

CLASSIC

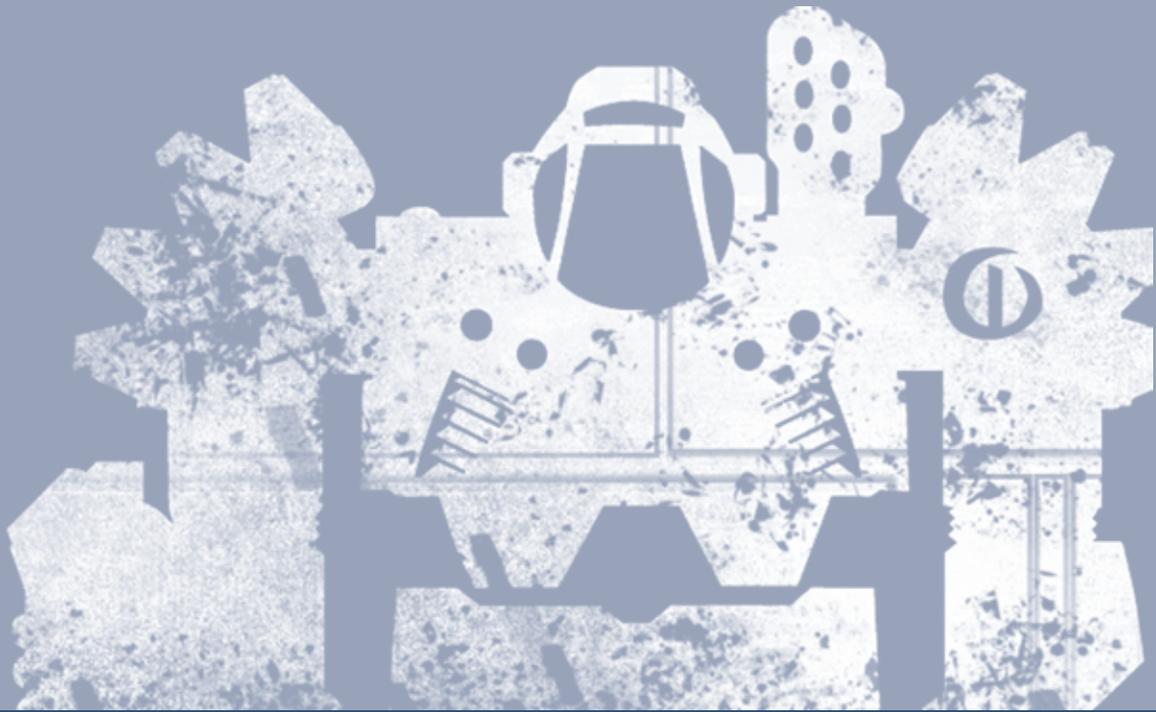
BATTLETECH

MINIATURES RULES



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CLASSIC BATTLETECH[™] **MINIATURES RULES**

• **FANPRO LLC** •



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Clan Jade Falcon's Delta Galaxy conducts a Trial of Possession to take a power station from the Steel Vipers' Chi Galaxy.





Lt. General Joseph Laidlaw and his lance cautiously make thier way through the Acheron Forest.

Classic BattleTech Miniatures Rules is a set of conversion rules that allows players to play *Classic BattleTech* as a table-top miniatures game (on 3-D terrain using rulers, and without the hex grid).

This rules set is divided into several sections that mirror the chapters found in *Total Warfare (TW)*. The sections for *Heat*, *ProtoMechs* and *Combat Vehicles* have been excluded, as the particular rules found in those sections are unmodified from *Total Warfare*.

Total Warfare: Please keep in mind that this is a set of conversion rules. *Total Warfare* is still needed to play, as an understanding of that rule set forms the basis for these rules adjustments.

3D TERRAIN VS. PAPER MAPS

As noted on p. 9 of *Total Warfare*, at its core *Classic BattleTech* is a board game that uses codified movement and combat ranges within a hex grid. Miniatures rules are by necessity a bit more vague than the standard hex-based rules. The lack of hexes, and often of clearly delineated levels, means that players must sometimes use their own judgment to decide what rule applies, especially when determining line of sight. To ensure smooth game play, players are encouraged to be reasonable in their application of these rules. Given the nature of miniatures play, there will be times when both players disagree on a point. In these situations, instead of letting the game bog down in a series of arguments, simply roll a die to settle the dispute and move on with the game.

COMPONENTS

Unless specifically noted otherwise, players use all the standard rules for *Components* as presented in *Total Warfare*.

UNITS

The units, as described in the *Components* chapter of *Total Warfare*, are unchanged. However, instead of using non-miniature options as counters during game play, players following these rules must use the *Classic BattleTech* line of miniatures available from Iron Wind Metals.

In addition, units that have firing arcs should be mounted on hex bases. The hex base allows players to know which direction such units are facing for movement, weapons firing and receiving damage.

Infantry and Hex Bases

Infantry and battle armor units can do away with hex bases because these units have no firing arcs. Players can put their infantry on circular bases, washers or even on coins; doing so will not detract from a player's ability to use that unit.

TERRAIN

Terrain features, such as woods, are best used with templates: terrain mounted on a base, as shown in the photo below. This represents large areas of terrain that affect game play.



Tree Template



Water and fissures pose unique problems. Ideally, depths and sublevels are handled by using “built-up” terrain several inches thick to represent Level 0, with depths or sublevels carved into it. If such terrain is not available, players can once again use the template method, though this requires some compromise when figuring LOS.

Total Warfare contains a helpful section on preparing table-top terrain (see p. 296, *TW*). Aside from scratch building your own structures, many hobby companies produce buildings in scales that work with *Classic BattleTech* miniatures. Both z-scale (1:220) and microscale/microarmor (1:300–1:285) are viable options. Iron Wind Metals produces a line of sci-fi structures in microscale, specifically for use with *Classic BattleTech* miniatures.

PLAYING THE GAME

Unless otherwise noted, players use all the standard rules for *Playing the Game* as presented in *Total Warfare*.

SCALE

Because table-top terrain increases the size of the playing area when compared to maps, players must modify relative scale. This means that all ranges and unit abilities on non-hexed terrain have to conform to a new scale where distances relate to that of normal *Classic BattleTech* maps.

The standard hex in *Classic BattleTech* represents 30 meters. Running games at true scale to *Classic BattleTech* miniatures (approximately 1:300 scale) means 1 inch would translate to 7.5 meters, which quickly becomes unwieldy. Therefore, these rules assume a compromise of 15 meters per terrain inch.

Those using the metric system will need to modify distances to fit into centimeters. Here, players can figure that 6 meters relate to 1 centimeter on the terrain board. Other measurements may also need modification to fit the metric system, such as ranges and movement.

This conversion means that players can assume ranges and movement are doubled (or multiplied by 5 if using the metric system). Both are summarized on the Measurement Conversion Table on the right.

LEVEL AND ELEVATION

Because not all terrain pieces are made the same, players should use common sense when determining terrain levels.

MEASUREMENT CONVERSION TABLE

Measurement System	Conversion
Non-Metric	15 meters = 1 inch
Metric	6 meters = 1 centimeter

Normally, 1 inch (2.5 centimeters) of height is considered one level.

Elevation for airborne non-aerospace units is difficult to accurately display on the table-top, though it can still be accounted for easily with counters, “elevation dice” (a die with the face-up number representing the unit’s current elevation) or simply on the unit’s record sheet. Regardless, elevation is still synonymous with level; for example, a unit 5 elevations above the underlying terrain is 5 inches or 5 “levels” above that terrain.

GROUND MOVEMENT

Unless otherwise noted, players use all the standard rules for *Ground Movement* as presented in *Total Warfare*.

MOVEMENT BASICS

Movement Points for *Classic BattleTech* units on non-hexed terrain are double the normal movement allowance (or, if using the metric system, multiplied by 5) for Walking/Cruising MP; recalculate Running/Flank MP based on the new Walking/Cruising MP. See the Sample Movement Table below.

Movement cost through terrain has been modified to reflect the fact that hexes no longer represent terrain. Consult the Movement Costs Table (see p. 6). MP cost through terrain is determined per inch moved (or centimeter, if using metric). Units account for this as soon as a unit enters terrain, even if it crosses through less than a full inch (or centimeter) of the terrain.

Level Change

Usually, units moving across gentle inclines do not incur additional MP costs. Steeper inclines do incur MP costs, as stated under *Movement Basics* above. As a rule of thumb, if a miniature can’t stand on the slope without falling over, the slope is steep enough to cost MP.

SAMPLE MP CONVERSION TABLE

GRF-6CS Griffin			
Movement Points	Hex-Based	Miniatures Rules (Inches)	Miniatures Rules (Centimeters)
Walking	5	10	25
Running	8	15	38
Jumping	5	10	25



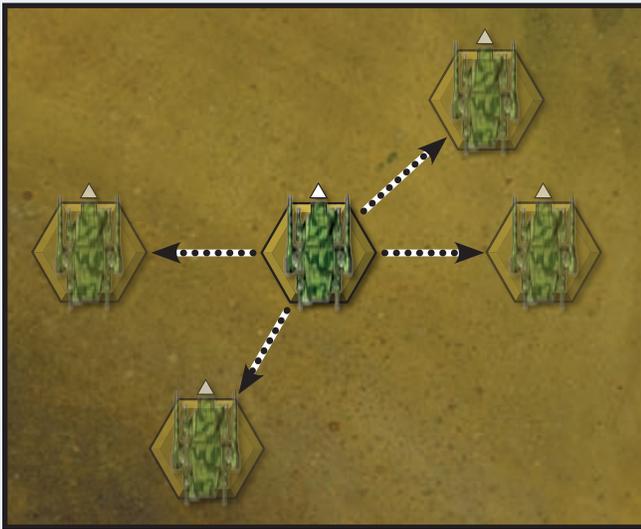
Minimum Movement

This rule functions as presented in *Total Warfare*, except that instead of moving 1 hex forward, a unit may only move 1 inch (3 cm) forward using the minimum movement rule.

Lateral Shift (Four-legged 'Mechs Only)

Four-legged 'Mechs may move in *any* direction without changing facing. If they move in any direction other than directly forward or backward, they must pay the extra lateral movement MP cost (see Movement Cost Table, p. 6).

The Lateral Shift Diagram below shows just a few examples of Lateral Shift movement. In the diagram, the four-legged 'Mech has opted to move laterally 2 inches, for a total cost of 4 MP (5 centimeters, for 10 MP)



• LATERAL SHIFT DIAGRAM •

FACING

Changing a unit's facing costs 2 MP per hexside (5 MP for metric) or fraction thereof. Facing is still relevant despite the lack of hexes on the terrain board. A unit's facing helps determine LOS and movement allowance in the same fashion as when using maps.

Front facing for 'Mechs is determined by the hexside on the base, where both feet point (poses on some miniatures may

make it wise for players to agree to what is the "front" before play begins). For vehicles, the front of the vehicle determines which hexside represents the front. Because infantry and battle armor have no facing, this rule does not apply to those units.

Facing Change

'Mechs and vehicles can only move directly forward, following a line drawn from the front hexside, or directly backward, following a line drawn from the unit's back hexside. Changing movement direction requires a change in facing.

In the Facing Change diagram below, a player wants to move the BattleMech from point A to point B. However, the BattleMech is currently facing point C, and so cannot legally move to point B. If the BattleMech changes its facing, as shown in Figure 2, it can legally move to point B. This facing change costs 4 MP (10 MP if using metric). Even though the 'Mech turned one full hexside, and one partial hexside, it must pay the MP cost for two full hexsides.

In the Movement Basics diagram on page 5, the BattleMech at Point A has a Walking MP of 10 and a Running MP of 16. The controlling player declares that the BattleMech will walk this turn.

It costs 8 of the BattleMech's available Walking MP to change facing one hexside to the left (2 MP), move forward 3 inches (3 MP) and then, after climbing 1 level (2 MP), move forward another 1 inch and end its move at Point B (1MP).

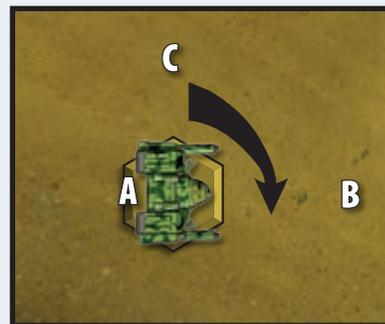
It costs 12 MP for the BattleMech to move to Point C: straight forward 2 inches (2 MP), then change facing one hexside to the left (2 MP), then move forward 4 inches (4 MP), while climbing two levels (4 MP). As this move costs more than the Walking MP of the BattleMech, the controlling player cannot make it.

Likewise, the controlling player cannot move the BattleMech to Point D. Doing so would require 13 MP: change facing one (partial) hexside to the left (2 MP), then move straight forward 6 inches (6 MP), while climbing one level (2 MP), and entering 2 inches worth of heavy woods (2 MP).

