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TABLES

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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
Direct-Fire Ballistic Weapons†††											
Autocannon/2	DB, S	1	2	4	1–8	9–16	17–24	45	2	Long	0
Autocannon/5	DB, S	1	5	3	1–6	7–12	13–18	20	5	Medium	0
Autocannon/10	DB, S	3	10	0	1–5	6–10	11–15	10	10	Medium	0
Autocannon/20	DB, S	7	20	0	1–3	4–6	7–9	5	20	Short	0
Light Gauss Rifle	DB, X	1	8	3	1–8	9–17	18–25	16	8	Extreme	0
Gauss Rifle	DB, X	1	15	2	1–7	8–15	16–22	8	15	Long	0
Heavy Gauss Rifle	DB, X, V	2	25/20/10	4	1–6	7–13	14–20	4	25/20/10	Long	0
LB 2-X AC	DB, C/S/F‡‡	1	2	4	1–9	10–18	19–27	45	2	Extreme	0, –1†
LB 5-X AC	DB, C/S/F‡‡	1	5	3	1–7	8–14	15–21	20	3	Long	0, –1†
LB 10-X AC	DB, C/S/F‡‡	2	10	0	1–6	7–12	13–18	10	6	Medium	0, –1†
LB 20-X AC	DB, C/S/F‡‡	6	20	0	1–4	5–8	9–12	5	12	Medium	0, –1†
Light AC/2	DB, S	1	2	0	1–6	7–12	13–18	45	2	Medium	0
Light AC/5	DB, S	1	5	0	1–5	6–10	11–15	20	5	Medium	0
Light Machine Gun	DB, AI§	0	1	0	1–2	3–4	5–6	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	1	2	3	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	1	2	—	100	3	Short	0
Nail/Rivet Gun	DB, AI**	0	0**	0	1	—	—	300	0**	—	0
Rotary AC/2	DB, R/C	1/Sht	2/Sht, R6	0	1–6	7–12	13–18	45	8	Medium	0
Rotary AC/5	DB, R/C	1/Sht	5/Sht, R6	0	1–5	6–10	11–15	20	20	Medium	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	3	1–8	9–17	18–25	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	2	1–6	7–13	14–20	20	7	Long	0
Ultra AC/10	DB, R/C	4/Sht	10/Sht, R2	0	1–6	7–12	13–18	10	15	Medium	0
Ultra AC/20	DB, R/C	8/Sht	20/Sht, R2	0	1–3	4–7	8–10	5	30	Medium	0
Direct-Fire Energy Weapons											
ER Large Laser	DE	12	8	0	1–7	8–14	15–19	—	8	Long	0
ER Medium Laser	DE	5	5	0	1–4	5–8	9–12	—	5	Medium	0
ER Small Laser	DE	2	3	0	1–2	3–4	5	—	3	Short	0
Flamer	DE, H, AI§	3	2§§	0	1	2	3	—	2§§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	2§§	0	1	2	3	20	2§§	Short	0
Large Laser	DE	8	8	0	1–5	6–10	11–15	—	8	Medium	0
Medium Laser	DE	3	5	0	1–3	4–6	7–9	—	5	Short	0
Small Laser	DE	1	3	0	1	2	3	—	3	Short	0
Plasma Rifle	DE, H, AI	10	10**	0	1–5	6–10	11–15	10	10**	Medium	0
Light PPC	DE	5	5	3	1–6	7–12	13–18	—	5	Medium	0
PPC	DE	10	10	3	1–6	7–12	13–18	—	10	Medium	0
Heavy PPC	DE	15	15	3	1–6	7–12	13–18	—	15	Medium	0
ER PPC	DE	15	10	0	1–7	8–14	15–23	—	10	Long	0
Snub-Nose PPC	DE, V	10	10/8/5	0	1–9	10–13	14–15	—	10/8	Medium	0
Pulse Weapons											
Large Pulse Laser	P	10	9	0	1–3	4–7	8–10	—	9	Medium	–2
Medium Pulse Laser	P	4	6	0	1–2	3–4	5–6	—	6	Short	–2
Small Pulse Laser	P, AI§	2	3	0	1	2	3	—	3	Short	–2
Missile Weapons‡‡‡											
LRM 5	M, C, S	2	1/Msl, C5/5	6	1–7	8–14	15–21	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	6	1–7	8–14	15–21	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	6	1–7	8–14	15–21	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	6	1–7	8–14	15–21	6	12/16	Long	0
MML 3**	M, C, S										
LRM ammo	—	2	1/Msl, C3/3	6	1–7	8–14	15–21	40	2/2	Long	0
SRM ammo	—	2	2/Msl, C2/3	0	1–3	4–6	7–9	33	4/4	Short	0
MML 5**	M, C, S										
LRM ammo	—	3	1/Msl, C5/5	6	1–7	8–14	15–21	24	3/4	Long	0
SRM ammo	—	3	2/Msl, C2/5	0	1–3	4–6	7–9	20	6/8	Short	0
MML 7**	M, C, S										
LRM ammo	—	4	1/Msl, C5/7	6	1–7	8–14	15–21	17	4/6	Long	0
SRM ammo	—	4	2/Msl, C2/7	0	1–3	4–6	7–9	14	8/12	Short	0
MML 9**	M, C, S										
LRM ammo	—	5	1/Msl, C5/9	6	1–7	8–14	15–21	13	5/7	Long	0
SRM ammo	—	5	2/Msl, C2/9	0	1–3	4–6	7–9	11	10/14	Short	0
MRM 10	M, C	4	1/Msl, C5/10	0	1–3	4–8	9–15	24	6	Medium	+1
MRM 20	M, C	6	1/Msl, C5/20	0	1–3	4–8	9–15	12	12	Medium	+1
MRM 30	M, C	10	1/Msl, C5/30	0	1–3	4–8	9–15	8	18	Medium	+1
MRM 40	M, C	12	1/Msl, C5/40	0	1–3	4–8	9–15	6	24	Medium	+1
Narc Missile Beacon	M, E, S	0	**	0	1–3	4–6	7–9	6	**	**	0
Improved Narc Launcher	M, E, S	0	**	0	1–4	5–9	10–15	4	**	**	0
Rocket Launcher 10	M, C, OS	3	1/Msl, C5/10	0	1–5	6–11	12–18	OS	6	Medium	+1
Rocket Launcher 15	M, C, OS	4	1/Msl, C5/15	0	1–4	5–9	10–15	OS	9	Medium	+1
Rocket Launcher 20	M, C, OS	5	1/Msl, C5/20	0	1–3	4–7	8–12	OS	12	Medium	+1
SRM 2	M, C, S	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	2/4	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	4	Short	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	8	Short	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	12	Short	0
Equipment											
A-Pod	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
B-Pods	PD, OS, AI	0	**	—	—	—	—	OS	**	—	—
Anti-Missile System	PD	1	**	—	—	—	—	12	**	—	—
Beagle Active Probe	E	—	—	—	—	—	4	—	—	**	—
Guardian ECM Suite	E	—	—	—	—	—	6	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	**	0	1–5	6–9	10–15	—	**	**	—

