 equals 8.5, rounded up to 9; the number of levels fallen plus 1 equals 1; 9 x 1 = 7). The player divides the 9 points into one 5-point grouping and one 4-point grouping, and then uses the Front column of the Hit Location Table to determine the exact location of the damage.*

FALLING DAMAGE TO A MECHWARRIOR

A player makes a second Piloting Skill Roll after every fall (often called a seat belt check). All modifiers applied to the PSR that caused the fall are applied to this second roll, with an additional +1 modifier applied to the Target Number for every level above 1 fallen. If the roll succeeds, the MechWarrior avoids taking damage (wounds). If the roll fails, the MechWarrior takes 1 point of damage (wound).

Automatic Damage: A MechWarrior automatically takes 1 point of damage if at the time of the fall their 'Mech is immobile (see p. 11) or if the modified Target Number for the PSR to avoid MechWarrior damage is greater than 12.

The MechWarrior piloting the BattleMaster *in the previous example has a Piloting Skill of 5. It does not have any pre-existing damage, it did not take 20 points of damage in this turn, and it fell 0 Levels, and so no modifiers apply to the Target Number for the Piloting Skill Roll. Its controller therefore need only roll 5 or better to avoid damaging (wounding) the MechWarrior.*

ACCIDENTAL FALLS FROM ABOVE

A 'Mech cannot intentionally fall onto another 'Mech. However, if a 'Mech is displaced into a hex two or more levels lower than its previous hex, and that hex already contains a 'Mech, then the displaced 'Mech might fall onto the target 'Mech. The displaced 'Mech makes an attack roll with a base Target Number of 7, modified by target movement (the number on the Movement Die, *not* the color) and terrain.

FALLING 'MECH MISSES TARGET

If the attack roll fails, the falling 'Mech lands in an adjacent hex as close as possible to the hex from which it fell; if multiple such hexes exist, randomly determine which hex it lands in. Resolve this as a standard fall.

FALLING 'MECH HITS TARGET

If the attack roll is successful, divide the falling 'Mech's weight by 10 (round up), and multiply this by the number of levels fallen to the point of impact (the level of the underlying hex plus the level of the target 'Mech). Divide this damage by 2 (round down) if the target 'Mech is fully submerged. Then divide the damage into 5-point Damage Value groupings (assigning any remaining points of damage to an undersized grouping), and assign a hit location for each grouping to the target 'Mech using the Punch Location Table.

Determine the amount of damage to the falling 'Mech as normal for a fall of that height. Roll for facing as normal on the Facing After Fall Table (see p. 43), but the 'Mech always lands on its back and all damage is applied to the rear.

The target 'Mech is immediately displaced to a random neighboring legal hex (see *Displacement*, p. 40), and must make a Piloting Skill Roll (see p. 40) with a +2 modifier or fall in the hex it was displaced into.

FORBIDDEN DISPLACEMENT

If there is no legal hex for the falling or target 'Mech to be placed in, that 'Mech is destroyed.

DAMAGING A MECHWARRIOR

Three types of damage to a 'Mech can also damage (wound) the MechWarrior inside: head hits, falling, and internal ammunition explosions. In addition, excessive heat buildup can harm the MechWarrior if the 'Mech's life support system suffers a critical hit.

A MechWarrior can withstand up to 5 points of damage (wounds). The sixth point of damage (wound) kills the warrior.

Ammunition Explosions: An ammunition explosion causes 2 points of damage to the MechWarrior.

Falling: If a 'Mech falls, its controller must immediately make a Piloting Skill Roll for the MechWarrior (the seat belt check), before applying any falling damage to the 'Mech. All modifiers applied to the PSR that caused the fall are applied to this second roll, with an additional +1 modifier applied for every level above 1 fallen as well. If the roll fails, the warrior takes 1 point of damage (wound).

If the 'Mech is immobile (see p. 11), or if the modified Target Number for the PSR to avoid MechWarrior damage is greater than 12, such a fall automatically damages (wounds) the warrior.

Head Hits: The MechWarrior takes 1 point of damage (wound) whenever the 'Mech's head takes a hit, even if the hit did not penetrate the 'Mech's armor.

Heat: When a 'Mech's life support system takes a critical hit, the MechWarrior takes 1 point of damage (wound) at the end of every Heat Phase that the 'Mech's Heat Scale is between 15 and 25; if the Heat Scale is 26 or higher, the MechWarrior takes 2 points of damage (wounds) instead.

CONSCIOUSNESS ROLLS

MechWarriors can survive up to 5 points of damage (wounds), but they may be knocked unconscious long before taking that much. Every time a warrior takes a point of damage (wound), its controller must immediately make a Consciousness Roll. Roll 2D6 and consult the Consciousness Table (as seen on the Warrior Data section of the 'Mech Record Sheet, duplicated below). If the roll result is equal to or greater than the MechWarrior's consciousness number, the warrior remains conscious. If the result is less than the consciousness number, the warrior is immediately knocked unconscious. For example, after the first damage (wound), if a player rolls a 2 the pilot is unconscious; if the player rolls 3 or more the pilot remains conscious.

The player makes this roll for every point of damage taken; for example, in the case of an ammunition explosion in a 'Mech, that MechWarrior will need to make two consecutive Consciousness Rolls. However, if a MechWarrior is knocked unconscious, no further Consciousness Rolls need be made that turn.

A 'Mech with an unconscious warrior becomes immobile (see p. 11).

A warrior that takes 6 points of damage (wounds) is dead. Remove their 'Mech from the map in the end of the phase in which they were killed.

Piloting Skill Rolls: If a MechWarrior is forced to make both a Consciousness Roll and a PSR at the same time, the Consciousness Roll always comes first.

All PSRs required of an unconscious MechWarrior automatically fail.

Recovering Consciousness: During the End Phase of each turn after the turn in which the MechWarrior lost consciousness (i.e. the pilot must remain unconscious for at least one full turn), the player rolls 2D6. If the result is equal to or greater than the consciousness number for the warrior's current total damage points (wounds), the warrior regains consciousness. The player need not roll again to determine unconsciousness until the warrior takes new damage (wound).