The 'Mech can make it to Point E, moving straight forward 6 inches (6 MP), while passing through 1 inch of light woods before arriving at Point Hex E (1 MP). Similarly, the 'Mech can reach Point F by spending 9 MP: change facing one (partial) hexside to the right (2 MP), then move straight forward 5 inches (5 MP), while paying the cost for moving through 2 inches of light woods (2 MP).



• FIGURE 1 •



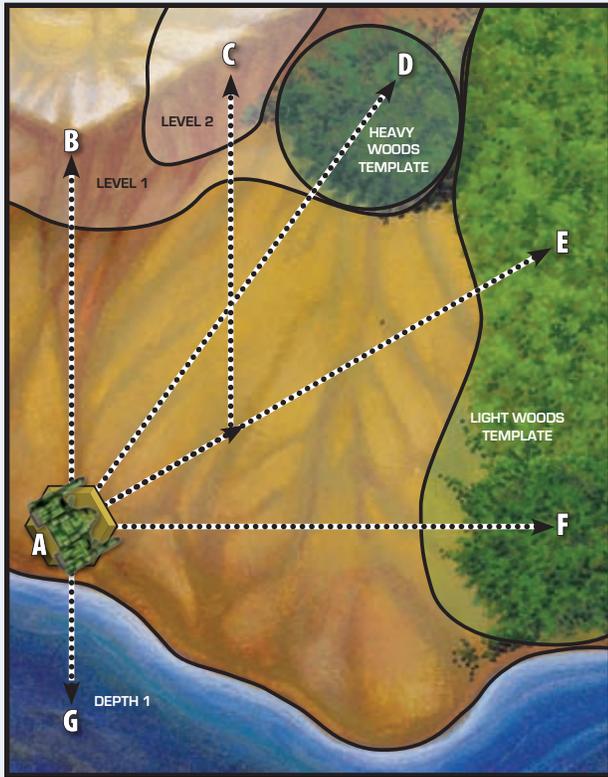
• FIGURE 2 •

• FACING CHANGE DIAGRAMS •



Finally, the BattleMech can turn two hexsides to the right (4 MP), and then move forward 2 inches into the Depth 1 water, taking into account the additional 1 MP per inch moved in Depth 1 water (4 MP), and requiring an additional

2 MP for the level change (for a total of 6 MP). As noted on the Movement Cost Table, however, the controlling player would need to immediately make a Piloting Skill Roll to avoid falling after entering the water.



● MOVEMENT BASICS DIAGRAM ●

JUMPING

Jumping is little changed from *Total Warfare*, with the following exceptions. A jumping unit cannot take a path that intersects with a level higher in inches than the sum of the unit's Jumping MP divided by 2 (divided by 5 if metric), plus the level of the location where the unit began its move. However, the unit can go around the obstructing terrain, if applicable. A jumping unit must still take the shortest path possible.

STACKING

Obviously, a unit cannot occupy the same physical space as another unit. To reflect this reality, units are prohibited from ending their movement in any location where another unit already exists. Because table-top play does not use hexes, opposing and friendly units can be in base-to-base contact with any other friendly or enemy unit. When this happens, physical and swarm attacks can occur between opposing units. If the players wish, swarming infantry units can be placed on another unit's base whenever the infantry begin their attack via base-to-base contact with the target. Infantry attacking another infantry unit follow the normal stacking limits.

Units can still move through other friendly units, but must end their move in an empty space. Units can move through terrain as long as the terrain movement rules permit, but cannot stop on a piece of terrain where the unit cannot physically fit. This includes buildings, openings and overhanging terraces from buildings. If a unit can physically fit through any of these areas, then it can move through them and end its movement in these locations



This Clan Steel Viper Mechwarrior seeks greater glory by challenging two Clan Cloud Cobra warriors simultaneously.



MOVEMENT COSTS TABLE

Movement Action/Terrain Type	MP Cost Per Inch (Centimeter)/Terrain Cost	Prohibited Units
Cost to Move	1	
Cost When Moving Through Terrain		
Clear	+0 ⁶	Naval vessel
Paved/Bridge	+0 ¹⁵	Naval vessel
Road	+0 ^{3, 15}	Naval vessel
Rough	+1	Wheeled, naval vessel
Light woods	+1 ¹⁰	Wheeled ⁹ , hover, VTOL ¹² , WiGE ¹² , naval vessel
Heavy woods	+2 ¹¹	Vehicles ¹² , naval vessel
Water		
Depth 0	+0	Naval vessel
Depth 1	+1 ¹ (Level change MP cost not included)	Infantry ¹⁴ , vehicles ^{4, 7}
Depth 2+	+3 ¹ (Level change MP cost not included)	Infantry ¹⁴ , vehicles ^{4, 7} , IndustrialMechs ⁸
Level change (up or down)		
1 level	+2 for inches, +5 for centimeters (Mechs, VTOLs, subs, ProtoMechs) +4 for inches, +10 for centimeters (infantry, ground vehicles)	—
2 levels	+4 for inches, +10 for centimeters (Mechs, VTOLs, subs)	Infantry, ground vehicles, WiGE ¹³ , ProtoMechs
3+ levels	+2/level for inches, +5/level for centimeters (VTOLs, subs)	'Mechs, ProtoMechs, infantry, ground vehicles, WiGE ¹³
Rubble	+1 ¹	Wheeled, Naval vessel
Light building	+1 ²	VTOL, WiGE, Naval vessel
Medium building	+2 ²	VTOL, WiGE, Naval vessel
Heavy building	+3 ²	VTOL, WiGE, Naval vessel
Hardened building	+4 ²	VTOL, WiGE, Naval vessel
Additional movement actions		
Lateral Movement (Quad 'Mechs Only)	+1 (for any non-forward or non-backward movement)	
Facing change	2/hexside ⁵ (if using inches) 5/hexside ⁵ (if using centimeters)	
Dropping to the ground ('Mech only)	2 (if using inches) 5 (if using centimeters)	
Standing up ('Mech only)	4/attempt (if using inches) 10/attempt (if using centimeters)	

¹ MP cost to move along the bottom of a water area or rubble; Piloting Skill Roll required every 2 inches/5cm to prevent falling.

² Piloting Skill Roll required to prevent damage; infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter any building.

³ If traveling along road; otherwise, cost of underlying terrain.

⁴ Hovercraft may enter all water areas along the surface and may enter such areas using flanking movement.

⁵ No cost for infantry.

⁶ If a wheeled Support Vehicle lacks the Off-Road Vehicle Chassis and Controls modification, then movement costs 1 additional MP per inch/centimeter.

⁷ Wheeled or tracked Support Vehicles with the Amphibious Chassis and Controls modification can move through any water area on the surface at a cost of 2 MP per inch/centimeter (see p. 56, *TW*).

⁸ IndustrialMechs can enter Depth 2 or greater water. However, the IndustrialMechs must mount a fuel cell, fission or fusion power plant and must mount the Environmental Sealing Chassis and Controls modification to do so. If the IndustrialMech does not meet those requirements, it is considered destroyed if it remains in Depth 2 or greater water (or prone in Depth 1 water) in the End Phase of the turn immediately following the turn in which the 'Mech entered it.

⁹ Wheeled Support Vehicles with the Monocycle or Bicycle Chassis and Controls modification can enter light woods.

¹⁰ Infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter light woods.

¹¹ Infantry pays only 2 MP (except mechanized infantry, which pays 3 MP) to enter heavy woods.

¹² VTOL and WiGE vehicles can enter a woods area provided their elevation is higher than the level of the woods.

¹³ This only applies to WiGE units entering an elevation higher than the unit's current elevation; see *Wing-In-Ground-Effect*, p. 55, *TW*, for rules governing entering elevations lower than the unit's current elevation.

¹⁴ Infantry can enter water of Depth 1 or deeper if they have UMU MP.

¹⁵ Ground vehicles moving on pavement may receive a movement bonus of 1 MP, regardless of whether the vehicle uses cruising or flanking movement. To gain the extra MP, the unit must begin its turn on a paved hex and continue to travel on pavement for the entire Movement Phase.



PILOTING/DRIVING SKILL ROLL TABLE (CHANGES ONLY)

Situation	Modifier
Unit's actions	
'Mech entered Depth 1 water area ¹	-1
'Mech entered Depth 2 water area ¹	0
'Mech entered Depth 3+ water area ¹	+1
'Mech entered rubble area ¹	0
Special cases	
MechWarrior trying to avoid damage when his 'Mech is falling	+1/inch fallen ²
IndustrialMech trying to avoid critical damage when falling	+1/inch fallen ²
Skidding Movement	
Inches (Centimeters) moved in turn	
0-5 (0-14)	-1
6-9 (15-24)	0
10-15 (25-39)	+1
16-21 (40-54)	+2
22-35 (55-89)	+4
36-49 (90-124)	+5
50+ (125+)	+6

Situation	Modifier
Building Movement³	
Unit entering/leaving light building section	0
Unit entering/leaving medium building section	+1
Unit entering/leaving heavy building section	+2
Unit entering/leaving hardened building section	+5
Inches (Centimeters) moved in turn	
1-5 (1-14)	0
6-9 (15-24)	+1
10-13 (25-34)	+2
14-19 (35-49)	+3
20-35 (50-89)	+4
36-49 (90-124)	+5
50+ (125+)	+6

¹Per 2 inches/5cm (or fraction thereof) of movement through this terrain type.

²For purposes of falling, a 'Mech only rises 1 inch (2.5cm) above the underlying terrain.

³To avoid damage only. Does not result in a fall if Piloting Skill Roll fails (see p.166, *TW*). Add a +1 modifier if unit is charging or being charged (in addition to the +2 modifier normally required in that situation).

PILOTING/DRIVING SKILL ROLLS

If a player must make multiple Piloting/Driving Skill Rolls to pass through terrain, the rolls are made for every 2 inches/5 cm (or fraction thereof) of movement. For example, if a 'Mech is moving through 5 inches of Depth 1 water, the player must make 3 Piloting Skill Rolls: first when the 'Mech enters the water, next after 2 inches (5cm) of movement, then finally after 4 inches (10cm) of movement.

MOVEMENT ON PAVEMENT

Ground vehicles moving on pavement may receive a movement bonus of 2 inches (5cm), regardless of whether the vehicle uses cruising or flanking movement. To gain the extra MP, the unit must begin its turn on a paved area and continue to travel on pavement for the entire Movement Phase.

When checking to see if a unit skids, use the converted Skid Modifiers Table below. A unit skids a number of inches (or centimeters) equal to how far it has moved, divided by 2 (rounded up). A 'Mech takes damage equal to one-half its normal falling damage, rounded up, for each 2 inches/5cm (or fraction thereof) that it skids.

Collisions

Collisions with buildings or other units may occur, if at any point in a skid the skidding unit comes into base-to-base contact with a building or another unit; follow the collision rules from *Total Warfare* (see pp. 62-66, *TW*) and the converted Charge Attacks rules (see p. 12).

SKID MODIFIERS TABLE

Inches (Centimeters) Moved	Piloting Skill Modifier
0-5 (0-14)	-1
6-9 (15-24)	0
10-15 (25-39)	+1
16-21 (40-54)	+2
22-35 (55-89)	+4
36-49 (90-124)	+5
50+ (125-)	+6



Sideslipping

A unit sideslips a number of inches (or centimeters) equal to the Margin of Failure times 2 (5 if metric). Sideslipping VTOL and WiGE vehicles that crash take damage from crashing on whatever side hit the terrain. The damage is equal to the number of inches (centimeters) the vehicle moved in that turn times its tonnage, divided by 20 (50 if metric), rounded up. Divide the damage into 5-point Damage Value groupings and apply as normal.

FALLING

A unit that falls from a higher level is assumed to have fallen 1 level for each inch (2.5cm) that it fell. After a unit is determined to have fallen, roll for fall facing and apply damage as normal. Players may want to place an empty hexbase to determine the location of a fallen 'Mech, if they prefer not to lay the 'Mech on its side and risk damaging the miniature in question.

AEROSPACE MOVEMENT

Unless otherwise noted, players use all the standard rules for *Aerospace Movement* as presented in *Total Warfare*.

ATMOSPHERIC MOVEMENT

Aerospace units in *Total Warfare* interact with ground units by moving directly on ground maps, or by moving on high- or low-altitude maps (and then interacting with the battle when they pass over it).

Aerospace Units on Ground Table

Using aerospace units on ground mapsheets under these conversion rules requires a minimum playing area of 6 feet/2m squared (we suggest using open floor space as a gaming area). For those willing to tackle this type of game play, simple multiply

the aerospace movement (and minimum straight movement) as appropriate. That is, for every point of velocity, an aerospace unit must move 32 inches (80 centimeters).