*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	4	1–10	11–20	21–30	45	1	Extreme	0, –1†
LB 5-X AC	DB, C/S/F‡‡	1	5	3	1–8	9–15	16–24	20	3	Medium	0, –1†
LB 10-X AC	DB, C/S/F‡‡	2	10	0	1–6	7–12	13–18	10	6	Medium	0, –1†
LB 20-X AC	DB, C/S/F‡‡	6	20	0	1–4	5–8	9–12	5	12	Medium	0, –1†
AP Gauss Rifle	DB, X, AI§	1	3	0	1–3	4–6	7–9	40	3	Short	0
Gauss Rifle	DB, X	1	15	2	1–7	8–15	16–22	8	15	Long	0
HAG 20	DB, X, C, F	4	C5/20**	2	1–8	9–16	17–24	6	16/12/12	Long	0
HAG 30	DB, X, C, F	6	C5/30**	2	1–8	9–16	17–24	4	24/18/18	Long	0
HAG 40	DB, X, C, F	8	C5/40**	2	1–8	9–16	17–24	3	32/24/24	Long	0
Light Machine Gun	DB, AI§	0	1	0	1–2	3–4	5–6	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	1	2	3	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	1	2	—	100	3	Short	0
Nail/Rivet Gun	DB, AI	0	0**	0	1	—	—	300	0**	—	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	2	1–9	10–18	19–27	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	0	1–7	8–14	15–21	20	7	Long	0
Ultra AC/10	DB, R/C	3/Sht	10/Sht, R2	0	1–6	7–12	13–18	10	15	Medium	0
Ultra AC/20	DB, R/C	7/Sht	20/Sht, R2	0	1–4	5–8	9–12	5	30	Medium	0
Direct-Fire Energy Weapons											
ER Large Laser	DE	12	10	0	1–8	9–15	16–25	—	10	Extreme	0
ER Medium Laser	DE	5	7	0	1–5	6–10	11–15	—	7	Medium	0
ER Small Laser	DE	2	5	0	1–2	3–4	5–6	—	5	Short	0
ER Micro Laser	DE	1	2	0	1	2	3–4	—	2	Short	0
Flamer	DE, H, AI§	3	2§§	0	1	2	3	—	2§§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	2§§	0	1	2	3	20	2§§	Short	0
Heavy Large Laser	DE	18	16	0	1–5	6–10	11–15	—	16	Medium	+1
Heavy Medium Laser	DE	7	10	0	1–3	4–6	7–9	—	10	Short	+1
Heavy Small Laser	DE	3	6	0	1	2	3	—	6	Short	+1
Plasma Cannon	DE, H, AI	7	0**	0	1–6	7–12	13–18	10	0**	Medium	0
ER PPC	DE	15	15	0	1–7	8–14	15–23	—	15	Long	0
Pulse Weapons											
Large Pulse Laser	P	10	10	0	1–6	7–14	15–20	—	10	Long	–2
Medium Pulse Laser	P	4	7	0	1–4	5–8	9–12	—	7	Medium	–2
Small Pulse Laser	P, AI§	2	3	0	1–2	3–4	5–6	—	3	Short	–2
Micro Pulse Laser	P, AI§	1	3	0	1	2	3	—	3	Short	–2
Missile Weapons‡‡‡											
ATM 3**	M, C, S	2	2/Msl, C5/3	4	1–5	6–10	11–15	20	4	Medium	0
ATM 6**	M, C, S	4	2/Msl, C5/6	4	1–5	6–10	11–15	10	8	Medium	0
ATM 9**	M, C, S	6	2/Msl, C5/9	4	1–5	6–10	11–15	7	14	Medium	0
ATM 12**	M, C, S	8	2/Msl, C5/12	4	1–5	6–10	11–15	5	20	Medium	0
ATM ER Ammo	—	**	1/Msl, C5/**	4	1–9	10–18	10–27	**	§§§	Extreme	0
ATM HE Ammo	—	**	3/Msl, C5/**	0	1–3	4–6	7–9	**	§§§	Short	0
Narc Missile Beacon	M, E, S	0	**	0	1–4	5–8	9–12	6	**	**	0
LRM 5	M, C, S	2	1/Msl, C5/5	0	1–7	8–14	15–21	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	0	1–7	8–14	15–21	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	0	1–7	8–14	15–21	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	0	1–7	8–14	15–21	6	12/16	Long	0
SRM 2	M, C, S	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	2/5	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	1–4	5–8	9–12	50	4	Medium	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	1–4	5–8	9–12	25	8	Medium	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	1–4	5–8	9–12	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	—	—	—	—	—	5	—	—	**	—
Light Active Probe	E	—	—	—	—	—	3	—	—	**	—
ECM Suite	E	—	—	—	—	—	6	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	—	0	1–5	6–9	10–15	—	—	**	—
Light TAG	E	0	—	0	1–3	4–6	7–9	—	—	**	—