For example, a MechWarrior with 3 points of damage (wounds) must make a single 2D6 roll in the End Phase to wake up. A roll of 7+ means the warrior regains consciousness that phase.

WARRIOR DATA

Name: _____

Gunnery Skill: ___ Piloting Skill: ___

Hits Taken	1	2	3	4	5	6
Consciousness#	3	5	7	10	11	Dead

• MECHWARRIOR DATA •

SCENARIOS

This section provides three ready-to-play game situations called scenarios. Each entry describes the mapsheets used for the scenario, the forces each side will use, and the victory conditions and any special rules for the scenario.

Each scenario is longer and more complex than the previous engagement, and should be played in the order they appear. The three scenarios illustrate a variety of missions you can play using the *BattleTech* game system, and will help spark ideas for creating your own scenarios. To help get you started, each scenario includes potential modifications to open up new areas of play.

Choosing Sides: Both players roll 2D6: the winner chooses either the attacker or defender side, with the loser playing opposite.

Game Terms: As described on page 3, "mapsheet" indicates a single 17" x 22" playing map, while "playing area" refers to the total area of a given game, regardless of the number of mapsheets used.

Unless specifically stated otherwise, the "home map edge" is the side of the playing area where the attacker and defender either set-up and/or enter.

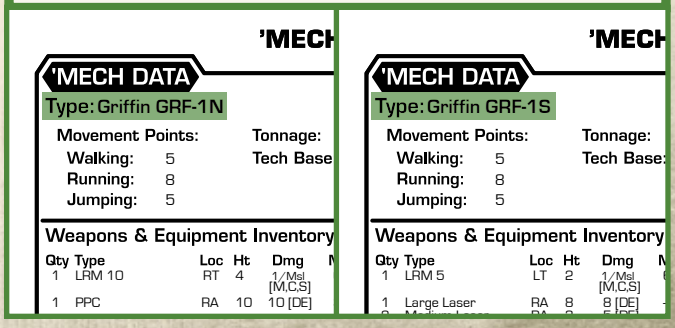
Copying Record Sheets: Players will need to photocopy from the record sheet booklet as some of the scenarios require two of the same record sheet in the same game. Players can also download the PDF of this record sheet booklet and simply print out the necessary copies (bg.battletech.com).

Miniatures & Punch-out Playing Pieces: For each scenario, use the illustrations on the indicated record sheets to select the correct miniature. If a scenario requires two of the same miniature, use the corresponding punch-out playing piece as needed.

BATTLEMECH VARIANTS

Each BattleMech is considered a unique chassis, but each chassis may have several variants developed over the centuries of war, boasting alternate weapons, equipment, or armor placement. For example, the *Wolverine* and *Griffin* both weigh 55 tons and are similar in speed, but are each a unique chassis with several variants.

There are two *Griffin* record sheets in this box, each a different variant: the GRN-1N and the GRN-1S (shown on the **Type** row, in the **'Mech Data** box). The scenarios use these designations when determining forces. However, the illustration of each variant shown on the record sheet does not change; it always represents the primary chassis as depicted in a *Technical Readout* sourcebook. When selecting record sheets, start with the name/illustration, and then quickly review the code designation to ensure you've selected the right variant!



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. Only one of those lance commanders will advance to the military academy's 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 their students are ready, the cadets' combat and leadership skills are tested with a "final exam." Before starting their simulated battle, two students are gravely informed that the military academy can only accept one cadet. The loser will simply have to abandon their dreams of becoming a MechWarrior.

In fact, the training officer is making all that up, but the deception—common 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 Desert #2 and Grassland #2 mapsheets as shown (see p. 46).

DEFENDER

The training officer has chosen a lance of mostly light and medium 'Mechs for the trial, but has supplied the lance commander with a heavy *Catapult*.

- Lance Commander Horace (Piloting 5, Gunnery 4), CPLT-C1 *Catapult*
- Cadet Winston (Piloting 5, Gunnery 4), LCT-1V *Locust*
- Cadet Johansson (Piloting 5, Gunnery 4), COM-2D *Commando*
- Cadet Rodriguez (Piloting 5, Gunnery 4), SHD-2H *Shadow Hawk*

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), LCT-1V *Locust*
- Cadet Armstrong (Piloting 5, Gunnery 4), COM-2D *Commando*
- Cadet Keenan (Piloting 5, Gunnery 4), SHD-2H *Shadow Hawk*

• SCENARIO 1 MAP LAYOUT •

DEPLOYMENT

The defender chooses one of their BattleMechs and places it on any hex along the west edge of the playing area. The attacker then chooses one of their BattleMechs and places it on any hex along the east edge. The players alternate placing their 'Mechs in this way until all eight 'Mechs are on the playing area. Play then begins with the Initiative Phase of the first turn.

VICTORY CONDITIONS

The winner is the side which cripples (see below) or destroys all of the other side's BattleMechs first.

SPECIAL RULES

For 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.

Now play the game!

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:

Attacker: TDR-5SE *Thunderbolt*, WVR-6R *Wolverine*, LCT-1V *Locust*, COM-3A *Commando*.

Defender: TDR-5S *Thunderbolt*, GRF-1N *Griffin*, LCT-1E *Locust*, COM-2D *Commando*.

TERRAIN

The terrain in this scenario can be varied by setting up the mapsheets differently or using the die-cut terrain (see p. 48). For example, turning the mapsheets so they are facing opposite directions will create a different battlefield. Or players can place the mapsheets so that their narrow sides touch, rather than their wide sides.

SCENARIO 2: TRIAL BY FIRE

"Assault lance, report—what's 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 commlink crackled with the commander's response.

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

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 heavily damaged and his lancemates were dead. The young MechWarrior felt panic closing in, but forced it out of his mind. 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.