High-Altitude Table

The layout of the high-altitude map does not completely mesh with a miniatures table-top game. However, it can be played side by side with the table-top miniatures, using all the rules from *Total Warfare* as is, and switching to the conversion rules when attacking ground units or crashing.

Low-Altitude Table

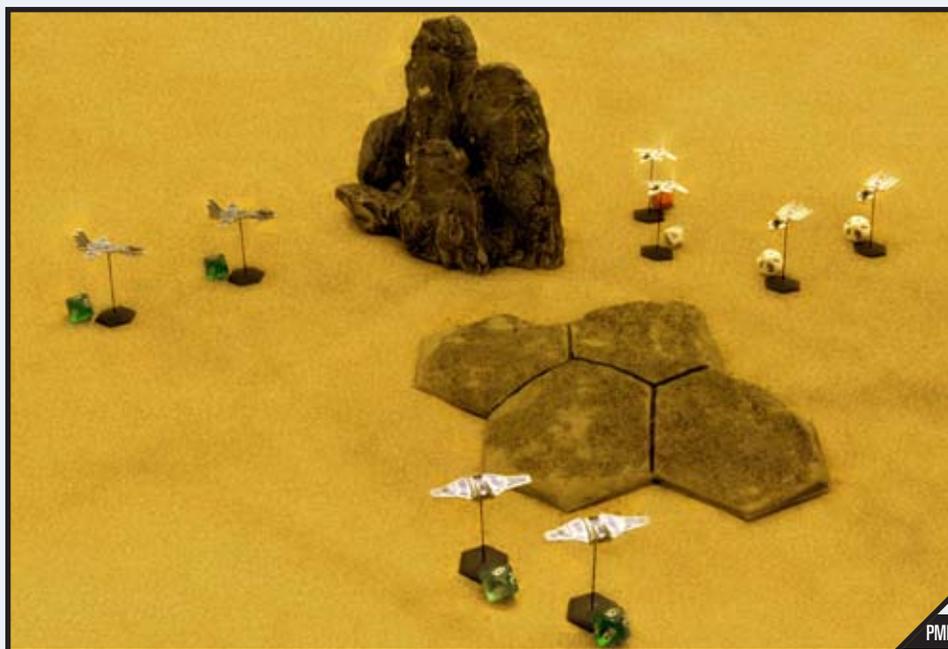
The best way for aerospace units to participate in a miniatures conversion game is via low-altitude movement on a low-altitude table. Players can handle this in two ways: by using low-altitude hex maps, or by setting up a separate table for low-altitude terrain.

When using low-altitude hexmaps, follow the rules exactly as found in *Total Warfare*. Designate one hex as the area in which the ground battle is taking place (or one hex for every 4 x 6 foot gaming area), and use the conversion rules only when interacting with the ground battle or when crashing.

If the players choose to set up their own table/area, they should apply all the movement rules in *Total Warfare*, with the following changes: a unit moves 2 inches (5 centimeters) for every point of effective velocity, and each altitude level (terrain and unit altitude) is equivalent to 1 inch. Use a 2 x 3 inch (5 x 7.5 cm) template to represent the table-top area where the ground battle is occurring.

Landing and Lift-off

When applying terrain modifiers for a vertical landing (see p. 86, *TW*), use the predominant terrain under the miniature's hexbase/footprint. If a DropShip lands vertically in an area that is not a paved road or water, the terrain within 2 inches (5 cm)



This AMC lance of Lucifers finds itself ambushed by the Word of Blake on the Low-Altitude Table.

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of the DropShip's footprint is reduced by 1 level. Any building sections underneath are automatically reduced to rubble, while woods are automatically reduced to rough terrain.

Landing strips for horizontal landings must be 10 inches wide by 40 inches long (25 cm x 100 cm) for DropShips, 2 inches wide by 16 inches long (5 cm x 40 cm) for conventional fighters and Small Craft, and 2 inches wide by 10 inches long (5 cm x 25 cm) for fighters equipped with VSTOL. Aerodyne DropShips that attempt to reduce the landing distance must make a Control Roll with a +4 modifier. If the roll succeeds, reduce the required landing distance by 4 inches (10 cm) for every point of the Margin of Success, to a minimum of half the standard landing distance. If the roll fails, consult the Failed Braking Maneuver Table (see p. 87, TW).

Aerodyne DropShips, fighters and Small Craft require a runway 40 inches (100 cm) long of clear or paved terrain in a continuous line that does not change levels in order to liftoff. VSTOL equipped units can take off from a runway half that length.

Proximity Damage

Any unit within a 14-inch (35 cm) radius of a spheroid unit as it lands or takes off suffers damage according to the DropShip Exhaust Damage Table below, broken into 5-point Damage Value groupings and applied using the appropriate hit location table. This damage only applies to units in the rear arc of an aerodyne DropShip when it takes off. Measure the radius from the absolute center of a spheroid DropShip, or from the rear of an aerodyne DropShip.

DROPSHIP EXHAUST DAMAGE TABLE

Distance	Damage
Within 2 inches (5 cm)	Destroyed
4 inches (10 cm)	12D6
6 inches (15 cm)	10D6
8 inches (20 cm)	8D6
10 inches (25 cm)	6D6
12 inches (30 cm)	3D6
14 inches (35 cm)	2D6

Out-of-Control Effects

Convert any random movement effects as follows: aerospace units on a low-altitude table move forward 2 inches (5 cm) instead of 1 hex, or 2D6 inches (5D6 cm) on a ground table.

Crashing

When an aerospace unit crashes, use the rules as written in *Total Warfare*, but remember to use random movement conversion for forward movement during the crash (see *Out-of-Control Effects*, above).

Fighters, Small Craft and Fixed-Wing Support Vehicles: These unit types affect all units within a 2 inch (5 cm) radius of the crash (called the *crash zone*, synonymous with the crash hex in *Total Warfare*). For a building section, apply the same amount of damage the aerospace unit received to the section's CF; a hardened building section doubles the standard crashing damage applied to the aerospace unit.

DropShips: DropShips affect all units within the crash zone, but also affect units from within a 4-inch to 8-inch (10 cm to 20 cm) radius from the crash (called the *outer crash zone*, synonymous with the adjacent 6 hexes to the crash in *Total Warfare*). Any building sections the unit hits are automatically destroyed; a hardened building section doubles the standard crashing damage applied to the DropShip. This is not cumulative; for example, if a DropShip crashes into three hardened building sections, the damage remains only double, rather than six times the standard crash damage. Any unit in the crash zone or outer crash zone takes (or can avoid) damage as if it were in the target hex or in an adjacent hex, respectively (see *Avoiding or Taking Damage*, p. 82, TW). A unit that is partially within both zones, is considered to be completely within the crash zone. All terrain within the crash zone is lowered by 2 levels (2 inches/5cm), while the terrain in the outer crash zone is lowered by 1 level (1 inch/2.5cm).

Woods and Water: Aerospace units that crash into woods reduce the terrain in the crash zone: heavy woods become light woods, and light woods become rough terrain. Regardless of the type of woods, a crashing DropShip reduces the woods in the crash zone and outer crash zone to rough terrain.

With the exception of DropShips, an aerospace unit that crashes into Depth 1 or greater water is automatically destroyed. If a DropShip crashes in predominantly Depth 1 water, the ship is immobile for the rest of the game. If a DropShip crashes in predominantly Depth 2 water, the DropShip is automatically destroyed.



'MechBuster, Seventeenth Donegal Guards (House Steiner)

COMBAT

Unless otherwise noted, players use all the standard rules for Combat as presented in *Total Warfare*.

LINE OF SIGHT

Line of sight (LOS) in miniatures combat is a little different than in standard *Classic BattleTech* game play. Because of the three-dimensional terrain, it is much easier to determine LOS on the board. Units can usually be sighted simply by going to the level of the firing unit and looking at the opposing miniature. If the opposing miniature can be seen, then the units have LOS to one another. When this is not possible, players must determine line of sight by running a straight measuring tape or a taut string from miniature to miniature.

Woods do not automatically block LOS as buildings and hills do. Four inches (or 10 centimeters) of intervening heavy woods (or any combination of heavy and light woods), or 6 inches (15 centimeters) of light woods, block LOS. If the attacker and target are on different levels, woods only intervene from within 2 inches of the attacker and defender along the LOS. Woods that intervene but do not block LOS impose a penalty on attack-to-hit numbers (see the Attack Modifiers Table, p. 12).

In the Intervening Terrain Diagrams below, BattleMech A wants to target BattleMech B, so the controlling player goes down to the level of the miniature to check for LOS. The only thing he sees between A and B is a light woods template. He uses a measuring tape drawn between BattleMech A and BattleMech B to see how many inches of woods intervene. Seven inches of light woods intervene, blocking LOS between BattleMechs A and B.

The player controlling BattleMech A decides instead to target Ground Vehicle C. However, when he goes down to the minis' level to check LOS, he finds that LOS to Vehicle C is blocked by a low ridge.

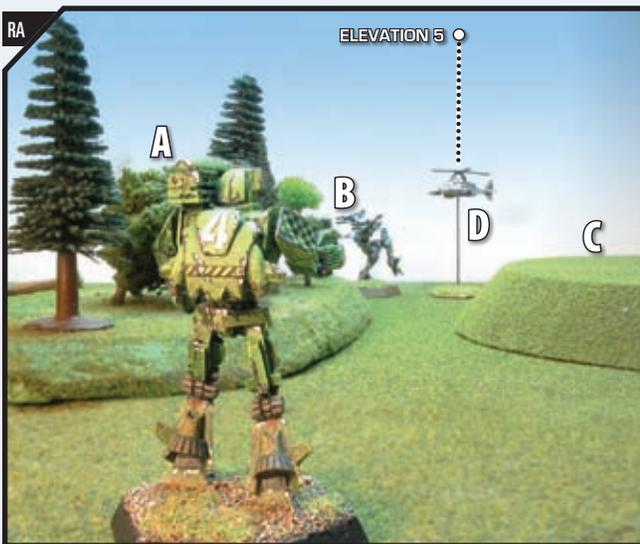
BattleMech A's player then checks LOS to VTOL D. However, since VTOL D is at Elevation 5, he has to draw LOS to 5 inches (12.5 cm) above the table where the VTOL's hexbase is located (elevation times 1 inch/2.5 centimeters). While BattleMech A has a clear shot, the player must take into account the light woods that are within 2 inches, as they impose a firing penalty.

Partial Cover ('Mechs only)

Partial cover works slightly differently than in map-based games. Units still receive the +1 penalty for shooting at an opposing unit in partial cover, and any shots hitting the obscured areas are considered to have hit the intervening terrain instead. Under these conversion rules, however, units get partial cover not simply to the legs, but to any areas hidden behind the partial covered. For example, if a 'Mech is partially covered because its right side is behind a building, then any shots that hit the 'Mech's right leg, right arm and right torso are considered to have hit the building.

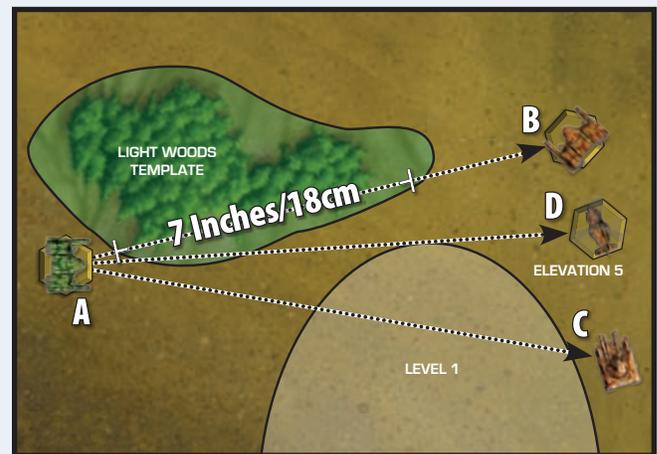
Weapons firing from an attacking 'Mech behind cover may not be able to strike certain targets because the cover does not provide a clear line of fire. If the 'Mech has its torso twisted, turn the miniature temporarily one hexside in the twist direction, in order to determine if the weapons are clear or not. If a line cannot be drawn from the weapon, or the hit location on the 'Mech containing the weapon, to the target without being blocked by the terrain providing cover to the attacking 'Mech, the weapon cannot be fired at that particular target. It may be fired at a secondary target, provided that the covering terrain does not block it from the secondary target. If a 'Mech is firing an indirectly guided weapon (such as indirect-firing LRMs), that weapon is not subject to the above restriction. Anti-missile systems located on a section of a targeted 'Mech that cannot draw a line to an attacker may not be employed against missile fire from the attacking unit, unless the 'Mech is being targeted indirectly by that attacker.