*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 the 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.

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

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.

ADDITIONAL INNER SPHERE WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
Direct-Fire Ballistic Weapons							
"Firedrake" Support Needler	DB, AI‡‡	1	0	1	2	3	0
"David" Light Gauss Rifle	DB	1	0	1–3	4–5	6–8	0
"King David" Light Gauss Rifle	DB	1	0	1–3	4–6	7–9	0
Grand Mauler Gauss Cannon	DB	1	0	1–2	3–4	5	0
Magshot Gauss Rifle	DB	2	0	1–3	4–6	7–9	0
Tsunami Gauss Rifle	DB	1	0	1–2	3–4	5	0
Micro Grenade Launcher	DB, AI§	1	0	1	2	—	0
Grenade Launcher	DB, AI§	1	0	1	2	3	0
Light Mortar	DB, AI§	3	1	1	2	3	0
Heavy Mortar	DB, AI§	3	2	1-2	3-4	5-6	0
Light Recoilless Rifle	DB, AI§	2	0	1–2	3–4	5–6	0
Medium Recoilless Rifle	DB, AI§	3	0	1–2	3–4	5–6	0
Heavy Recoilless Rifle	DB, AI§	3	0	1–3	4–5	6–7	0
Direct-Fire Energy Weapons							
Flamer	DE, H, AI§	2§§	0	1	2	3	0
Man-Portable Plasma Rifle	DE	2	0	1–2	3–4	5–6	0
Support PPC	DE	2	0	1–2	3–5	6–7	0
Missile Weapons							
Compact Narc	M, E	**	0	1–2	3–4	5	0
LRM 1	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 2	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 3	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 4	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 5	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
MRM 1	M, C, S	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 2	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 3	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 4	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 5	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
Rocket Launcher 1	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 2	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 3	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 4	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 5	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
SRM 1	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 2	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 3	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 4	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 5	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 6	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
Equipment							
Light TAG	E	—	0	1–3	4–6	7–9	—

ADDITIONAL CLAN WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
Direct-Fire Ballistic Weapons							
"Bearhunter" Superheavy AC	DB, AI‡‡	3	0	0	1	2	+1
Heavy Grenade Launcher	DB, C, AI§	1	0	1	2	3	0
Light Recoilless Rifle	DB, AI§	2	0	1–2	3–4	4–6	0
Medium Recoilless Rifle	DB, AI§	3	0	1–2	3–4	4–6	0
Heavy Recoilless Rifle	DB, AI§	3	0	1–3	4–5	6–7	0
Direct-Fire Energy Weapons							
Flamer	DE, H, AI§	2§§	0	1	2	3	0
Support PPC	DE	2	0	1–2	3–5	6–7	0
Missile Weapons							
Compact Narc	M, E	**	0	1–2	3–4	5	0
LRM 1	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 2	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 3	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 4	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 5	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
SRM 1	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 2	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 3	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 4	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 5	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 6	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
Advanced SRM 1†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 2†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 3†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 4†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 5†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 6†	M, C	1/Msl, C2/‡	0	1–4	5–8	9–12	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 Type	MP Cost Per Hex/Terrain Cost	Prohibited Units
Cost to Enter Any Hex	1	
Terrain Cost When Entering Any New Hex		
Clear	+0[6]	Naval vessel
Paved/Bridge	+0	Naval vessel
Road	+0[3]	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)		

Movement Action/ Terrain Type	MP Cost Per Hex/Terrain Cost	Prohibited Units
1 level	+1 ('Mechs, VTOLs, subs, ProtoMechs) +2 (infantry, ground vehicles)	—
2 levels	+2 ('Mechs, VTOLs, subs)	Infantry, Ground Vehicles, WiGE[13], ProtoMechs
3+ levels	+1/level (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		
Facing change	1/hexside[5]	
Dropping to the ground ('Mech only)	1	
Standing up ('Mech only)	2/attempt	

[1] MP cost to move along the bottom of a water hex; Piloting Skill Roll required 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 hex.

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

[4] Hovercraft may enter all water hexes along the surface and may enter such hexes 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 hex.

[7] Wheeled or tracked Support Vehicles with the Amphibious Chassis and Controls modification can move through any water hex on the surface at a cost of 2 MP (see p. 56).

[8] IndustrialMechs *can* enter a Depth 2 or greater water hex. However, the IndustrialMechs must mount either a fuel cells, 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 they remain in a Depth 2 or greater water hex (or prone in a Depth 1 water hex) in the End Phase of the turn immediately following the turn in which they entered it.