GAME SET-UP

Lay out the Desert #2 and Grassland #3 mapsheets as shown.

DEFENDER

The defender is a lone MechWarrior in a *BattleMaster* that suffered damage in an earlier battle.

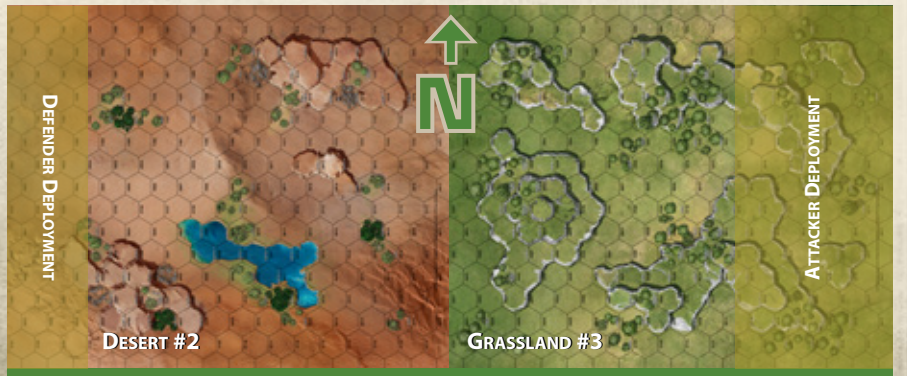
Pre-existing Damage: Before play begins the defending player must roll hit locations on the Front side column for four attacks against the *BattleMaster*, each inflicting 5 points of damage. Re-roll any head hits and do not roll for critical hits, if any occur.

- MechWarrior Thompson (Piloting 5, Gunnery 4), BLR-1G *BattleMaster*.

ATTACKER

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

- Sergeant Hoffmann (Piloting 5, Gunnery 5), WVR-6M *Wolverine*



• SCENARIO 2 MAP LAYOUT •

- MechWarrior Adjani (Piloting 6, Gunnery 5), LCT-1V *Locust*
- MechWarrior Lucas (Piloting 6, Gunnery 5), COM-3A *Commando*

DEPLOYMENT

The attacker sets up first, and can place their 'Mechs on any Clear Level 0 hex within six hexes of the east edge of the playing area, with any facing desired.

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

VICTORY CONDITIONS

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

SPECIAL RULES

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

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

Any attacking 'Mech that exits the playing area is considered destroyed.

Now play the game!

VARIATIONS

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

SCENARIO 3: DIVIDE AND CONQUER

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

Slowly but surely, the attackers drove a wedge into the defending force, forcing it apart. The attacking force destroyed half of the defending 'Mech force, but lost two-thirds of its own 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 other group comes within range.

GAME SET-UP

Lay out the Desert #3 and Grassland #3 mapsheets as shown, including the die-cut terrain pieces, as shown.

DEFENDER

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

Command Lance

- Lieutenant Blake (Piloting 3, Gunnery 2), CPL-K2 *Catapult*
- Sergeant Petersen (Piloting 4, Gunnery 3), TDR-5S *Thunderbolt*
- MechWarrior Lee (Piloting 5, Gunnery 4), SHD-2H *Shadow Hawk*

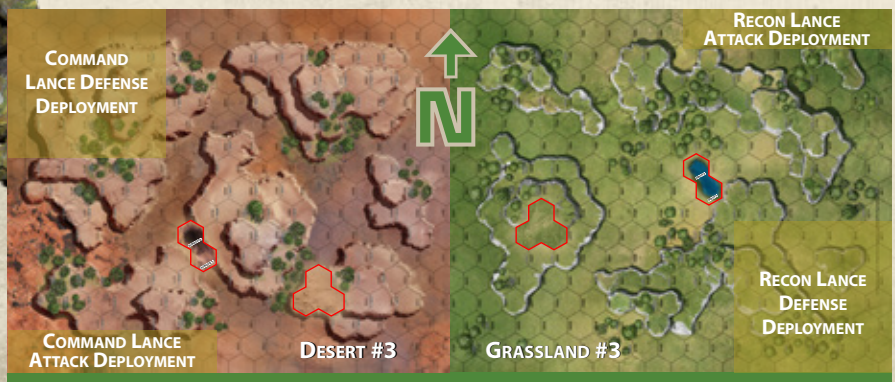
Recon Lance

- Sergeant Alvarez (Piloting 4, Gunnery 4), LCT-1V *Locust*
- MechWarrior Theissen (Piloting 5, Gunnery 4), COM-3A *Commando*
- MechWarrior Jones (Piloting 5, Gunnery 4), COM-2D *Commando*

ATTACKER

The attacking force consists of a single lance.

- Captain Seymore (Piloting 3, Gunnery 3), AWS-8Q *Awesome*
- Lieutenant Marks (Piloting 5, Gunnery 4), TDR-5SE *Thunderbolt*
- MechWarrior Kanazawa (Piloting 4, Gunnery 3), WVR-6M *Wolverine*
- MechWarrior O'Rourke (Piloting 4, Gunnery 3), GRF-1N *Griffin*



• SCENARIO 3 MAP LAYOUT •

DEPLOYMENT

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

The attacker sets up after all the defending 'Mechs are placed. The attacker can attack the defender's lances in any order they prefer. If they want to attack the recon lance first, they must place their 'Mechs in the northeast corner of the east mapsheet, in the row of hexes numbered 1510 through 1517. If they want to attack the command lance first, they must place their '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 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 playing area for any reason, it is considered destroyed.

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

Now play the game!

VARIATIONS

For a smaller (and shorter) game, remove the SHD-2H *Shadow Hawk* and LCT-1V *Locust* from the defender, and the TDR-5SE *Thunderbolt* from the attacker; 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. 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.

ADDITIONAL VARIATIONS

Use the following rules for additional variations for any of these scenarios.