Elevated units also receive a partial cover penalty if they cannot see parts of a 'Mech adjacent to cover. For purposes of LOS, a unit that stops on an incline is considered to be on an elevation equal to the one it occupied before being placed on the slope. Woods do not create partial cover, but act as intervening terrain (see LOS,



● FIGURE 1 ●

● INTERVENING TERRAIN DIAGRAMS ●



● FIGURE 2 ●



• FIGURE 1 • PARTIAL COVER DIAGRAMS • FIGURE 2 •

partial cover. Firing downhill does not automatically negate partial cover—instead, players should go by visual LOS.

Terrain Note: When using sublevel templates as opposed to carved-out sublevels, players must rely on a little imagination and compromise. Figure LOS as normal, except that for every level below 0 on which a 'Mech stands, it is actually 1 inch (2.5 cm) deeper into the table. Depending on where the 'Mech is positioned, there may be partial cover or even blocked LOS. If no compromise can be reached, roll D6. On a result of 1–2, LOS does not exist between attacker and target; on a 3–4, the 'Mech has partial cover (legs only); on a 5–6, full LOS exists.

A 'Mech in Depth 1 water always has partial cover (legs only), regardless of whether the players use water templates or carved-out water terrain. Depth 2+ water completely blocks LOS unless both attacker and target are in Depth 2 water or lower. LOS is also blocked to a prone 'Mech in Depth 1 or deeper water.

In the Partial Cover Diagrams above, a player wants to attack a target BattleMech. When dropping to minis level to check for LOS, as shown in Figure 1, the player sees that the target BattleMech has partial cover; its legs and left arm are hidden by the terrain. The player adds a +1 partial cover modifier to his target numbers, and any shots that hit the legs or left arm strike the cover instead. When the target BattleMech returns fire, the target BattleMech's controlling player cannot use the 'Mech's left-arm mounted weapon, because it is behind cover. However, because he declared a torso twist, as shown in Figure 2, he can temporarily turn his miniature 1 full hexside in the direction of the twist, to see if its left arm clears the cover. It does, and so the target BattleMech can now use its left arm weapon when returning fire.

FIRING ARCS

Firing arcs are only slightly modified from *Total Warfare*, as shown in the Firing Arcs diagram at left. The arcs are easy enough to discern using the unit's hexbase, by lining a straightedge from a side point to the opposite rear point of the hexbase.

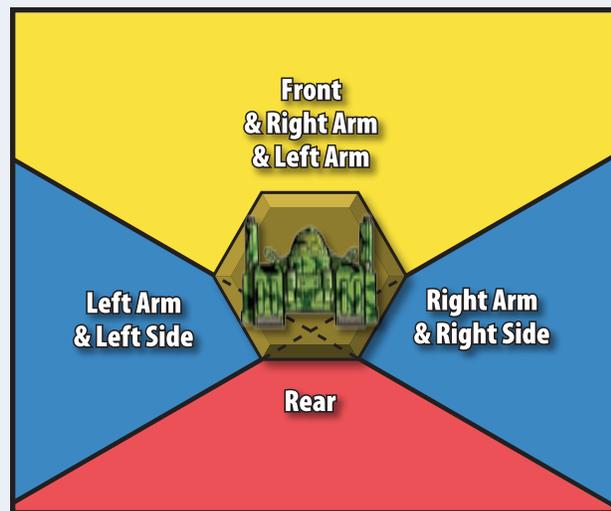
FIRING WEAPONS

Just as scale from maps to a terrain board is multiplied by 2 (5 if metric), so are weapon ranges. This means that each weapon's short, medium and long ranges are multiplied by 2 when determining their range in inches. Ranges are also measured from the attacker's hexbase center to the target's hexbase center, or the edge of the terrain feature being shot at.

Penalties for attacker movement, walking/cruising, running/flanking and jumping are the same as in *Total Warfare*. Target penalties for movement, shooting through woods and minimum ranges are outlined in the Attack Modifiers Table (see p. 12).

Aerospace Units

Range from a non-aerospace unit (including grounded aerospace units) to an airborne aerospace unit depends on whether the target is operating on a low-altitude table or directly on a ground table. If the target is operating on a low-altitude table, range is based on the distance from the attacker



• FIRING ARCS DIAGRAM •

ATTACK MODIFIERS TABLE (CHANGES ONLY)

All Attacks: Weapons and Physical	Modifier
Terrain (modifiers are cumulative)	
Light Woods	+1 per 2 inches (5cm) intervening; +1 if target in light woods
Heavy Woods	+2 per 2 inches (5cm) intervening; +2 if target in heavy woods
Partial Cover	+1; see <i>Partial Cover</i> , p. 10
Target (modifiers are cumulative)	
Prone	-2 from base-to-base; +1 from all others*
Movement in Inches (Centimeters)	
Moved 0-5 (0-14)	0
Moved 6-9 (15-24)	+1
Moved 10-13 (25-34)	+2
Moved 14-19 (35-49)	+3
Moved 20-35 (50-89)	+4
Moved 36-49 (90-124)	+5
Moved 50+ (125+)	+6
Weapon Attacks Only	Modifier
Attacker	
Range and Terrain	
Minimum range	[Minimum] - [Target Range / 2, round up] +1
Each Intervening Section/Level between Attacker and Target (as well as target's section) in same multi-section building	+1 per section/level (maximum +3; see <i>Combat Within Buildings</i> , p. 175, <i>TW</i>)

* Does not necessarily apply to Four-legged 'Mechs (see *Firing When Down*, p. 113, *TW*).

to the exact center of his table. In addition, add 4 inches (10 cm) to the range for each altitude. For example, a fighter at Altitude 3 would add 12 inches (30 cm) to the range. If the target is moving directly on the ground table/area, range is based on the distance to the target. Again, add 4 inches (10 cm) to the range for each altitude.

In both instances, if the attacker also suffered an attack this turn by the targeted aerospace unit (meaning if the attack has been announced, even if it has yet to be resolved), the range to the target is considered 0. Also in both instances, weapon minimum ranges are not taken into account against airborne aerospace units.

When clearing woods, each attack on the woods affects an area 2 inches (5 cm) in diameter, centered on the spot targeted by the attack.

OTHER WEAPONS AND EQUIPMENT

Unless otherwise noted, equipment and weapon range of effects are translated into inches by multiplying their ranges by 2 (or multiplying by 5 for centimeters). Ranges are always measured from the unit's hexbase center.

PHYSICAL ATTACKS

Physical attacks can only occur when two units have base-to-base contact. The attacking unit must also have the target unit in the appropriate firing arc.

Push Attacks

Units displaced by a push must move 2 inches (5 cm) in the direction of the push.

Charges and Death-From-Above Attacks

Charges and DFAs can only be completed if a unit has enough MP to displace the target from its position on the terrain board. Whether the attack is successful or not, the attacker will displace the target after the attack is made. If the attack succeeds, the target is displaced in the opposite direction from which the attack came; if the attack is unsuccessful, the target is displaced in a direction of its player's choosing. In either case, the target and the attacker end their movement adjacent to each other.

If a charge succeeds, both units take damage from the collision. Divide the attacker's tonnage by 10, multiply that number by the total inches (centimeters) moved by the attacker, and then divide the result by 2 (5 if metric), rounding up. Apply that damage in 5-point groupings to the target. The attacker takes damage as normal. Damage to attacker and target as the result of a DFA is resolved per *Total Warfare*.

Different Levels

Units adjacent to each other but at different levels can conduct physical attacks as long as the level difference is no more than 1 level (1 inch/2.5 cm).



BUILDINGS

Buildings add a great deal to a *Classic BattleTech* miniatures game, both in visual appeal and in tactical possibilities. However, whether you have a full urban sprawl or a few modest structures, some finesse is required in order to use the full rules for buildings from *Total Warfare* on the table-top. In general it is unsafe to place a miniature on a building roof, whether you're simulating a unit on the roof or somewhere else in the building. Once a unit has entered or landed on a building, a counter or token should be placed on the building to keep track of its level and location.

MULTI-SECTION BUILDINGS

Some table-top buildings are large enough to be congruous with multi-hex buildings. For every 2 inches (5 cm) squared (or fraction thereof) of a building's area, assign it one "section". Players may number or name these sections as appropriate (for example, a building with two sections might have a front and a back; a building with four sections might have a north, south, east and west).

Sections within a building must be of the same type and CF, but each section tracks its own CF. When half or more of a building's sections are destroyed, the entire building collapses.

MOVEMENT EFFECTS

Follow the rules in *Total Warfare*, but use the converted tables for Movement Costs and Piloting/Driving Skill Rolls found on pp. 6 and 7, respectively.

COMBAT EFFECTS

When targeting a multi-section building, the attacker must declare which section he is targeting. Building sections block LOS to other building sections. In *Total Warfare*, any mention of a building hex can be substituted for a building section in table-top play for purposes of combat and LOS.

SUPPORT VEHICLES

Unless otherwise noted, players use all the standard rules for *Support Vehicles* as presented in *Total Warfare*.

CARRYING UNITS

Use the mounting and dismounting rules from *Total Warfare*, with the exception that in order to mount a vehicle, a unit must be in base-to-base contact with it.

AEROSPACE UNITS

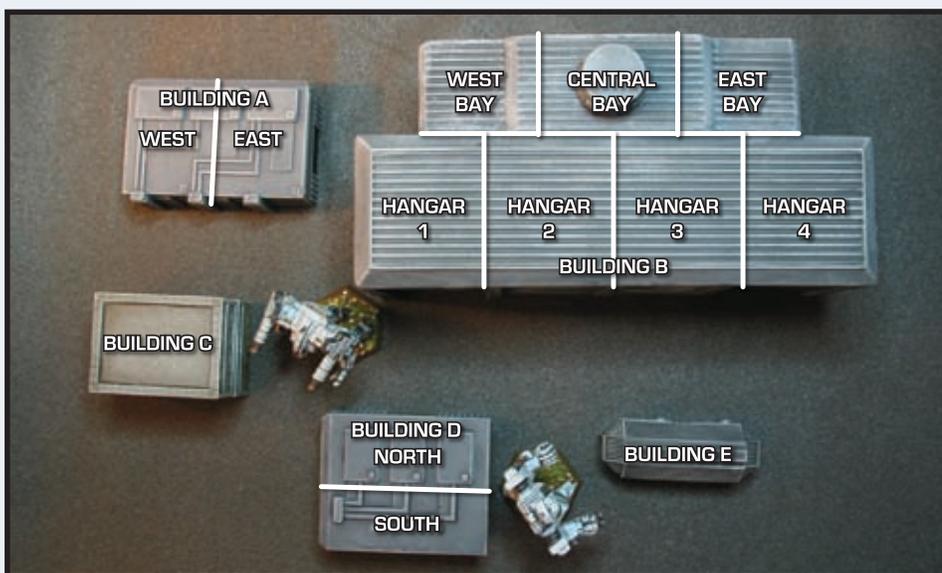
Unless otherwise noted, players use all the standard rules for *Aerospace Units* as presented in *Total Warfare*.

ATMOSPHERIC COMBAT

Rules in this section assume that the aerospace units are operating directly on the ground table or on a low-altitude table. If the aerospace units are operating on hex maps, use the rules found in *Total Warfare*, except when the aerospace units are interacting with the ground battle. Keep in mind that weapon ranges on a low-altitude table are multiplied by 2 to determine inches, or by 32 if playing directly on the ground table (multiply by 5 and 80 respectively, if using metric).

Air-to-Air Attacks

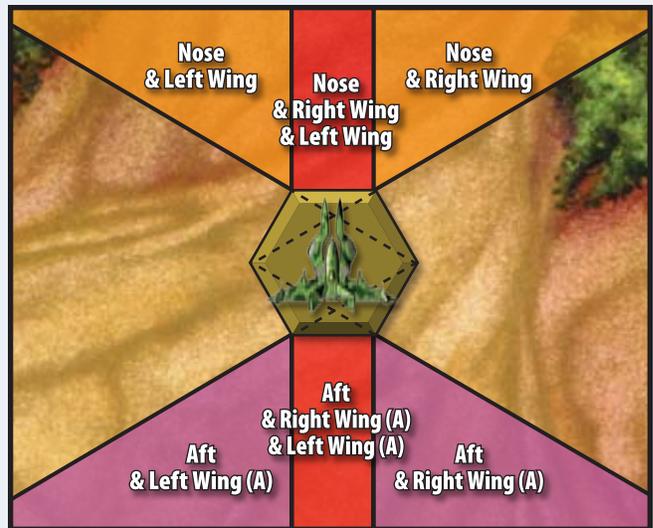
Units at the same altitude figure ranges normally. At different altitudes, multiply the difference in altitudes by 2 (5 if centimeters), and add the result to the range. Differences in altitude also create a "dead zone" around each unit. If the difference in altitude is 1, the attacker and target must be 4 inches (10 cm) away. If the difference is 2, they must be 6 inches (15 cm) away. If the difference is 3, they must be 8 inches (20 cm) away, and so on.