[9] Wheeled Support Vehicles with either the Monocycle or Bicycle Chassis and Controls modification can enter a light woods hex.

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

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

[12] VTOL and WiGE vehicles can enter a woods hex provided their elevation is higher than the level of the woods in the hex.

[13] This only applies to WiGE units entering a hex whose level is higher than the unit's current hex; see *Wing-In-Ground-Effect*, p. 55, for rules governing entering hexes whose level is lower than the unit's current hex.

[14] Infantry can enter a water hex of Depth 1 or deeper if they are noted as having UMU MPs.

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 hex	−1
'Mech entered Depth 2 water hex	0
'Mech entered Depth 3+ water hex	+1
'Mech attempted to stand	0
'Mech entered rubble hex	0
Running/flanking unit moved after facing change while on pavement	See *Skidding*, p. 62.

Situation	Modifier
Flanking VTOL/WiGE/Hover Vehicle moved after facing change	See *Sideslipping*, p. 67
'Mech jumped with damaged gyro or leg/foot/hip actuators	per Preexisting Damage, below
'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/level fallen[8]
IndustrialMech trying to avoid critical damage when falling	+1/level fallen[8]
IndustrialMech with ICE power plant fails PSR (see *Piloting/Driving Skill Rolls*, 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]

Situation	Modifier
Skidding Movement	
Hexes moved in turn	
0–2	−1
3–4	0
5–7	+1
8–10	+2
11–17	+4
18–24	+5
25+	+6
Building Movement[7]	
Unit entering/leaving light building hex	0
Unit entering/leaving medium building hex	+1
Unit entering/leaving heavy building hex	+2
Unit entering/leaving hardened building hex	+5
Hexes moved in turn	
1–2	0
3–4	+1
5–6	+2
7–9	+3
10–17	+4
18–24	+5
25+	+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 the MechWarrior*, p. 69).

[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.

[7] To 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).

[8] For the purposes of falling, a 'Mech only rises 1 level above the underlying terrain.

FACING AFTER FALL TABLE

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

CLUSTER HITS TABLE

Die Roll (2D6)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
2	1	1	1	1	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
3	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
4	1	1	2	2	3	3	4	4	4	5	5	5	6	6	7	7	8	8	9	9	9	10	10	10	11	11	11	12	12	18
5	1	2	2	3	3	4	4	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
6	1	2	2	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
7	1	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
8	2	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
9	2	2	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
10	2	3	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
11	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
12	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40

Weapon Size header spans columns 2–40.

ATTACK MODIFIERS TABLE

All Attacks: Weapons and Physical	Modifier
Attacker	
Movement (modifiers are cumulative)*	
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 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*, p. 102
Depth 2	Underwater units cannot target units that are not underwater (see *Terrain Modifiers*, p. 108).
Partial Cover	+1; see *Partial Cover*, p. 102
Target *(modifiers are cumulative)*	
Prone	−2 from adjacent hex; +1 from all others†
Immobile	−4 (Includes Grounded DropShips)
Skidding	+2
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/Airborne (non-aerospace units)	+1 additional
Battle armor unit (only applies to non-infantry attackers)	+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] +1 (see *Minimum Range Modifier*, p. 107)
Each Intervening Hex/Level between Attacker and Target (as well as target's hex) in same multi-hex building	+1 per hex/level (maximum +3); see *Combat Within Buildings*, 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).

'MECH HIT LOCATION TABLE

Die Roll (2D6)	Biped (Four-legged)		
	Left Side	Front/Rear	Right Side
2*	Left Torso [critical]	Center Torso [critical]	Right Torso [critical]
3	Left Leg (Left Rear Leg)	Right Arm (Right Front Leg)	Right Leg (Right Rear Leg)
4	Left Arm (Left Front Leg)	Right Arm (Right Front Leg)	Right Arm (Right Front Leg)
5	Left Arm (Left Front Leg)	Right Leg (Right Rear Leg)	Right Arm (Right Front Leg)
6	Left Leg (Left Rear Leg)	Right Torso	Right Leg (Right Rear Leg)
7	Left Torso	Center Torso	Right Torso
8	Center Torso	Left Torso	Center Torso
9	Right Torso	Left Leg (Left Rear Leg)	Left Torso
10	Right Arm (Right Front Leg)	Left Arm (Left Front Leg)	Left Arm (Left Front Leg)
11	Right Leg (Right Rear Leg)	Left Arm (Left Front Leg)	Left Leg (Left Rear 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. 124.

PHYSICAL ATTACK MODIFIERS TABLE

Attack Type	Modifier
Charging	+0*
Clubbing	–1
Death From Above (DFA)	+0*†
Kicking	–2
Punching	+0
Pushing	–1

*Whenever one unit charges or DFAs another, compare their Piloting Skill Ratings and use the difference between the two skill ratings as a modifier to the to-hit number. If the target's skill rating is lower, add the modifier to the to-hit number. If the attacker's Piloting Skill Rating is lower, subtract the modifier from the to-hit number.

†All the normal attack modifiers apply, including the attacker's jumping movement, but the roll is not modified for terrain. For DFA attacks against infantry targets, apply an additional +3 to-hit modifier (because infantry units have no Piloting Skill, neither player needs to add a modifier for relative Piloting Skill Rating).