MECHWARRIOR CARDS

These cards bring notable MechWarriors from the fiction to life (such as the MechWarriors from the *Eyestorm* novella found in this box). After you have one scenario under your belt, review the MechWarrior Cards and consider adding them to your game. Use the following rules when doing so:

- Only one BattleMech per side can have an attached MechWarrior Card.
- Both MechWarrior Cards must have the same cost.

Force Balance: As noted above, both MechWarrior Cards must have the same cost, so both players will need to agree on that cost prior to the game. If you cannot agree, roll a D6 and divide by 2 (rounding down).

Piloting and Gunnery Skills: All MechWarrior Cards include Gunnery and Piloting Skills. Use the values listed on the card during game play. If you're replaying one of the scenarios from this section, note that the values on the MechWarrior Card will replace the Piloting and Gunnery Skill listed in the scenario entry for that 'Mech. However, to maintain force balance, an opposing MechWarrior should have their Skill Rating improved (i.e., lowered) by the same increment as the bonus provided by the MechWarrior Card. For example, if a MechWarrior Card would lower a unit's rating from Piloting Skill 4 to Piloting Skill 3, an opposing MechWarrior could improve their Piloting Skill of 5 by one level, to Piloting Skill 4.

PLANETARY CONDITIONS

For more challenging games, players can introduce one or both of the following Planetary Conditions.

FULL MOON NIGHT

MP Modifier: +1 MP cost per hex.

Attack Target Number Modifier: +2 to all weapon attacks (not physical attacks). Reduce this modifier by 1 for every 20 points of heat on the target 'Mech's heat scale (to a minimum of 0).

STRONG GALE

Attack Target Number Modifier: Apply a +2 Target Number modifier to all missile attacks and a +1 Target Number modifier to all autocannon and machine gun attacks.

PSRs: Apply a +1 modifier to all Piloting Skill Rolls.

TERRAIN

The punch-out sheet includes several terrain pieces to modify either mapsheet. If players cannot mutually agree on a way to add the terrain, use the following rules before deploying any 'Mechs:

- Both players must add the same number of terrain pieces.
- Randomly determine who will start, then rotate back and forth, placing only one terrain piece at a time.
- Terrain cannot be within two hexes of the edge of the mapsheet, and there must always be three hexes between each terrain piece.

CAMPAIGN PLAY

Players can introduce the concept of the campaign: a series of linked scenarios. Players could decide that Scenario 1 and Scenario 3 are linked, and surviving 'Mechs from Scenario 1 could be brought in as reinforcements for Scenario 3. For example, if the Defender from Scenario 1 has a *Catapult* and a *Commando* that survived after winning that game, those two 'Mechs (including any damage with which they ended Scenario 1) are under the control of the defender in Scenario 3 and can enter along the west edge of the playing area during the Movement Phase of Turn 5.

CONSTRUCTION

The following system enables players to construct unique BattleMechs that conform to the rules presented in this book. As these rules can be fairly math-intensive, designers are encouraged to do all work on scratch paper before committing the resulting design's specifications to a blank BattleMech Record Sheet.

BATTLEMECH BASICS

BattleMech construction relies on two primary factors: weight, and space.

WEIGHT

BattleMech weights are measured in tons, with standard 'Mechs weighing 20 to 100 tons (increasing in increments of 5 tons). BattleMechs fall into four weight classes, determined by their tonnage.

- **Light** BattleMechs weigh 20 to 35 tons, and are the lightest 'Mechs commonly spotted on the battlefield. Because their armor and weapon options are usually limited, they often sacrifice both for speed, and are favored as scouts or light security forces.
- **Medium** BattleMechs weigh 40 to 55 tons, and are the most common 'Mech type. Typically balancing speed and firepower, they are favored as raiders and hunter/killers.
- **Heavy** BattleMechs weigh from 60 to 75 tons. They tend to be brawlers, with average mobility and a wide range of weapons. They often serve as the heart of attack forces.
- **Assault** BattleMechs weigh from 80 to 100 tons. Usually built for maximum firepower and armor, they tend to be far slower than most other 'Mechs, and so are favored for defensive, line-breaking, or fire support roles.

SPACE (SLOTS)

Internal space (also called critical space) on a BattleMech is illustrated and tracked by the Critical Hit Table on the 'Mech's record sheet, which abstractly describes the internal arrangement of a 'Mech's body. Certain sections of this table are already filled in, because the relevant components and equipment—actuators, cockpit systems, engines, and gyros—must be housed in those specific body locations.

The Critical Space Table at left summarizes the number of open critical slots (those not automatically assigned to specific equipment in every 'Mech, such as the engine, gyro, life support, and sensors) in each location of a standard BattleMech.

CRITICAL SPACE TABLE

Location	Open Critical Slots
Head	1
Center Torso	2
Right Torso	12
Left Torso	12
Right Arm	8
Left Arm	8
Right Leg	2
Left Leg	2

ASSIGNING COMPONENTS

As the 'Mech's various design elements are chosen, they must be assigned to locations on the 'Mech's body, and their required number of slots allocated on its Critical Hit Table. Each step in the design process to follow will explain any special rules for how the components added in that step are assigned to a 'Mech. However, here are the general rules regarding critical slots and their use:

- No critical slot may accommodate more than one item at a time.
- Many items take up more than one critical slot: these must be specially noted as a single item on the tables.
- Critical slots for all multi-slot items must be contiguous (i.e. placed together in a row) in their location(s) unless the item's construction rules specifically permit otherwise. On the record sheet, the arm and torso locations are broken into two 6-slot sections. This only matters for determining critical hits: when placing items, ignore this and treat each of these locations as a single, 12-slot location.

INCREASING CRITICAL SPACE

Removal of hand and/or lower arm actuators can increase the amount of available critical slots in a location. The removal of a lower arm actuator requires that the hand actuator on that arm also be removed.

THE DESIGN PROCESS

The process of BattleMech design is organized into eight steps, each of which is fully described later in this section:

Step 1: Design the Chassis—determine the BattleMech's weight and internal structure.

Step 2: Install Engine—determine the BattleMech's Engine Rating and weight.