• BUILDING SECTIONS DIAGRAM •



• SPHEROID FIRING ARCS DIAGRAM •



• AERODYNE FIRING ARCS DIAGRAM •

LOS between aerospace units is determined normally—the player must visually determine if the target can be seen from the attacking unit's position. LOS must be gauged from the unit's position on the board, and 1 inch (2.5 cm) vertically for every level of the unit's altitude.

Air-to-Ground Attacks

When an aerospace unit ends its movement over the ground map template, it can attack targets on the ground table. The player must first nominate an attack path over which the fighter will pass. This must form a straight line and represents the fighter's flight path across the ground table. Aerospace units operating directly on the ground table use their actual flight path rather than designating an attack path.

Striking: Striking follows all the rules in *Total Warfare*. Striking units only take terrain into account for the immediate area in which the target is standing. Units flying NOE must also take into account the terrain within 4 inches (10 cm) in front of the target.

Strafing: When strafing, the attacker nominates up to a 10 inch (25 cm) x 2 inch (5cm) stretch along his attack path. Any units whose bases lie along that path (friend or foe) are subject to the strafing attack.

In the strafing diagram, the attacking player decides to perform a strafing run and chooses his attack path to maximize damage to his opponent. His strafing attack targets 'Mechs A, B, and Infantry C of his opponent's forces. While the attacker is careful to keep his attack path away from his 'Mech D, he will be forced to make a strafing attack on his Battle Armor E since it lies within the strafing attack path..



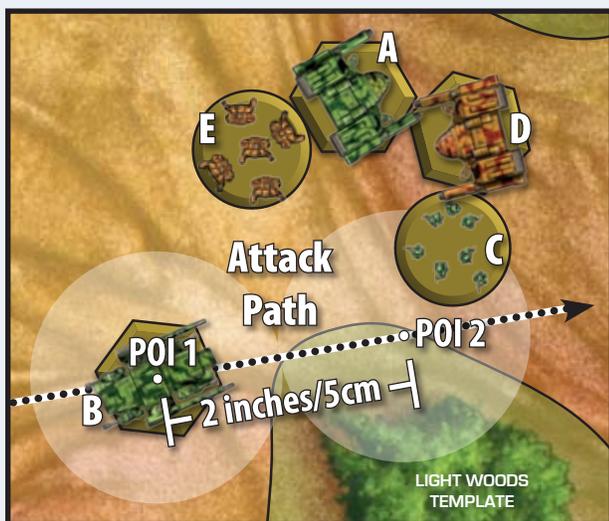
• STRAFING DIAGRAM •

Dive-Bombing: To perform a dive-bombing attack, designate a single Point of Impact (POI) along the attacker's flight path. If the attack fails, roll 1D6 and consult the Dive-Bombing Scatter Diagram (see p. 245, *TW*) for the scatter direction, then roll 2D6 (5D6 for centimeters) to determine the number of inches/centimeters the bomb scatters.

Altitude-Bombing: When altitude-bombing, the attacker may choose up to 10 POI, 1 POI every 2 inches (5cm), along the flight path to bomb. Up to 2 bombs may be dropped per POI, but a minimum of 1 bomb per POI. If the attack fails, roll 1D6 for each bomb and consult the Altitude-Bombing Scatter Diagram (see p. 245, *TW*) for the scatter direction, then roll 2D6 (5D6 for centimeters) for each bomb to determine the number of inches/centimeters the bomb scatters.

Bomb Types: HE bombs affect anything within a 1-inch (2.5 cm) radius from the POI. Cluster bombs affect anything within a 2-inch (5 cm) radius. To determine attack direction, use the POI as the direction from which the attack is originating. If the POI is directly centered on a unit, roll 1D6 for that unit. A result of 1–3 hits the front; a 4–6 hits the back.

The bombing diagram shows the previous example, but instead the attacker has decided to perform an altitude bombing. He chooses a path clear of his 'Mech D and Battle Armor E, and sets the first POI directly over 'Mech B. He decides to continue to a second POI, which must be 2 inches (5cm) away along the attack path, landing on the edge of a light woods template. The diagram shows the area of effect if HE bombs are used; the bombs dropped on POI 1 effect 'Mech B, and the bombs dropped on POI 2 effect Infantry C.



● BOMBING DIAGRAM ●

Attacks by Grounded Aerospace Units

Playing with a grounded DropShip requires the use of a large model, such as the *Leopard* DropShip produced by Iron Wind Metals. Determining firing arcs and attack direction for a Grounded Spheroid DropShip is simple; bisect the model into a right arc/side and left arc/side. Nose-mounted weapons can only fire on airborne aerospace units, and aft-

mounted weapons can only target units within 1 inch (2.5cm) of the DropShip.

Grounded Aerodyne DropShips require a little finesse, as they use their existing firing arcs and attack direction, but scaled up to fit the model being used.

LOS: Line of Sight from a DropShip to a target may be drawn from any point on the DropShip; which ever point provides the best LOS circumstances.

INFANTRY

Unless otherwise noted, players use all the standard rules for *Infantry* as presented in *Total Warfare*.

INFANTRY COMBAT

Infantry follow the rules in *Total Warfare*, but multiply their weapon ranges by 2 (by 5 if using centimeters). Consult the table below for conventional infantry weapon range modifiers.

ANTI-MECH ATTACKS

Infantry must be in base-to-base contact with a unit in order to make a leg or swarm attack. Though any number of infantry stands may be in base-to-base contact with a target unit, it may only be targeted for one type of attack per turn (provided the attack type is allowed for the unit in question).

INFANTRY CARRIERS

In order to mount an infantry carrier, the infantry unit must be in base-to-base contact with the carrier. When dismounting, the infantry are placed anywhere on the table, in base-to-base contact with the carrier. If there is not enough room for the infantry to be base-to-base with the carrier, or the surrounding terrain is prohibited for that infantry type, then the infantry cannot dismount.

CONVENTIONAL INFANTRY RANGE MODIFIER TABLE

Weapon Type	Range in Inches/Centimeters (To-Hit Modifier)									
	Base - to-Base	0-2/ 0-5	3-4/ 6-10	5-6/ 11-15	7-8/ 16-20	9-10/ 21-25	11-12/ 26-30	13-14/ 31-35	15-16/ 36-40	17-18/ 41-45
Rifle, Ballistic	-2	0	+2	+4	—	—	—	—	—	—
Rifle, Energy	-2	0	0	+2	+2	+4	+4	—	—	—
Machine Gun	-2	0	+2	+4	—	—	—	—	—	—
SRM	-1	0	0	+2	+2	+4	+4	—	—	—
LRM	-1	0	0	0	+2	+2	+2	+4	+4	+4
Flamer	-1	0	+2	+4	—	—	—	—	—	—

INNER SPHERE WEAPONS AND EQUIPMENT TABLE

Item	Type*	Heat	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	Ammo Per Ton	Attack Value††	Aerospace Range‡	To-Hit Modifier
<i>Direct-Fire Ballistic Weapons†††</i>											
Autocannon/2	DB, S	1	2	8" (20cm)	0"-16" (0cm-40cm)	17"-32" (41cm-80cm)	33"-48" (81cm-120cm)	45	2	Long	0
Autocannon/5	DB, S	1	5	6" (15cm)	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	20	5	Medium	0
Autocannon/10	DB, S	3	10	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	10	10	Medium	0
Autocannon/20	DB, S	7	20	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	5	20	Short	0
Light Gauss Rifle	DB, X	1	8	6" (15cm)	0"-16" (0cm-40cm)	17"-34" (41cm-85cm)	35"-50" (86cm-125cm)	16	8	Extreme	0
Gauss Rifle	DB, X	1	15	4" (10cm)	0"-14" (0cm-35cm)	15"-30" (36cm-75cm)	31"-44" (76cm-110cm)	8	15	Long	0
Heavy Gauss Rifle	DB, X, V	2	25/20/10	8" (20cm)	0"-12" (0cm-30cm)	13"-26" (31cm-65cm)	27"-40" (66cm-100cm)	4	25/20/10	Long	0
LB 2-X AC	DB, C/S/F++	1	2	8" (20cm)	0"-18" (0cm-45cm)	19"-36" (46cm-90cm)	37"-54" (91cm-135cm)	45	2	Extreme	0, -1†
LB 5-X AC	DB, C/S/F++	1	5	6" (15cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	20	3	Long	0, -1†
LB 10-X AC	DB, C/S/F++	2	10	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	10	6	Medium	0, -1†
LB 20-X AC	DB, C/S/F++	6	20	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	5	12	Medium	0, -1†
Light AC/2	DB, S	1	2	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	45	2	Medium	0
Light AC/5	DB, S	1	5	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	20	5	Medium	0
Light Machine Gun	DB, AI§	0	1	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-30cm)	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	—	100	3	Short	0
Nail/Rivet Gun	DB, AI**	0	0**	0	0"-2" (0cm-5cm)	—	—	300	0**	—	0
Rotary AC/2	DB, R/C	1/Sht	2/Sht, R6	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	45	8	Medium	0
Rotary AC/5	DB, R/C	1/Sht	5/Sht, R6	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	20	20	Medium	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	6" (15cm)	0"-16" (0cm-40cm)	17"-34" (41cm-85cm)	35"-50" (86cm-125cm)	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	4" (10cm)	0"-12" (0cm-30cm)	13"-26" (31cm-65cm)	27"-40" (66cm-100cm)	20	7	Long	0
Ultra AC/10	DB, R/C	4/Sht	10/Sht, R2	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	10	15	Medium	0
Ultra AC/20	DB, R/C	8/Sht	20/Sht, R2	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-20" (36cm-50cm)	5	30	Medium	0
<i>Direct-Fire Energy Weapons</i>											
ER Large Laser	DE	12	8	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-38" (71cm-95cm)	—	8	Long	0
ER Medium Laser	DE	5	5	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	—	5	Medium	0
ER Small Laser	DE	2	3	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-10" (21cm-25cm)	—	3	Short	0
Flamer	DE, H, AI§	3	25§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	25§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	25§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	20	25§	Short	0
Large Laser	DE	8	8	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	—	8	Medium	0
Medium Laser	DE	3	5	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	—	5	Short	0
Small Laser	DE	1	3	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	3	Short	0
Plasma Rifle	DE, H, AI	10	10**	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	10	10**	Medium	0
Light PPC	DE	5	5	6" (15cm)	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	—	5	Medium	0
PPC	DE	10	10	6" (15cm)	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	—	10	Medium	0
Heavy PPC	DE	15	15	3	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	—	15	Medium	0
ER PPC	DE	15	10	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-46" (71cm-115cm)	—	10	Long	0
Snub-Nose PPC	DE, V	10	10/8/5	0	0"-18" (0cm-45cm)	19"-26" (46cm-65cm)	27"-30" (66cm-75cm)	—	10/8	Medium	0
<i>Pulse Weapons</i>											
Large Pulse Laser	P	10	9	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-20" (36cm-50cm)	—	9	Medium	-2
Medium Pulse Laser	P	4	6	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-30cm)	—	6	Short	-2
Small Pulse Laser	P, AI§	2	3	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	3	Short	-2
<i>Missile Weapons†††</i>											
LRM 5	M, C, S	2	1/Msl, C5/5	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	6	12/16	Long	0
MML 3**	M, C, S	—	—	—	—	—	—	—	—	—	—
LRM ammo	—	2	1/Msl, C3/3	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	40	2/2	Long	0
SRM ammo	—	2	2/Msl, C2/3	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	33	4/4	Short	0
MML 5**	M, C, S	—	—	—	—	—	—	—	—	—	—
LRM ammo	—	3	1/Msl, C5/5	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	24	3/4	Long	0
SRM ammo	—	3	2/Msl, C2/5	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	20	6/8	Short	0
MML 7**	M, C, S	—	—	—	—	—	—	—	—	—	—
LRM ammo	—	4	1/Msl, C5/7	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	17	4/6	Long	0
SRM ammo	—	4	2/Msl, C2/7	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	14	8/12	Short	0
MML 9**	M, C, S	—	—	—	—	—	—	—	—	—	—
LRM ammo	—	5	1/Msl, C5/9	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	13	5/7	Long	0
SRM ammo	—	5	2/Msl, C2/9	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	11	10/14	Short	0
MRM 10	M, C	4	1/Msl, C5/10	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	24	6	Medium	+1
MRM 20	M, C	6	1/Msl, C5/20	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	12	12	Medium	+1
MRM 30	M, C	10	1/Msl, C5/30	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	8	18	Medium	+1
MRM 40	M, C	12	1/Msl, C5/40	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	6	24	Medium	+1
Narc Missile Beacon	M, E, S	0	**	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	6	**	**	0
Improved Narc Launcher	M, E, S	0	**	0	0"-8" (0cm-20cm)	9"-18" (21cm-45cm)	19"-30" (46cm-75cm)	4	**	**	0
Rocket Launcher 10	M, C, OS	3	1/Msl, C5/10	0	0"-10" (0cm-25cm)	11"-22" (26cm-55cm)	23"-36" (56cm-90cm)	OS	6	Medium	+1
Rocket Launcher 15	M, C, OS	4	1/Msl, C5/15	0	0"-8" (0cm-20cm)	9"-18" (21cm-45cm)	19"-30" (46cm-75cm)	OS	9	Medium	+1
Rocket Launcher 20	M, C, OS	5	1/Msl, C5/20	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	OS	12	Medium	+1
SRM 2	M, C, S	2	2/Msl, C2/2	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	50	2/4	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	50	4	Short	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	25	8	Short	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	15	12	Short	0
<i>Equipment</i>											
A-Pod	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
B-Pods	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
Anti-Missile System	PD	1	**	—	—	—	—	12	**	—	—
Beagle Active Probe	E	—	—	—	—	—	0"-8" (0cm-20cm)	—	—	**	—
Guardian ECM Suite	E	—	—	—	—	—	0"-12" (0cm-30cm)	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	—	0	0"-10" (0cm-25cm)	11"-18" (26cm-45cm)	19"-30" (46cm-75cm)	—	—	**	—

*See the Weapon and Equipment Types Table, p. 304, for abbreviation explanations, or *Weapons and Equipment*, p. 113, for complete details. If weapon types are separated by a slash, then those weapon types all apply at once. For example, an LB-X can either be fired as a Direct-Fire Ballistic Weapon, or as Cluster Weapon, which means it also has switchable ammo and is flak capable.