TERRAIN FACTOR AND CONVERSION TABLE

Terrain Factor	Former Terrain	New Terrain
Heavy Woods: 90	Heavy Woods	Light Woods
Light Woods: 50	Light Woods	Rough
Rough: 0	All others	No change

DETERMINING CRITICAL HITS TABLE

Die 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.

†When rolling for damage inflicted on an IndustrialMech, add +2 to the dice roll result. Treat a modified result of 13 as a 12. On a modified result of 14, the IndustrialMech's head or limb is blown off. If the hit struck a torso location, make four critical hit rolls.

'MECH PUNCH LOCATION TABLE

D6 Roll Result	Biped			D6 Roll Result	Four-Legged		
	Left Side	Front/Rear	Right Side		Left Side	Front/Rear	Right Side
1	Left Torso	Left Arm	Right Torso	1	Left Torso	Left Front Leg/ Left Rear Leg	Right Torso
2	Left Torso	Left Torso	Right Torso	2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso	3	Center Torso	Center Torso	Center Torso
4	Left Arm	Right torso	Right Arm	4	Left Front Leg	Right Torso	Right Front Leg
5	Left Arm	Right Arm	Right Arm	5	Left Rear Leg	Right Front Leg/ Right Rear Leg	Right Rear Leg
6	Head	Head	Head	6	Head	Head	Head

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, ProtoMech, Vehicle or infantry 1 level higher	Punch, Club, Physical Weapon
Prone 'Mech, ProtoMech, Vehicle or infantry 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.

UNIT HEIGHTS TABLE

Type	Heights*
'Mech	2 levels**
ProtoMechs, vehicles, infantry and fighters	1 level
Submarines	1 depth***
Large Support Vehicles and small craft	2 levels
Aerodyne DropShips	5 levels
Spheroid DropShips	10 levels

*A unit's height levels (or elevations, if airborne) must be included in the level of the underlying hex for determining a unit's total height; the height of aerospace units for LOS purposes is irrelevant while airborne.

**Prone 'Mechs rise one level above the level of the underlying hex.

***A vessel on the surface rises 1 level above the level of the hex.

'MECH KICK LOCATION TABLE

D6 Roll Result	Biped		
	Left Side	Front/Rear	Right Side
1–3	Left Leg	Right Leg	Right Leg
4–6	Left Leg	Right Leg	Right Leg
	Four-legged		
1–3	Left Front Leg	Right Front Leg/ Right Rear Leg	Right Front Leg
4-6	Left Rear Leg	Left Front Leg/ Left Rear Leg	Right Rear Leg

HEAT POINT TABLE

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (minimum of 3 per turn)
Attempting to stand	+1 per attempt
Weapons fire	Per Weapons and Equipment Tables, p. 303.
Heat-Causing Weapons	Per Weapons and Equipment Tables, p. 303, or Other Combat Weapons and Equipment, p. 129
Heat sink	–1 per operational heat sink; –2 per operational double heat sink –1 additional per operational single heat sink under water (maximum 6 points) –2 additional per operational double heat sink underwater (maximum 6 points)
First engine hit	+5 per turn
2nd engine hit	+10 (total) per turn

PHYSICAL WEAPON ATTACKS TABLE

Weapon Type	To-Hit Modifier	Damage Value	To-Hit Location Table	Firing Arc**	Affected by TSM	To-Hit/Damage Value Affected by Actuator Damage
Backhoe	+1	6	Standard	Arm	Yes	Yes/Yes
Chainsaw	+0	5	Standard	Arm	No	Yes/No
Combine	–2	3†	Standard	Arm	No	Yes/No
Dual Saw	+0	7	Standard	Arm	No	Yes/No
Hatchet	–1	1/per 5 tons††	Standard*	Arm	Yes	Yes/Yes
Heavy-Duty Pile Driver	+2	9	Standard	Forward	No	Yes/No
Mining Drill	–1	4	Standard	Arm	No	Yes/No
Retractable Blade	–2	1/per 10 tons‡	Standard*	Arm	Yes	Yes§§/Yes
Rock Cutter	+1	5	Standard	Arm	No	Yes/No
Spot Welder	+0	5‡‡	Punch	Arm	No	Yes/No
Sword	–2	1/per 10 tons +1‡	Standard*	Arm	Yes	Yes/Yes
Wrecking Ball	+1	8§	Standard	Forward	No	Yes/No

*Roll normally on the 'Mech Hit Location Table. Alternatively, when the controlling player announces the physical weapon attack, he may also announce that he will use the Punch or Kick Hit Location Table to resolve damage if the attack succeeds, in which case apply a +4 modifier in addition to all the standard modifiers, including the standard to-hit modifier for the weapon (this modifier does not apply when attacking on a Punch/Kick Location Table due to attacks from different levels; see p. 150)

**Forward: the target of a physical weapon attack can only be in the 'Mech's forward arc. Arm: the target of a physical weapon attack can be in the 'Mech's forward arc or in the side arc corresponding to the arm in which the equipment is mounted.

†1D6 against conventional infantry.

††A successful attack does 1 point of damage for every 5 tons that the attacking 'Mech weighs.

‡A successful attack does 1 point of damage for every 10 tons that the attacking 'Mech weighs (round up); +1 to that Damage Value for a sword.

‡‡Whenever the spot welder is used in a physical weapon attack, it generates 2 points of heat.

§ On any to-hit roll result of 2, the ball has successfully delivered a self-inflicted hit against the attacker rather than the target. Such a self-inflicted strike causes half the normal damage and is resolved using the Front Hit Location Table. Immediately after sustaining damage from a self-inflicted wrecking ball hit, the player must make a Piloting Skill Roll to avoid falling from being thrown off-balance by this critical failure.