Step 3: Add Jump Jets—determine the BattleMech's jump capability, if any.

Step 4: Install Control Systems—determine the BattleMech's gyro and cockpit.

Step 5: Add Armor—determine the armor weight, and allocate armor points.

Step 6: Add Additional Heat Sinks—determine the number and locations (if necessary) for the BattleMech's heat sinks.

Step 7: Install Weapons and Ammunition—add weapons to the BattleMech.

Step 8: Complete the Record Sheet.

The above design process is a mere framework. The actual process—particularly after the chassis, engine, and control systems

are determined—can involve a bit more flexibility as weapons, armor, and heat sinks are balanced for their best fit in terms of weight and space. For instance, some designers might wish to assign armor as soon as they have chosen the engine and chassis, perhaps to maximize the 'Mech's protection before dealing with heat sinks and weapons. Others may want to choose weapons first, to see how many extra heat sinks would be needed.

It may be useful to make copies of the 'Mech Record Sheet to visually arrange the placement of weapons and equipment, while tracking tonnage on a piece of scratch paper.

Gameplay Effects: Several construction options available to 'Mechs have effects over and above the tonnage required or number of critical spaces occupied. When this is the case, this will be so noted in that construction step.

STEP 1: DESIGN THE CHASSIS

The first step in BattleMech design is the creation of the 'Mech's basic framework, or chassis.

Jason wants to design a heavy fire-support 'Mech with good armor, which he intends to call the Catapult. *Heavy 'Mechs weigh between 60 and 75 tons. Jason decides his* Catapult *will be a 65-ton 'Mech.*

CHOOSE WEIGHT (TONNAGE)

Under these rules, BattleMechs may weigh 20 to 100 tons (in 5-ton increments). The total weight of the 'Mech's engine, weapons, armor, and other components may not exceed the amount chosen. The total may fall below, but any unspent weight left over after the creation process is wasted tonnage, and the 'Mech always counts as weighing the full amount for any gameplay purposes.

ADD INTERNAL STRUCTURE

Every BattleMech has an internal structure, which represents its skeleton and joints. The weight of this structure depends on the weight of the 'Mech and what structure type is chosen.

The BattleMech's mass and structure type also determines the number of internal structure points in each location. A designer must mark out any excess circles on the Internal Structure Diagram, leaving behind only the number of circles in each location equal to the number of internal structure points in that location.

The Internal Structure Table shows that a 65-ton 'Mech requires 6.5 tons for its internal structure. It has 21 points of internal structure points in the centre torso, 15 points in the right and left torsos, 10 points in the right and left arms, and 15 points in the right and left legs. On the record sheet's Internal Structure Diagram, Jason blacks out all the excess circles in those locations. This leaves 58.5 tons remaining (65 – 6.5 = 58.5).

INTERNAL STRUCTURE TABLE

Total 'Mech Tonnage	Structure Tonnage	Internal Structure Circles					Maximum Armor Factor
		Head	Torso (Center)	Torso (Left/Right)	Arms (Each)	Legs (Each)	
20	2.0	3	6	5	3	4	69
25	2.5	3	8	6	4	6	89
30	3.0	3	10	7	5	7	105
35	3.5	3	11	8	6	8	119
40	4.0	3	12	10	6	10	137
45	4.5	3	14	11	7	11	153
50	5.0	3	16	12	8	12	169
55	5.5	3	18	13	9	13	185
60	6.0	3	20	14	10	14	201
65	6.5	3	21	15	10	15	211
70	7.0	3	22	15	11	15	217
75	7.5	3	23	16	12	16	231
80	8.0	3	25	17	13	17	247
85	8.5	3	27	18	14	18	263
90	9.0	3	29	19	15	19	279
95	9.5	3	30	20	16	20	293
100	10.0	3	31	21	17	21	307

Internal structure points are fixed to their assigned locations, based on the weight of the 'Mech itself (i.e. they may not be redistributed elsewhere). The maximum amount of armor points a 'Mech may carry (called its Maximum Armor Factor) is determined by the number of internal structure points per section. All locations except the head may carry a maximum of twice the number of armor points as they have internal structure points, including any armor placed in rear locations (see *Add Armor*, p. 52). All head locations may receive a maximum of 9 armor points (regardless of the weight of the 'Mech).

The Internal Structure Table on page 50 provides the mass of the internal structure, as well as the number of internal structure circles each location receives. Also provided is the maximum possible armor factor for 'Mechs at each tonnage.

CHOOSE ACTUATORS

Some 'Mechs have fully articulated arms and hands, so that they can pick up and carry things, or to increase their ability in physical combat. Other 'Mechs lack some or all of these actuators, in order to free up more slots for weapons, to keep costs down, or just for appearance's sake.

A 'Mech that installs both hand and lower arm actuators in an arm can make punch and club attacks with that arm with no penalty. A 'Mech with a lower arm actuator must always install it directly underneath the upper arm actuator (slot 3 on the Critical Hit Table). If the 'Mech has a hand actuator, it must always be installed underneath the lower arm actuator (slot 4 on the Critical Hit Table).

The effects of not installing these actuators (other than freeing up criticals) are as follows:

No Hand Actuator:

- Add a +1 Target Number modifier to all punches made with that arm.
- The 'Mech cannot use that arm to pick things up or make clubbing attacks.

No Lower Arm Actuator:

- Add a +2 Target Number modifier to all punches made with that arm.
- Damage from punches with that arm is halved (round down).
- No physical weapons can be placed in that arm.

An arm without a lower arm actuator also has no hand actuator (and the effects are cumulative).

Arm Flipping: Any 'Mech designed without both hand and lower arm actuators can flip both arms over and fire backward (see p. 15).

Jason envisions his 'Mech as having powerful long range weapons. He doesn't foresee his Catapult *getting into brawls, and wants to make sure he has lots of room, so he decides to forego hands and lower arm actuators.*

STEP 2: INSTALL ENGINE

The second step is the installation of the 'Mech's engine. This step establishes the key factors in the 'Mech's mobility: its maximum speed and the weight of its engine. It also determines how many jump jets can be installed (see Step 3).