**See *Other Combat Weapons and Equipment*, p. 129; for aerospace units, see *Weapons and Equipment*, p. 236.

†When fired as a Cluster Weapon by non-aerospace units; aerospace units always apply the -1 to-hit modifier.

††For Missile Weapons, the number after the slash represents a missile weapon linked to Artemis IV FCS (see p. 130).

†††Rapid-Fire Weapons display their Damage Value uniquely; i.e. an Ultra AC/2 is "2/Sht, R2", meaning each shot that is fired deals 2 points of damage (2/Sht) and it can fire a total of two shots in a turn (R2).

‡Maximum range for weapons mounted on aerospace units; see *Range Modifier*, p. 235, in the *Aerospace Units* section.

‡‡May use Cluster Ammunition; see *LB-X Weapons and Cluster Ammunition*, pp. 120 and 141 respectively.

‡‡‡Missile Weapons display their Damage Value uniquely; i.e. an LRM 20 is "1/Msl, C5/20", meaning each missile does 1 point of damage (1/Msl), the largest Damage Value grouping is 5 (C5), and that 20 missiles are fired with each shot (20).

§See *Burst-Fire Weapon Damage Vs. Conventional Infantry Table*, either p. 217 or p. 309.

§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon*, p. 113).

CLAN WEAPONS AND EQUIPMENT TABLE

Item	Type*	Heat	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	Ammo Per Ton	Attack Value††	Aero Range‡	To-Hit Modifier
Direct-Fire Ballistic Weapons†††											
LB 2-X AC	DB, C/S/F#	1	2	8" (20cm)	0"-20" (0cm-50cm)	21"-40" (51cm-100cm)	41"-60" (101cm-150cm)	45	1	Extreme	0, -1†
LB 5-X AC	DB, C/S/F#	1	5	6" (15cm)	0"-16" (0cm-40cm)	17"-30" (41cm-75cm)	31"-48" (76cm-120cm)	20	3	Long	0, -1†
LB 10-X AC	DB, C/S/F#	2	10	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	10	6	Medium	0, -1†
LB 20-X AC	DB, C/S/F#	6	20	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	5	12	Medium	0, -1†
AP Gauss Rifle	DB, X, AI§	1	3	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	40	3	Short	0
Gauss Rifle	DB, X	1	15	4" (10cm)	0"-14" (0cm-35cm)	15"-30" (36cm-75cm)	31"-44" (76cm-110cm)	8	15	Long	0
HAG 20	DB, X, C, F	4	C5/20**	4" (10cm)	0"-16" (0cm-40cm)	17"-32" (41cm-80cm)	33"-48" (81cm-120cm)	6	16/12/12	Long	0
HAG 30	DB, X, C, F	6	C5/30**	8" (20cm)	0"-16" (0cm-40cm)	17"-32" (41cm-80cm)	33"-48" (81cm-120cm)	4	24/18/18	Long	0
HAG 40	DB, X, C, F	8	C5/40**	8" (20cm)	0"-16" (0cm-40cm)	17"-32" (41cm-80cm)	33"-48" (81cm-120cm)	3	32/24/24	Long	0
Light Machine Gun	DB, AI§	0	1	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-30cm)	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	—	100	3	Short	0
Nail/Rivet Gun	DB, AI	0	0**	0	0"-2" (0cm-5cm)	—	—	300	0**	—	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	8" (20cm)	0"-18" (0cm-45cm)	19"-36" (46cm-90cm)	37"-54" (91cm-135cm)	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	20	7	Long	0
Ultra AC/10	DB, R/C	3/Sht	10/Sht, R2	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	10	15	Medium	0
Ultra AC/20	DB, R/C	7/Sht	20/Sht, R2	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	5	30	Medium	0
Direct-Fire Energy Weapons											
ER Large Laser	DE	12	10	0	0"-16" (0cm-40cm)	17"-30" (41cm-75cm)	31"-50" (76cm-125cm)	—	10	Extreme	0
ER Medium Laser	DE	5	7	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	—	7	Medium	0
ER Small Laser	DE	2	5	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-30cm)	—	5	Short	0
ER Micro Laser	DE	1	2	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-8" (11cm-20cm)	—	2	Short	0
Flamer	DE, H, AI§	3	2§§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	2§§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	2§§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	20	2§§	Short	0
Heavy Large Laser	DE	18	16	0	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	—	16	Medium	+1
Heavy Medium Laser	DE	7	10	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	—	10	Short	+1
Heavy Small Laser	DE	3	6	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	6	Short	+1
Plasma Cannon	DE, H, AI	7	0**	0	0"-12" (0cm-30cm)	13"-24" (31cm-60cm)	25"-36" (61cm-90cm)	10	0**	Medium	0
ER PPC	DE	15	15	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-46" (71cm-115cm)	—	15	Long	0
Pulse Weapons											
Large Pulse Laser	P	10	10	0	0"-12" (0cm-30cm)	13"-28" (31cm-70cm)	29"-40" (71cm-100cm)	—	10	Long	-2
Medium Pulse Laser	P	4	7	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	—	7	Medium	-2
Small Pulse Laser	P, AI§	2	3	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-30cm)	—	3	Short	-2
Micro Pulse Laser	P, AI§	1	3	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	—	3	Short	-2
Missile Weapons###											
ATM 3**	M, C, S	2	2/Msl, C5/3	8" (20cm)	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	20	4	Medium	0
ATM 6**	M, C, S	4	2/Msl, C5/6	8" (20cm)	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	10	8	Medium	0
ATM 9**	M, C, S	6	2/Msl, C5/9	8" (20cm)	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	7	14	Medium	0
ATM 12**	M, C, S	8	2/Msl, C5/12	8" (20cm)	0"-10" (0cm-25cm)	11"-20" (26cm-50cm)	21"-30" (51cm-75cm)	4	20	Medium	0
ATM ER Ammo	—	**	1/Msl, C5/**	8" (20cm)	0"-18" (0cm-45cm)	19"-36" (46cm-90cm)	37"-54" (91cm-135cm)	**	§§§	Extreme	0
ATM HE Ammo	—	**	3/Msl, C5/**	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	**	§§§	Short	0
Narc Missile Beacon	M, E, S	0	**	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	6	**	**	0
LRM 5	M, C, S	2	1/Msl, C5/5	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	6	12/16	Long	0
SRM 2	M, C, S	2	2/Msl, C2/2	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	50	2/5	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	50	4	Medium	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	25	8	Medium	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	15	12	Medium	0
Equipment											
A-Pod	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
B-Pods	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
Anti-Missile System	PD	1	**	—	—	—	—	24	**	—	—
Active Probe	E	—	—	—	—	—	10" (50cm)	—	—	**	—
Light Active Probe	E	—	—	—	—	—	6" (15cm)	—	—	**	—
ECM Suite	E	—	—	—	—	—	12" (30cm)	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	—	0	0"-10" (0cm-25cm)	11"-18" (26cm-45cm)	19"-30" (46cm-75cm)	—	—	**	—
Light TAG	E	0	—	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	—	—	**	—

*See the Weapon and Equipment Types Table, below, for abbreviation explanations, or *Weapons and Equipment*, p. 113, for complete details. If weapon types are separated by a slash, then those weapon types all apply at once. For example, an LB-X can either be fired as a Direct-Fire Ballistic Weapon, or as Cluster Weapon, which means it also has switchable ammo and is flak capable.

**See *Other Combat Weapons and Equipment*, p. 129; for aerospace units, see *Weapons and Equipment*, p. 236.

†When fired as a Cluster Weapon by non-aerospace units; aerospace units always apply the -1 to-hit modifier.

††For Missile Weapons, the number after the slash represents a missile weapon linked to Artemis IV FCS (see p. 130).

†††Rapid-Fire Weapons display their Damage Value uniquely; i.e. an Ultra AC/2 is "2/Sht, R2", meaning each shot that is fired deals 2 points of damage (2/Sht) and it can fire a total of two shots in a turn (R2).

‡Maximum range for weapons mounted on aerospace units; see *Range Modifier*, p. 235, in the Aerospace Units section.

‡‡May use Cluster Ammunition; see *LB-X Weapons and Cluster Ammunition*, pp. 120 and 141 respectively.

###Missile Weapons display their Damage Value uniquely; i.e. an LRM 20 is "1/Msl, C5/20", meaning each missile does 1 point of damage (1/Msl), the largest Damage Value grouping is 5 (C5), and that 20 missiles are fired with each shot (/20).

§See Burst-Fire Weapon Damage Vs. Conventional Infantry Table, either p. 217 or p. 309.

§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon*, p. 113).

§§§Non-Bays: When using ER ammo, increase the range bracket to extreme and half the Attack Value (round up). When using HE ammo, reduce the range bracket to short and then multiply the Attack Value by 1.5 (round up). Bays: If all the ATMs in a given bay have at least one ton of each ammo type, the bay's short range bracket Attack Value is multiplied by 1.5 (round up), the medium range bracket remains the same, and it also has a long and extreme range brackets, with an Attack Value that is halve (round up) the standard value.

AEROSPACE WEAPONS AND EQUIPMENT

Item	Heat	Attack Value*	Aerospace Range‡	To-Hit Modifier
Killer Whale	20	4	Extreme	0
White Shark	15	3	Extreme	0
Barracuda	10	2	Extreme	-2
AR10	†	†	†	†
Kraken-T‡	50	10	Extreme	0
Killer Whale-T‡	20	4	Extreme	0
White Shark-T‡	15	3	Extreme	0
Barracuda-T‡	10	2	Extreme	0

*Capital-scale damage; see p. *Damage*, p. 238

†AR10 can fire Killer Whale, White Shark, or Barracuda missiles (but not tele-operated missiles) as long as the appropriate ammunition is available.

‡See *Tele-Operated Missiles*, p. 251.

WEAPON AND EQUIPMENT TYPES TABLE

See *Weapons and Equipment*, p. 113, for complete details of weapon and equipment types.