§§Damage to the hand actuator (or the absence of a hand actuator) in the arm mounting this equipment does not modify the to-hit number of the attack.

LARGE GROUND SUPPORT VEHICLE HIT LOCATION TABLE
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	Attack Direction			
2D6 Roll	**Front**	**Rear**	**Front Side§**	**Rear Side§**
2*	Front (critical)	Rear (critical)	Side (critical)	Side (critical)
3	Right Side†	Left Side†	Front†	Rear†
4	Front†	Rear†	Side†	Side†
5	Front†	Rear†	Side	Side
6	Front	Rear	Side	Side
7	Front	Rear	Side	Side
8	Front	Rear	Side (critical)*	Side (critical)*
9	Front†	Rear†	Side†	Side†
10	Turret	Turret	Turret	Turret
11	Turret	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit. For each such roll result, apply damage normally to the armor in that section. The attacking player then rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on this roll may inflict a critical hit against the turret. If the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.
†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, p. 193 (applying damage at the end of the phase in which the damage takes effect).
§If the attack hits the front right side, all Front Side results strike the front right side armor, while Rear Side results strike the rear right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

PROTOMECH HIT LOCATION TABLE
PAGE 185

2D6 Result	Hit Location
2	Main Gun
3	* Near Miss
4	Right Arm
5	Legs
6	Torso
7	Torso
8	Torso
9	Legs
10	Left Arm
11	* Near Miss
12	Head

*A result of 3 or 11 inflicts no damage on the target. In the case of a kick attack from a 'Mech, a Near Miss on the ProtoMech Hit Location Table does not force the attacking 'Mech to make a Piloting Skill Roll.

SPECIAL PROTOMECH HIT LOCATION TABLE
PAGE 185

2D6 Result	Hit Location*
2	Main Gun
3	Legs
4	Legs
5	Right Arm
6	Torso
7	Torso
8	Torso
9	Left Arm
10	Legs
11	Legs
12	Head

*Use Special ProtoMech Hit Location Table when determining damage under the following circumstances: area-affect weapons, building collapse, crashing aerospace units, falling and collisions with skidding units.

GROUND COMBAT VEHICLE HIT LOCATION TABLE
PAGE 193

	Attack Direction		
2D6 Roll	**Front**	**Rear**	**Side§**
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side†	Left Side†	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on the Ground Combat Vehicles Hit Location Table may inflict a critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.
†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, at right. Apply damage at the end of the phase in which the damage takes effect.
§Side hits strike the side as indicated by the attack direction. For example, if an attack hits the right side, all Side results strike the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

MOTIVE SYSTEM DAMAGE TABLE
PAGE 193

2D6 Roll	Effect*
2–5	No effect
6–7	Minor damage; +1 modifier to all Driving Skill Rolls
8–9	Moderate damage; –1 Cruising MP, +2 modifier to all Driving Skill Rolls
10–11	Heavy damage; only half Cruising MP (round fractions up), +3 modifier to all Driving Skill Rolls
12+	Major damage; no movement for the rest of the game. Vehicle is immobile.

Attack Direction Modifier:

Hit from rear	+1
Hit from the sides	+2

Vehicle Type Modifiers:

Tracked, Naval	+0
Wheeled	+2
Hovercraft, Hydrofoil	+3
WiGE	+4

*All movement and Driving Skill Roll penalties are cumulative. However, each Driving Skill Roll modifier can only be applied once. If a unit's Cruising MP is reduced to 0, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the Weapon Attack Phase and the first unit inflicts motive system damage and rolls a 12, the –4 immobile target modifier would not apply for the second attacker. However, the –4 modifier would take effect during the Physical Attack Phase. If a hover vehicle is rendered immobile while over a Depth 1 or deeper water hex, it sinks and is destroyed.

PHYSICAL ATTACKS AGAINST VTOL VEHICLES TABLE
PAGE 198

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

VTOL COMBAT VEHICLE HIT LOCATION TABLE
PAGE 196

2D6 Roll	Front	Rear	Side
2*	Front (critical)	Rear (critical)	Side (critical)
3	Rotors†	Rotors†	Rotors†
4	Rotors†	Rotors†	Rotors†
5	Right Side	Left Side	Front
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side	Right Side	Rear
10	Rotors†	Rotors†	Rotors†
11	Rotors†	Rotors†	Rotors†
12*	Rotors (critical)†	Rotors (critical)†	Rotors (critical)†

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit on the VTOL. For each such attack, apply damage normally to the armor in that section. The attacking player then immediately rolls once on the VTOL Combat Vehicle Critical Hits Table, below.
†Damage Value / 10 (round up); see Rotor Hits, p. 197. Additionally, damage to the rotors slows down the VTOL. Each hit reduces the VTOL's Cruising MP by 1, meaning that the controlling player must also recalculate Flank MP; multiply the new Cruising MP by 1.5 and round up. As with all damage, such movement penalties do not apply until the end of the phase in which the damage occurred.