ADD ENGINE

Every BattleMech constructed under these rules must carry one fusion engine to power its movement, weapon systems, and other integral components.

The output of this engine is measured by the 'Mech's Engine Rating, which is determined by the 'Mech's total weight and desired speed. To compute the Engine Rating, multiply the 'Mech's tonnage by its desired Walking MP. The Engine Table on page 52 lists the tonnage for engines of various ratings.

The 'Mech's Running MP is also calculated at this time by multiplying its Walking MP by 1.5 and rounding up to the nearest whole number.

Because the Catapult *is intended to fight at long range, speed is not the primary concern. Jason decides to give it a Walking MP rating of 4. This gives the* Catapult *an engine rating of 260 (4 × 65 = 260). Looking at the Engine Table, a 260-rated engine weighs 13.5 tons. This leaves the 'Mech with 45 tons (58.5 – 13.5 = 45). The Running MP of the* Catapult *is 6 (4 × 1.5 = 6).*

ENGINE RATING AND MOBILITY FORMULAS

Engine Rating = 'Mech Tonnage × Desired Walking MP
Running MP = Desired Walking MP × 1.5 (round up)

STEP 3: ADD JUMP JETS

BattleMechs may optionally be equipped with jump jets to allow for short bursts of jumping movement. Jump jets are mounted singly, with each jet providing one Jumping Movement Point (for example, a 'Mech with five jump jets would have a Jumping MP of 5). The weight of these depends on the weight of the 'Mech and the MP desired.

A 'Mech with jump jets may have as many jump jets as it has Walking MP.

Space: Jump jets may only be mounted in a 'Mech's torso and leg locations. They do not have to be placed symmetrically, although this is almost always done. Each requires one critical slot.

JUMP JETS TABLE

'Mech Tonnage	Jump Jet Weight (per Jump MP)/ Critical Slots
20–55	0.5 tons / 1
60–85	1 ton / 1
90–100	2 tons / 1

ENGINE TABLE

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

To offset its slower speed and help it get into better firing positions, Jason decides to give the Catapult *jump jets. Looking at the Jump Jets Table, Jason sees that each Jump MP will use up a ton. He decides to give the 'Mech the maximum Jumping MP of 4, at a cost of 4 tons. This leaves him with 41 tons (45 – 4 = 41). Each jump jet requires one critical slot. Jason places two in the right torso and two in the left, leaving 10 critical slots in each of those locations.*

STEP 4: INSTALL CONTROL SYSTEMS

This step sees the installation of the 'Mech's control systems: the gyroscope that keeps it upright and the cockpit system where the MechWarrior resides during battle.

ADD GYROSCOPE

A BattleMech requires a powerful gyroscope to keep it upright and able to move. To determine the weight for a gyro, divide the 'Mech's Engine Rating by 100 and round the result up to the nearest whole number. The resulting number is the gyro's base weight (in tons).

For example, the gyro on a 'Mech with a 160-rated engine would weigh 2 tons: 160 ÷ 100 = 1.6, rounded up to 2.

ADD COCKPIT

Every BattleMech must have a cockpit, which contains the MechWarrior's control station, life-support system, and electronic sensors. A basic cockpit always weighs 3 tons.

With a 260-rated engine, Jason knows that the Catapult *is going to need a 3-ton gyro (260 / 100 = 2.6, rounded up to 3). As the cockpit always requires 3 tons, this leaves him with 35 tons (41 – 3 – 3 = 35).*

ARMOR TABLE

Armor Points per Ton: 16

STEP 5: ADD ARMOR

Armor protects the BattleMech's internal structure and critical components.

There is no minimum amount of armor—a 'Mech may even have no armor if desired (though experience in war has shown this to be a bad idea). The maximum amount of armor a 'Mech may mount is based on its number of internal structure points. For all locations but the head, the 'Mech may mount twice as many armor points as it has internal structure in that location. For example, if an arm has 9 points of internal structure, it may carry up to 18 points of armor. Torso locations divide this maximum between their front and rear sides. (Most designs focus more armor toward the front, as 'Mechs tend to sustain more frontal combat damage.) The head is an exception, in that all 'Mechs may always be built with up to 9

armor points in the head, regardless of the 'Mech's weight or any other factor.

Armor may be mounted in full- or half-ton lots, and provides 16 points per ton (8 points per half-ton).

Sometimes reaching a desired number of points—such as many Maximum Armor Factors—may force the designer to "waste" weight on points that cannot be mounted. For example, 105 armor points is the maximum that can be installed on a 30-ton 'Mech. 5.5 tons of armor only gets you 104 points. To have the full 105 points would require 6 tons of armor, but would result in 7 points of wasted armor.

Use the Armor Diagram on the blank 'Mech Record Sheet to indicate the number of Armor Points protecting each part of the 'Mech's body. Mark out any excess armor circles in the same way as for the Internal Structure Diagram. Armor Points do not have to be placed symmetrically, although in practice this is almost always done.

Knowing that he wants a lot of weaponry, Jason is going to rely on keeping to long range to help protect his 'Mech. Still, that alone won't stop enemy fire, and so some armor is a must. Assigning 10 tons of armor to the Catapult *provides 160 armor points (10 × 16 = 160).*

These points must be assigned to specific locations and facings on the 'Mech. Each arm is assigned 13 points, while each leg is assigned 18 points. The head gets the maximum 9 point of armor that any 'Mech can have, and each side torso gets 27: 19 on the front facing, and 8 on the rear. Finally, Jason puts 35 points on the center torso: 24 on the front facing and 11 on the rear. To make sure he didn't exceed the maximum amount of armor a location can hold, he then multiplies the number of internal structure points in each location by two (except the head).

The ten tons of armor leave Jason with 25 tons remaining (35 – 10).