- AE: Area-Effect Weapon
- C: Cluster Weapon
- DE: Direct-Fire Energy Weapon
- DB: Direct-Fire Ballistic Weapon
- H: Heat-Causing Weapon
- M: Missile Weapon
- R: Rapid-Fire (Multi-Firing) Weapon
- V: Variable Damage
- AI: Anti-Infantry
- OS: One-Shot Weapon
- P: Pulse Weapon
- PD: Point-Blank Weapon
- E: Electronics
- CE: Counter-Electronics
- T: Targeting System
- S: Switchable Ammo Supply
- PE: Performance Enhancement
- F: Flak
- X: Explosive Weapon

ADDITIONAL INNER SPHERE WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
<i>Direct-Fire Ballistic Weapons</i>							
"Firedrake" Support Needler	DB, AI††	1	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
"David" Light Gauss Rifle	DB	1	0	0"-6" (0cm-15cm)	7"-10" (16cm-25cm)	11"-16" (26cm-40cm)	0
"King David" Light Gauss Rifle	DB	1	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
Grand Mauler Gauss Cannon	DB	1	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-10" (21cm-25cm)	0
Magshot Gauss Rifle	DB	2	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
Tsunami Gauss Rifle	DB	1	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-10" (21cm-25cm)	0
Micro Grenade Launcher	DB, AI§	1	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	—	0
Grenade Launcher	DB, AI§	1	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
Light Mortar	DB, AI§	3	2" (5cm)	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
Heavy Mortar	DB, AI§	3	4" (10cm)	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Light Recoilless Rifle	DB, AI§	2	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Medium Recoilless Rifle	DB, AI§	3	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Heavy Recoilless Rifle	DB, AI§	3	0	0"-6" (0cm-15cm)	7"-10" (16cm-25cm)	11"-14" (26cm-35cm)	0
<i>Direct-Fire Energy Weapons</i>							
Flamer	DE, H, AI§	2§§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
Man-Portable Plasma Rifle	DE	2	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Support PPC	DE	2	0	0"-4" (0cm-10cm)	5"-10" (11cm-25cm)	11"-14" (26cm-35cm)	0
<i>Missile Weapons</i>							
Compact Narc	M, E	**	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-10" (21cm-25cm)	0
LRM 1	M, C, S	1/Msl, C5/#	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 2	M, C, S	1/Msl, C5/#	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 3	M, C, S	1/Msl, C5/#	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 4	M, C, S	1/Msl, C5/#	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 5	M, C, S	1/Msl, C5/#	12" (30cm)	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
MRM 1	M, C, S	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	+1
MRM 2	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	+1
MRM 3	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	+1
MRM 4	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	+1
MRM 5	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-16" (16cm-40cm)	17"-30" (41cm-75cm)	+1
Rocket Launcher 1	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	+1
Rocket Launcher 2	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	+1
Rocket Launcher 3	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	+1
Rocket Launcher 4	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	+1
Rocket Launcher 5	M, C	1/Msl, C5/#	0	0"-6" (0cm-15cm)	7"-14" (16cm-35cm)	15"-24" (36cm-60cm)	+1
SRM 1	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 2	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 3	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 4	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 5	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 6	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
<i>Equipment</i>							
Light TAG	E	—	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	—

ADDITIONAL CLAN WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
<i>Direct-Fire Ballistic Weapons</i>							
"Bearhunter" Superheavy AC	DB, AI††	3	0	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	+1
Heavy Grenade Launcher	DB, C, AI§	1	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
Light Recoilless Rifle	DB, AI§	2	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Medium Recoilless Rifle	DB, AI§	3	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-12" (21cm-60cm)	0
Heavy Recoilless Rifle	DB, AI§	3	0	0"-6" (0cm-15cm)	7"-10" (16cm-25cm)	11"-14" (26cm-35cm)	0
<i>Direct-Fire Energy Weapons</i>							
Flamer	DE, H, AI§	2§§	0	0"-2" (0cm-5cm)	3"-4" (6cm-10cm)	5"-6" (11cm-15cm)	0
Support PPC	DE	2	0	0"-4" (0cm-10cm)	5"-10" (11cm-25cm)	11"-14" (26cm-35cm)	0
<i>Missile Weapons</i>							
Compact Narc	M, E	**	0	0"-4" (0cm-10cm)	5"-8" (11cm-20cm)	9"-10" (21cm-25cm)	0
LRM 1	M, C, S	1/Msl, C5/#	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 2	M, C, S	1/Msl, C5/#	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 3	M, C, S	1/Msl, C5/#	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 4	M, C, S	1/Msl, C5/#	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
LRM 5	M, C, S	1/Msl, C5/#	0	0"-14" (0cm-35cm)	15"-28" (36cm-70cm)	29"-42" (71cm-105cm)	0
SRM 1	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 2	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 3	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 4	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 5	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
SRM 6	M, C, S	2/Msl, C2/#	0	0"-6" (0cm-15cm)	7"-12" (16cm-30cm)	13"-18" (31cm-45cm)	0
Advanced SRM 1†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0
Advanced SRM 2†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0
Advanced SRM 3†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0
Advanced SRM 4†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0
Advanced SRM 5†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0
Advanced SRM 6†	M, C	1/Msl, C2/#	0	0"-8" (0cm-20cm)	9"-16" (21cm-40cm)	17"-24" (41cm-60cm)	0

*See the Weapon and Equipment Types Table, p. 306, for abbreviation explanations, or *Weapons and Equipment*, p. 113, for complete details.

**See *Other Combat Weapons and Equipment*, p. 129

†Add +1 to the die roll when rolling on the Cluster Hits Table.

‡See *Missile Attacks*, p. 218

††Treat as Flamer on Burst-Fire Weapon Damage Vs. Conventional Infantry Table, see either p. 217 or p. 309.

§See Burst-Fire Weapon Damage Vs. Conventional Infantry Table, either p. 217 or p. 309.

§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon*, p. 113).

MOVEMENT COSTS TABLE

Movement Action/ Terrain Cost	MP Cost Per Inch (Centimeter)/ Terrain Type	Prohibited Units
Cost to Move	1	
Cost of Moving Through Terrain		
Clear	+0 ⁶	Naval vessel
Paved/Bridge	+0 ¹⁵	Naval vessel
Road	+0 ^{3,15}	Naval vessel
Rough	+1	Wheeled, naval vessel
Light woods	+1 ¹⁰	Wheeled ⁹ , hover, VTOL ¹² , WIGE ¹³ , naval vessel
Heavy woods	+2 ¹¹	Vehicles ¹⁷ , naval vessel
Water		
Depth 0	+0	Naval vessel
Depth 1	+1 ¹ (Level change MP cost not included)	Infantry ¹⁴ , vehicles ^{4,7}
Depth 2+	+3 ¹ (Level change MP cost not included)	Infantry ¹⁴ , vehicles ^{4,7} , IndustrialMechs ⁸
Level change (up or down)		
1 level	+2 for inches, +5 for centimeters (Mechs, VTOLs, subs, ProtoMechs) +4 for inches, +10 for centimeters (infantry, ground vehicles)	—
2 levels	+4 for inches, +10 for centimeters (Mechs, VTOLs, subs)	Infantry, ground vehicles, WIGE ¹³ , ProtoMechs
3+ levels	+2/level for inches, +5/level for centimeters (VTOLs, subs)	Mechs, ProtoMechs, infantry, ground vehicles, WIGE ¹³

¹MP cost to move along the bottom of a water area or rubble; Piloting Skill Roll required every 2 inches/5cm to prevent falling.
²Piloting Skill Roll required to prevent damage; infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter any building.
³If traveling along road; otherwise, cost of underlying terrain.
⁴Hovercraft may enter all water areas along the surface and may enter such areas using flanking movement.
⁵No cost for infantry.

Movement Action/ Terrain Cost	MP Cost Per Inch (Centimeter)/ Terrain Type	Prohibited Units
Rubble	+1 ¹	Wheeled, Naval vessel
Light building	+1 ²	VTOL, WIGE, Naval vessel
Medium building	+2 ²	VTOL, WIGE, Naval vessel
Heavy building	+3 ²	VTOL, WIGE, Naval vessel
Hardened building	+4 ²	VTOL, WIGE, Naval vessel
Additional movement actions		
Lateral Movement (Quad Mechs Only)	+1 (for any non-forward or non-backward movement)	
Facing change	2/hexside ⁵ (if using inches) 5/hexside ⁵ (if using centimeters)	
Dropping to the ground (*Mech only)	2 (if using inches) 5 (if using centimeters)	
Standing up (*Mech only)	4/attempt (if using inches) 10/attempt (if using centimeters)	

⁶If a wheeled Support Vehicle lacks the Off-Road Vehicle Chassis and Controls modification, then movement costs 1 additional MP per inch/centimeter.
⁷Wheeled or tracked Support Vehicles with the Amphibious Chassis and Controls modification can move through any water area on the surface at a cost of 2 MP per inch/centimeter (see p. 56, *TW*).
⁸IndustrialMechs can enter Depth 2 or greater water. However, the IndustrialMechs must mount a fuel cell, fission or fusion power plant and must mount the Environmental Sealing Chassis and Controls modification to do so. If the IndustrialMech does not meet those requirements, it is considered destroyed if it remains in Depth 2 or greater water (or prone in Depth 1 water) in the End Phase of the turn immediately following the turn in which the Mech entered it.
⁹Wheeled Support Vehicles with the Monocycle or Bicycle Chassis and Controls modification can enter light woods.
¹⁰Infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter light woods.
¹¹Infantry pays only 2 MP (except mechanized infantry, which pays 3 MP) to enter heavy woods.
¹²VTOL and WIGE vehicles can enter a woods area provided their elevation is higher than the level of the woods.
¹³This only applies to WIGE units entering an elevation higher than the unit's current elevation; see *Wing-In-Ground-Effect*, p. 55, *TW*, for rules governing entering elevations lower than the unit's current elevation.
¹⁴Infantry can enter water of Depth 1 or deeper if they have UMU MP.
¹⁵Ground vehicles moving on pavement may receive a movement bonus of 1 MP, regardless of whether the vehicle uses cruising or flanking movement. To gain the extra MP, the unit must begin its turn on a paved hex and continue to travel on pavement for the entire Movement Phase.

PILOTING/DRIVING SKILL ROLL TABLE

Situation	Modifier
Damage to Mech	
'Mech takes 20+ damage points in one phase	+1
'Mech fusion (or fission) 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
Unit's actions	
'Mech missed kick	0
'Mech made a successful charging attack	+2
'Mech made death from above attack	+4 ⁴
'Mech entered Depth 1 water area ⁵	-1
'Mech entered Depth 2 water area ⁵	0
'Mech entered Depth 3+ water area ⁵	+1
'Mech attempted to stand	0
'Mech entered rubble area ⁵	0
Running/flanking unit moved after facing change while on pavement	See <i>Skidding</i> , p. 62.

¹Only 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 the MechWarrior*, p. 69).
²The modifier for a destroyed gyro is +6 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.
³The modifier for a destroyed leg is +5 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.
⁴Automatic fall if death from above attack is unsuccessful.
⁵Ignore all modifiers from previous critical hits on that leg.

Situation	Modifier
Flanking VTOL/WIGE/Hover Vehicle moved after facing change	
'Mech jumped with damaged gyro or leg/foot/hip actuators	See <i>Sideslipping</i> , p. 67
'Mech jumped with destroyed leg	per Preexisting Damage, below
'Mech ran with damaged hip or gyro	per Preexisting Damage, below
Special cases	
MechWarrior trying to avoid damage when his Mech is falling	+1/inch fallen ⁶
IndustrialMech trying to avoid critical damage when falling	+1/inch fallen ⁶
IndustrialMech with ICE power plant fails PSR (see <i>Piloting/Driving Skill Rolls</i> , p. 59)	0 (no additional modifiers)
Four-legged Mech with intact legs	-2
Unintentional charge	+3
'Mech mounts small cockpit	+1
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

⁶Do not add modifiers for other damaged actuators in the leg.
⁷To avoid damage only. Does not result in a fall if Piloting Skill Roll fails. See *Buildings*, p. 166. Add an additional +1 modifier if unit is charging or being charged (in addition to the +2 modifier normally required in that situation).
⁸For the purposes of falling, a Mech only rises 1 inch (2.5cm) above the underlying terrain.
⁹Per 2 inches/5cm (or fraction thereof) of movement through this terrain type.

Situation	Modifier
Skidding Movement	
Inches (Centimeters) moved in turn	
0-5 (0-14)	-1
6-9 (15-24)	0
10-15 (25-39)	+1
16-21 (40-54)	+2
22-35 (55-89)	+4
36-49 (90-124)	+5
50+ (125+)	+6
Building Movement ⁷	
Unit entering/leaving light building section	0
Unit entering/leaving medium building section	+1
Unit entering/leaving heavy building section	+2
Unit entering/leaving hardened building section	+5
Inches (Centimeters) moved in turn	
1-5 (1-14)	0
6-9 (15-24)	+1
10-13 (25-34)	+2
14-19 (35-49)	+3
20-35 (50-89)	+4
36-49 (90-124)	+5
50+ (125+)	+6

ATTACK MODIFIERS TABLE

All Attacks: Weapons and Physical	Modifier
Attacker	
<i>Movement (modifiers are cumulative)*</i>	
Stationary	None
Walked/Cruised	+1
Ran/Flanked	+2
Jumped	+3
Prone	+2 (does not apply to four-legged 'Mechs)
Skidding	+1
Terrain (modifiers are cumulative)	
Light Woods	+1 per 2 inches (5cm) intervening; +1 if target in light woods
Heavy Woods	+2 per intervening hex; +2 if target in heavy woods
Water**	
Depth 1	+1; see <i>Partial Cover</i> , p. 10
Depth 2	Underwater units cannot target units that are not underwater (see <i>Terrain Modifiers</i> , p. 108).
Partial Cover	+1; see <i>Partial Cover</i> , p. 10
Target (modifiers are cumulative)	
Prone	-2 from base-to-base; +1 from all others†
Immobile	-4 (Includes Grounded DropShips)
Skidding	+2
Movement in Inches (Centimeters)	
Moved 0-5 (0-14)	0
Moved 6-9 (15-24)	+1
Moved 10-13 (25-34)	+2
Moved 14-19 (35-49)	+3
Moved 20-35 (50-89)	+4
Moved 36-49 (90-124)	+5
Moved 50+ (125+)	+6
Jumped/Airborne (non-aerospace units)	+1 additional
Battle armor unit (only applies to non-infantry attackers)	+1
Airborne VTOL unit	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker in attack/flight path)	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker not in attack/flight path)	+3

Weapon Attacks Only	Modifier
Attacker	
'Mech Damage	
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
Heat	
0-7	None
8-12	+1
13-16	+2
17-23	+3
24+	+4

Weapon Attacks Only	Modifier
Making indirect LRM attack	+1
Attacker is IndustrialMech***	+1
Grounded DropShip	-2
Range and Terrain	
Range	
Short	None
Medium	+2
Long	+4
Minimum range	[Minimum] - [Target Range / 2, round up] +1 (see <i>Minimum Range Modifier</i> , p. 107)
Each Intervening Section/Level between Attacker and Target (as well as target's section) in same multi-section building	+1 per section/level (maximum +3); see <i>Combat Within Buildings</i> , p. 175
Target	
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2
Large Support Vehicle or Grounded Small Craft	-1

Physical Attacks Only	Modifier
Attacker	
'Mech Damage	
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
Target	
Infantry	+3 to kicking and death from above attacks
Large Support Vehicle or Grounded Small Craft	-2
Other Modifiers	
Charging attack: Modify for relative Piloting Skills (see p. 40)	
Death from above attack: Modify for relative Piloting Skills (see p. 40)	

*Does not apply to infantry units.