GROUND COMBAT VEHICLE CRITICAL HITS TABLE
PAGE 194

	Hit Location			
2D6 Roll	**Front**	**Side**	**Rear**	**Turret**
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Driver Hit	Cargo/Infantry Hit	Weapon Malfunction	Stabilizer
7	Weapon Malfunction	Weapon Malfunction	Cargo/Infantry Hit	Turret Jam
8	Stabilizer	Crew Stunned	Stabilizer	Weapon Malfunction
9	Sensors	Stabilizer	Weapon Destroyed	Turret Locks
10	Commander Hit	Weapon Destroyed	Engine Hit	Weapon Destroyed
11	Weapon Destroyed	Engine Hit	Ammunition**	Ammunition**
12	Crew Killed	Fuel Tank*	Fuel Tank*	Turret Blown Off

*If Combat Vehicle has ICE engine only. If Combat Vehicle has a fusion engine, treat this result as Engine Hit.
**If Combat Vehicle carries no ammunition, treat this result as Weapon Destroyed.

VTOL COMBAT VEHICLE CRITICAL HITS TABLE
PAGE 196

	Hit Location			
2D6 Roll	**Front**	**Side**	**Rear**	**Rotors**
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Co-Pilot Hit	Weapon Malfunction	Cargo/Infantry Hit	Rotor Damage
7	Weapon Malfunction	Cargo/Infantry Hit	Weapon Jam	Rotor Damage
8	Stabilizer	Stabilizer	Stabilizer	Rotor Damage
9	Sensors	Weapon Destroyed	Weapon Destroyed	Flight Stabilizer Hit
10	Pilot Hit	Engine Damage	Sensors	Flight Stabilizer Hit
11	Weapon Destroyed	Ammunition**	Engine Damage	Rotors Destroyed
12	Crew Killed	Fuel Tank*	Fuel Tank*	Rotors Destroyed

*Only if the VTOL has an ICE engine. For VTOLs with fusion engines, treat this result as Engine Hit.
**If the VTOL carries no ammunition, treat this result as Weapon Destroyed.

GENERIC CONVENTIONAL INFANTRY DAMAGE TABLE

			Maximum Weapon Damage Per Platoon Type*			
Number of Troopers	Rifle, Ballistic	Rifle, Energy	Machine Gun	SRM	LRM	Flamer
1	1	0	1	0	0	0
2	1	1	1	1	1	1
3	2	1	2	1	1	1
4	2	1	2	2	2	2
5	3	1	3	2	2	2
6	3	2	3	3	3	3
7	4	2	4	3	3	3
8	4	2	4	4	3	4
9	5	3	5	4	4	4
10	5	3	6	5	4	5
11	6	3	6	5	5	5
12	6	3	7	6	5	6
13	7	4	7	6	6	6
14	7	4	8	7	6	7
15	8	4	8	7	6	7
16	8	4	9	8	7	8
17	9	5	10	8	7	8
18	9	5	10	9	8	9
19	10	5	11	9	8	9
20	10	6	11	10	9	10
21	11	6	12	10	9	10
22	11	6	12	11	9	11
23	12	6	13	11	10	11
24	12	7	13	12	10	12
25	13	7	14	12	11	12
26	14	7	15	13	11	12
27	14	8	15	13	11	13
28	15	8	16	14	12	13
29	15	8	16	14	12	14
30	16	8	17	15	13	14

*Damage is always applied in 2-point Damage Value groupings

INFANTRY DAMAGE IN BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	75 percent of damage to building
Medium	50 percent of damage to building
Heavy	25 percent of damage to building
Hardened	None

INFANTRY DAMAGE FROM ATTACKS INSIDE BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	All damage is assigned to infantry unit
Medium	All damage is assigned to infantry unit
Heavy	75 percent of damage to building
Hardened	50 percent of damage to building

SPECIAL 'MECH HIT LOCATION TABLE

Shot from Above		Shot from Below	
Die Roll (1D6)	Hit Location (Four legged)**	Die Roll (1D6)	Hit Location (Four legged)**
1	Left Arm (Left Front Leg)	1	Left Leg (Left Front Leg)
2	Front/Rear Left Torso*	2	Left Leg (Left Rear Leg)
3	Front/Rear Center Torso*	3	Front/Rear Left Torso*
4	Front/Rear Right Torso*	4	Front/Rear Right Torso*
5	Right Arm (Right Front Leg)	5	Right Leg (Right Rear Leg)
6	Head	6	Right Leg (Right Front Leg)

*The attack hits the front if from the front or the side. It hits the rear if from the rear.
**Location in parenthesis are for a four-legged 'Mech.

BASEMENTS TABLE

Die Roll (2D6)	Effect
2	Double basement. The unit falls 2 levels. Apply all damage to a 'Mech's legs (use the Front column of the 'Mech Kick Location Table).
3	Basement. The unit falls 1 level. Apply all damage to a 'Mech's legs (use the Front column of the 'Mech Kick Location Table).
4	Basement. The unit falls 1 level (for 'Mechs, use the Front/Rear column of the 'Mech Hit Location Table).
5-8	No basement.
9	Small basement. Infantry may move into the basement as though it were a new level of the building (Sublevel 1); ProtoMechs cannot enter this level. No effect on 'Mechs or vehicles.
10	Basement. The unit falls 1 level (for 'Mechs use the Front/Rear column of the 'Mech Hit Location Table).
11	Basement. The unit falls 1 level. 'Mechs fall headfirst (use the Front/Rear column of the 'Mech Punch Location Table).
12	Double basement. The unit falls 2 levels. 'Mechs fall headfirst (use the Front/Rear column of the 'Mech Punch Location Table).