STEP 6: ADD ADDITIONAL HEAT SINKS

The heat sinks that dissipate heat produced by a 'Mech's movement, weapons fire, and other actions may be allocated at this time. At this stage, however, the give-and-take of BattleMech design begins to come into play, and so the player can skip this step for now, leaving the heat sinks until after assigning the 'Mech's weapons and equipment.

A 'Mech's fusion engine automatically provides 10 free heat sinks. These do not take up tonnage, but may occupy critical slots if the engine's rating is not high enough. Additional heat sinks may be installed beyond this free amount, at a cost of 1 ton per heat sink.

Space: There are no special restrictions on heat sink placement—each may be placed wherever the designer can and wishes to fit it. Multiple heat sinks do not have to be grouped together. Note that heat sinks dissipate double their normal heat each turn if in water (see p. 37), making leg placement ideal.

The larger the 'Mech's engine, the more heat sinks it can store, while smaller engines are unable to store the full complement of ten free heat sinks a fusion engine provides, let alone any additional sinks. To find the number of heat sinks that may be considered integral (or "critical-free"), divide the 'Mech's engine rating by 25 and round the result down (or simply consult the Integral Heat Sinks Table, at right).

With the large weapon loadout Jason is anticipating, he knows he wants his Catapult *to have more than the automatic ten heat sinks. Five more heats sinks will be sufficient for what he has in mind, at a cost of 5 tons. This leaves Jason with 20 tons for weapons and ammunition (25 – 5 = 20).*

Next Jason figures out the number of heat sinks that must be assigned critical slots. Consulting the Integral Heat Sinks Table, he sees that having a 260-rated engine allows for 10 heat sinks to be stored inside the engine. This means that the extra five he just added must be assigned to the Critical Hit Table, with each sink using one critical slot. He places one in the empty head slot, and the remaining four in the legs, two per leg.

INTEGRAL HEAT SINKS TABLE

Engine Rating	Max Integral Heat Sinks
25-45	1
50-70	2
75-95	3
100-120	4
125-145	5
150-170	6
175-195	7
200-220	8
225-245	9
250-270	10
275-295	11
300-320	12
325-345	13
350-370	14
375-395	15
400	16

If heat sinks beyond the free 10 are added to a 'Mech, those stored in the engine still weigh one ton each, but do not occupy criticals. These sinks are considered an integral part of the engine, and so can only be destroyed if the engine is destroyed.

STEP 7: ADD WEAPONS AND AMMUNITION

The weapons and ammunition available to BattleMechs are listed on the Weapons and Equipment Table (see p. 55). In addition to any heat, damage and range statistics, these tables provide the tonnage and critical slots each item occupies.

Space: All weapons and equipment must be allocated to the Critical Hit Table in a contiguous series within the same location. They may therefore not be placed in a location that has fewer open critical slots than the equipment requires.

However, an AC/20 may be split between any two adjacent locations (not including the legs). If so, it automatically receives the more restrictive firing arc of the two locations. For example, if a 'Mech carries an AC/20 split between its left torso and left arm, that weapon uses the torso arc, not the arm arc.

Weapon Arcs: Weapons placed in the torso, leg, or head locations may have a forward or rearward firing arc. Rear-firing weapons must be so noted when installed.

Torso- and head-mounted items receive the firing arc of the 'Mech's torso (or the torso's rear, if the item is mounted for rearward firing). Arm-mounted weapons receive the firing arc appropriate to that arm. Leg-mounted weapons may receive either a forward or rearward firing arc.

Ammunition: A 'Mech needs at least one ton of ammo for each ballistic or missile weapon (machine guns of all types are the exception in that they may have ammo in half-ton bins). The Ammo column of the Weapons and Equipment Table (see p. 55) notes how many shots a weapon carries per ton (only machine guns can carry ammunition in half-ton lots).

Ammunition is stored in ammo bins. Each ammo bin (whether half-ton or full ton) occupies one critical slot. Multiple ammunition bins of the exact same type need not be contiguous. See *Ammunition*, on page 32, for more details.

Jason decides to start with the long-range weapons and work his way down. For a strong ranged punch, he chooses twin LRM 15 launchers (7 tons each) with 1 ton of ammo for each launcher. He mounts the launchers in the right and left arms. The ammunition he places in the right and left torsos.

This leaves 4 tons (20 – 7 – 7 – 1 – 1 = 4). With a light ammunition load, Jason sees the need for backup weapons. Four medium lasers will serve nicely (1 ton each). He places two of these in the center torso, and one in each of the right and left torsos, each occupying one critical slot.

As no weapons have been stated as rear-mounted, all weapons on the Catapult *will fire forward. The 'Mech is now complete.*

STEP 8: COMPLETE THE RECORD SHEET

By the time the designer has chosen all structure, engine, and controls for the BattleMech, and added the armor, weapons and equipment, all items must be allocated to their proper places on the blank 'Mech Record Sheet.

Any weight not allocated by this stage is considered wasted tonnage.