**See *Terrain Modifiers*, p. 108, for exceptions.

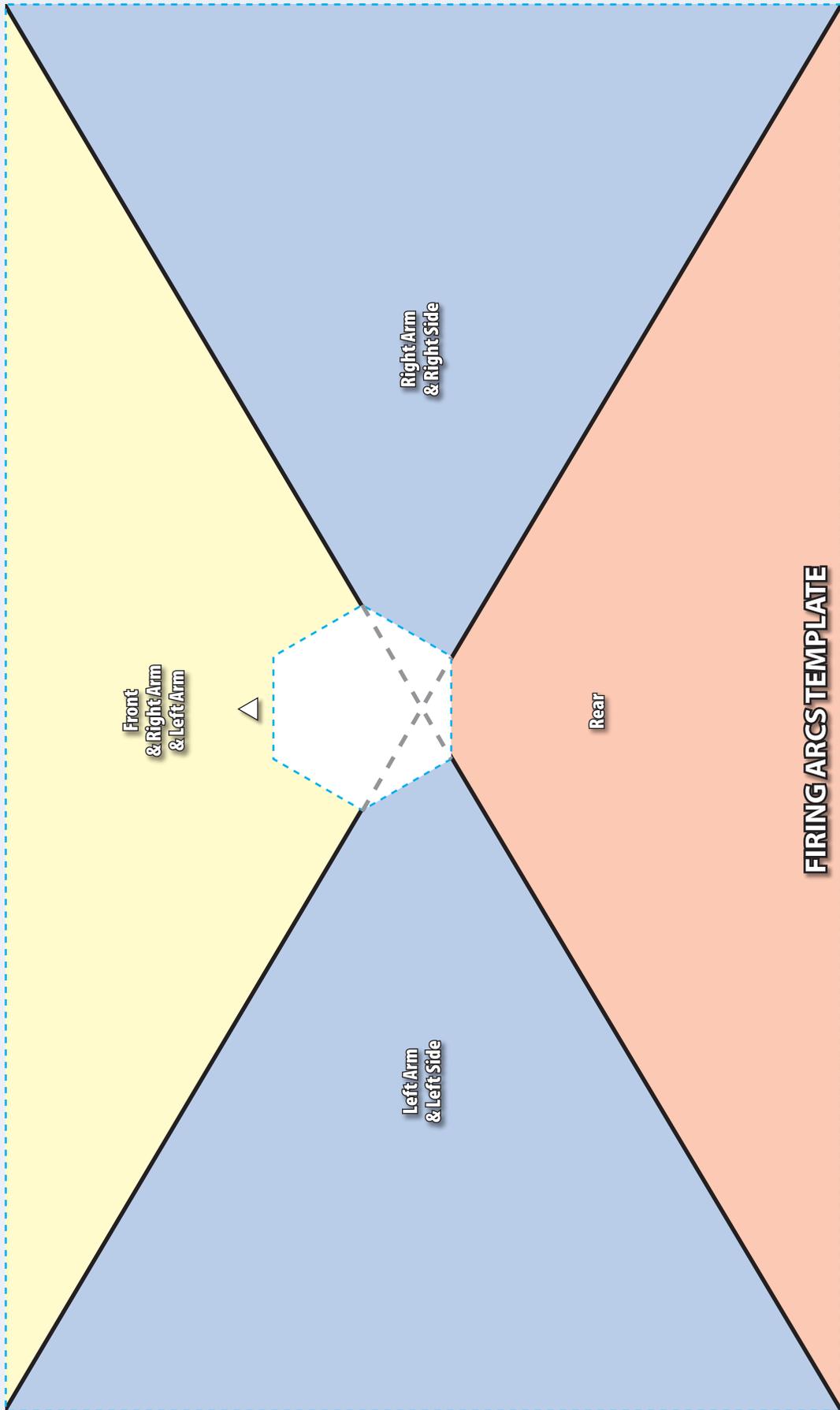
***If the IndustrialMech mounts advanced fire control, this modifier does not apply.

† Does not necessarily apply to Four-legged 'Mechs (see *Firing When Down*, p. 113).

CONVENTIONAL INFANTRY RANGE MODIFIER TABLE

Weapon Type	Range in Inches/Centimeters (To-Hit Modifier)									
	Base - to-Base	0-2/ 0-5	3-4/ 6-10	5-6/ 11-15	7-8/ 16-20	9-10/ 21-25	11-12/ 26-30	13-14/ 31-35	15-16/ 36-40	17-18/ 41-45
Rifle, Ballistic	-2	0	+2	+4	—	—	—	—	—	—
Rifle, Energy	-2	0	0	+2	+2	+4	+4	—	—	—
Machine Gun	-2	0	+2	+4	—	—	—	—	—	—
SRM	-1	0	0	+2	+2	+4	+4	—	—	—
LRM	-1	0	0	0	+2	+2	+2	+4	+4	+4
Flamer	-1	0	+2	+4	—	—	—	—	—	—

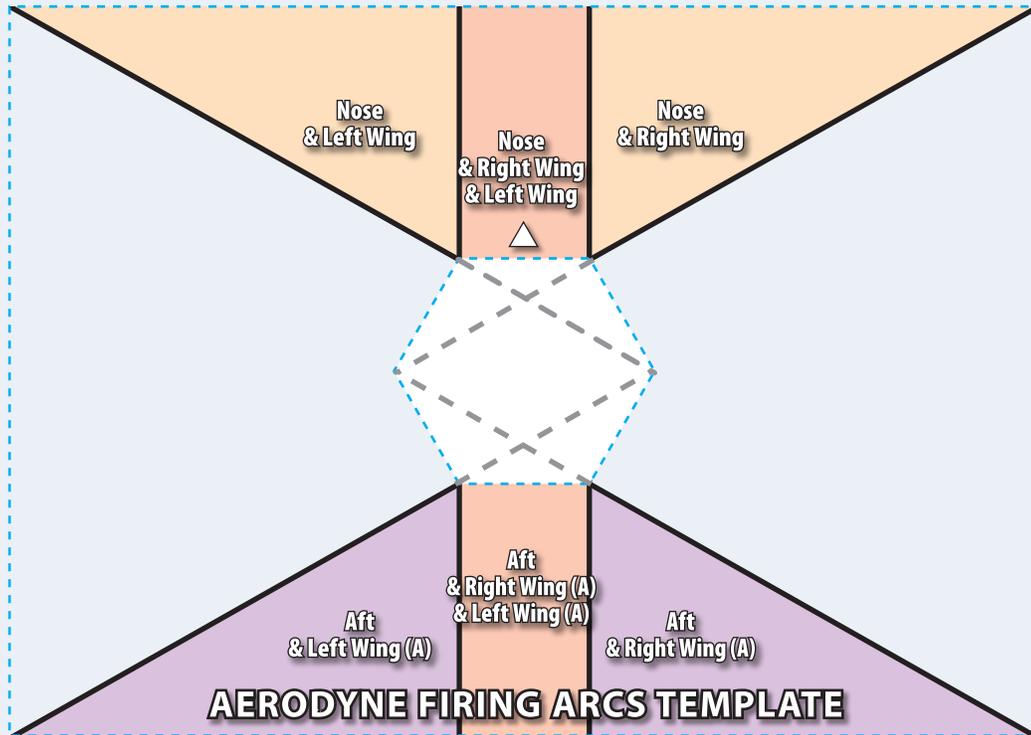
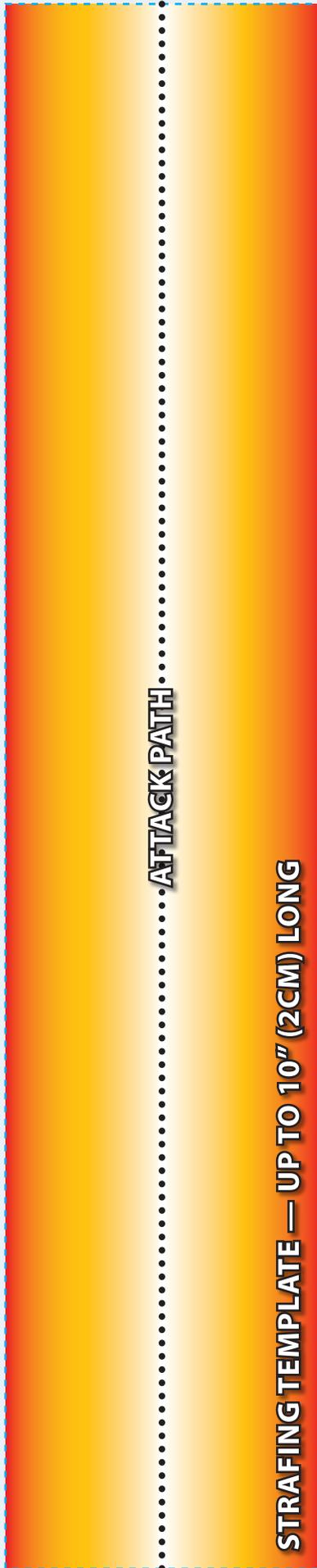
TEMPLATES



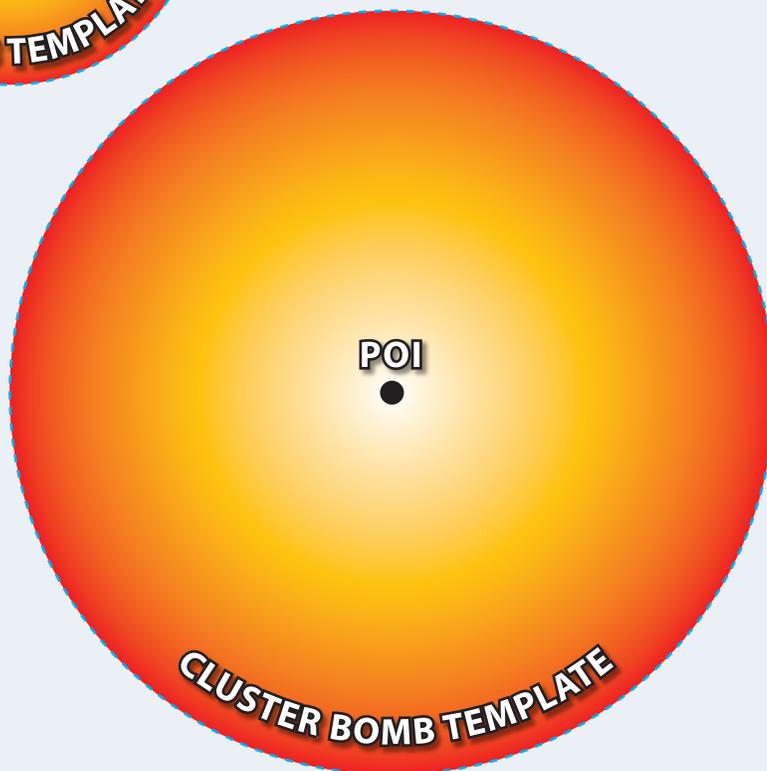
FIRING ARCS TEMPLATE

TEMPLATES

TEMPLATES



Instructions: Cut along the dotted blue lines. To use the Firing Arcs Template, cut out the hex in the center along the dotted blue lines; position the template over the miniature, aligning the template's front hexside (designated by the arrow) to the miniature's front hexside.



TEMPLATES