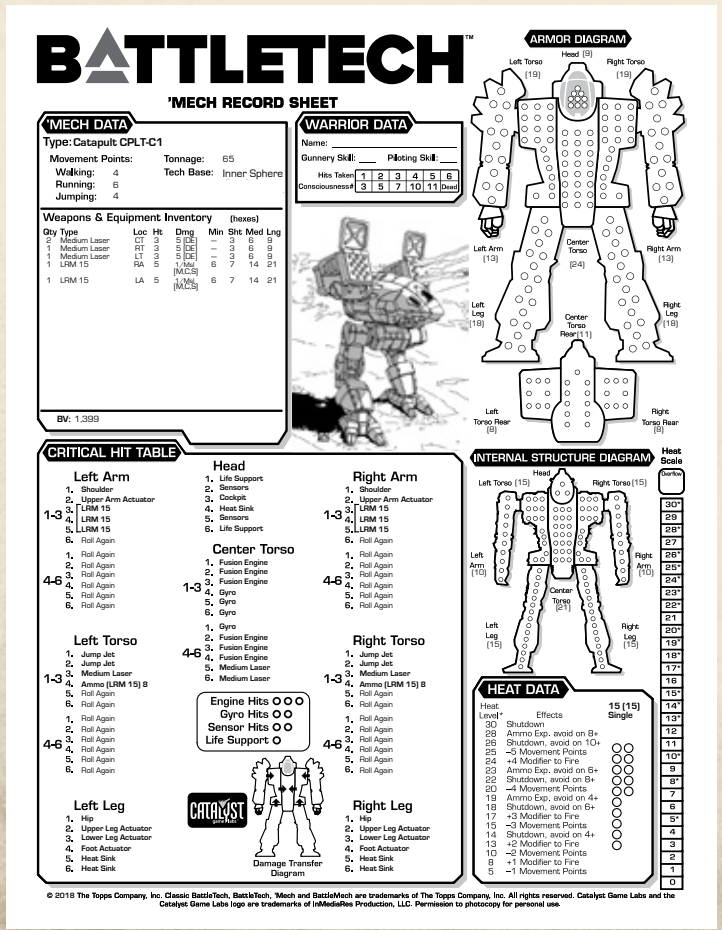
PLACING ITEMS

By this point, all components on the 'Mech should have been placed on the Critical Hit Table. If any remain, consult the *Space (Slots)* section (see p. 49) for details on how to assign components to critical slots, and each design step for placement instructions specific to that step. Any slot not filled during this process is assumed to have a "Roll Again" on it.

FINAL STEPS

The 'Mech's record sheet must have all data filled in for the 'Mech Data block (including name, tonnage, and MPs). All items and components with critical slots must be distributed on the Critical Hit Table (including armor, engine, gyro, extra heat sinks, weapons, as well as ammunition and number of shots per bin). All extraneous armor and internal structure points must be blacked out on the Armor and Internal Structure Diagrams (including the back armor sections). Finally, heat sink data must be filled in on the Heat Data block, with extraneous heat sink circles blacked out (or new ones drawn in, if necessary).

Once all of the above is completed, the BattleMech is ready for play!



WEAPONS AND EQUIPMENT TABLE

Type	Heat	Damage	Minimum Range	Short Range	Medium Range	Long Range	Tons	Critical Slots	Ammo per Ton
Direct-Fire Energy Weapons									
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	0.5	1	—
Flamer	3	2	—	1	2	3	1	1	—
PPC	10	10	3	1–6	7–12	13–18	7	3	—
Direct-Fire 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
Machine Gun	0	2	—	1	2	3	0.5	1	200
Missile Weapons									
LRM 5	2	1/Msl	6	1–7	8–14	15–21	2	1	24
LRM 10	4	1/Msl	6	1–7	8–14	15–21	5	2	12
LRM 15	5	1/Msl	6	1–7	8–14	15–21	7	3	8
LRM 20	6	1/Msl	6	1–7	8–14	15–21	10	5	6
SRM 2	2	2/Msl	—	1–3	4–6	7–9	1	1	50
SRM 4	3	2/Msl	—	1–3	4–6	7–9	2	1	25
SRM 6	4	2/Msl	—	1–3	4–6	7–9	3	2	15
Physical Weapons									
Hatchet	0	*	—	—	—	—	**	**	—
Equipment									
Heat Sink	–1	—	—	—	—	—	1	1†	—

* 'Mech Tonnage / 5
** 'Mech Tonnage / 15
† For heat sinks outside the engine (see *Step 6: Add Additional Heat Sinks*, p. 53)

WEAPONS AND EQUIPMENT

This section describes the most common weapons and equipment used by Inner Sphere forces. Game rules for many more weapons and other items can be found in the *BattleMech Manual*. The statistics for heat produced, Damage Value, range, and tonnage of each weapon and piece of equipment in this section appear in the Weapons and Equipment Table in *Construction*, page 55.

AUTOCANNONS

"Autocannon" (often abbreviated as "AC"), is a general term for modern 'Mech-scale cannons, which have a wide variety of calibers, firing speeds, and munition types. Some fire a single massive round, others are shotgun-like weapons, and still others are high-speed Gatling-like cannons that spew out a large number of rounds in a short span of time.

FLAMERS

Flamers are a catch-all term for the wide variety of flamethrowers in use by the armed forces of the thirty-first century. Most tap into the 'Mech's own reactor for the ravening heat necessary.

LASERS

The laser (its name originates from the ancient acronym "Light Amplification by Stimulated Emission of Radiation") is the most basic of modern battlefield energy weapons. Designed to deliver a concentrated burst of extreme heat to a small area, military-grade lasers can gouge through military-grade armors in a fraction of a second.

MACHINE GUNS

The machine gun (MG) has been favored as the quintessential anti-infantry weapon since the first crude models appeared in the nineteenth century.

MISSILE LAUNCHERS

Missile launchers are devices used to deliver self-propelled and self-guided munitions to inflict damage on a target.

LONG-RANGE MISSILES (LRM)

Long-range missile racks fire salvos of high-explosive missiles at distant targets. Because of the way they are fired, LRMs suffer penalties when trying to hit targets near the firing 'Mech.

SHORT-RANGE MISSILES (SRM)

SRMs are direct-trajectory missiles with high-explosive or armor-piercing explosive warheads. Compared to LRMs, they have a shorter range but compensate with a more powerful payload.

PARTICLE PROJECTOR CANNONS

The particle projector cannon (PPC for short) is one of the most powerful non-ballistic weapons ever devised for the modern battlefield. Consisting of a magnetic accelerator, firing high-energy proton or ion bolts, PPCs have been used for centuries to flay armor through kinetic and thermal damage.

PHYSICAL WEAPONS

Physical weapons are a wide variety of cutting, bashing, or slashing weapons mounted onto BattleMechs. These range from 'Mech-sized claws to ornate blades to massive, pulverizing maces. The most common physical weapon by far is the hatchet.