BURST-FIRE WEAPON DAMAGE VS. CONVENTIONAL INFANTRY TABLE

BattleMechs, ProtoMechs and Vehicles

Weapon	Damage vs. Conventional Infantry
AP Gauss Rifle	2D6
Light Machine Gun	1D6
Machine Gun	2D6
Heavy Machine Gun	3D6
Small/Micro Pulse Laser	2D6
Flamer	4D6

Battle Armor

Weapon	Damage vs. Conventional Infantry
Light Machine Gun	1D6/2 (round up)
Machine Gun	1D6
Heavy Machine Gun	2D6
Flamer	3D6
Light Recoilless Rifle	1D6
Medium Recoilless Rifle	2D6
Heavy Recoilless Rifle	2D6
Light Mortar	1D6
Heavy Mortar	1D6
Automatic Grenade Launcher	1D6/2 (round up)
Heavy Grenade Launcher	1D6

NON-INFANTRY WEAPON DAMAGE AGAINST INFANTRY TABLE

Weapon Type*	Number of Conventional Troopers Hit†
Direct Fire (Ballistic or Energy)	Damage Value / 10
Cluster (Ballistic)	Damage Value / 10 + 1
Pulse**	Damage Value / 10 + 2
Cluster (Missile)	Damage Value / 5
Area-Effect (AE)	Damage Value / .5
Burst-Fire	See Burst-Fire Weapons above
Heat-Effect Weapons	See Heat-Effect Weapons‡

*See *Combat*, p. 113, for weapon terminology. If a weapon falls under multiple types, use the type that inflicts the most damage. For example, a rotary AC/5 is defined as a direct-fire (ballistic) and a cluster (ballistic) weapon. A cluster (ballistic) weapon does more damage than a direct-fire (ballistic) weapon, and so players should use the statistics for cluster (ballistic) weapons when determining damage against conventional infantry.

**Except for Small and Micro Pulse Lasers, which are treated as Burst-Fire Weapons (see Burst-Fire Weapons Damage Vs. Conventional Infantry Table, p. 217).

†This equals the number of conventional infantry troopers hit and eliminated, regardless of armor protection. Attacks by non-infantry weapons against mechanized infantry double the number of troopers eliminated; Round all fractions up.

‡Heat-Effect Weapon each has specific damage against conventional infantry, as noted on either the appropriate Weapon and Equipment Tables or in *Other Combat Weapons and Equipment* (see p. 129).

BUILDING MODIFIERS TABLE

Building Type	Original CF	MP Cost Per Hex*	Piloting/Driving Skill Modifier
Light	1–15	1	0
Medium	16–40	2	+1
Heavy	41–90	3	+2
Hardened	91–150	4	+5
Cost to Enter Any Hex		1	

*Infantry (except mechanized infantry) pay only 1 MP to enter a building hex regardless of building type; ProtoMechs and mechanized infantry only pay 2 MP to enter a building hex.

BUILDING MOVEMENT MODIFIERS TABLE

Hexes Moved In Turn	Piloting/Driving Skill Modifier
1–2	0
3–4	+1
5–6	+2
7–9	+3
10–17	+4
18–24	+5
25+	+6

CHANGING FACING COST TABLE

Current Velocity	Thrust Point Cost	Current Velocity	Thrust Point Cost
0-2	1	8-9	4
3-5	2	10	5
6-7	3	11	6
		12+	+1 per point

EVASIVE ACTION MODIFIERS TABLE

Evading Unit is:	Target's Evasive Action Modifier	Attacker's Evasive Action Modifier
Fighter	+3	N/A
Small craft, Fixed-Wing Support Vehicle	+2	N/A
DropShip	+2	+2
Airship	N/A	N/A

STRAIGHT MOVEMENT TABLE

Minimum Straight Movement (in hexes)			
Effective Velocity	Aerospace Fighter	Conventional Fighter	Aerodyne DropShip
1–3	1	1	1
4–6	1	1	2
7–9	2	1	3
10–12	3	2	4
13–15	4	3	5
16+	5	4	6

STRAIGHT MOVEMENT ON GROUND MAPS TABLE (AERODYNE CRAFT ONLY)

Minimum Straight Movement (in hexes)			
Velocity	Fighter	Small Craft	DropShip
1	8	8	8
2	12	14	16
3	16	20	24
4	20	26	32
5	24	32	40
6	28	38	48
7	32	44	56
8	36	50	64
9	40	56	72
10	44	62	80
11	48	68	88
12	52	74	96

Units on ground maps cannot reach a velocity above 12. If required to gain a velocity above 12 (through special maneuvers, for example) the unit remains at Velocity 12 and must make a Control Roll.

RE-ENTRY TABLE

Situation	Modifier (Maximum 6)
Craft has engine damage	+1 per box crossed out
Craft has damage to thrusters	+1 per box crossed out
Craft has no thrust*	+6

*A craft has no thrust if it cannot generate any due to critical engine damage or lack of fuel.

HIGH-ALTITUDE TABLE

Hex Row	Altitude (km)	Max. Safe Velocity
Ground	0–17	2
Row 1	18–35	3
Row 2	36–53	6
Row 3	54–71	9
Row 4	72–89	12
Interface	90–107	15

ATMOSPHERIC CONTROL MODIFIERS TABLE

Condition	Control Roll
Per 20 points of damage	+1
Unit is spheroid DropShip	+1
Unit is aerodyne DropShip	0
Unit is fighter or small craft	−1

RAMMING ATTACKS TABLE

Base To-Hit Number: 6 + (target Piloting Skill – attacker Piloting Skill)

Modifiers	
Attacker existing damage:	
Sensor damage	+1
Avionics damage	+1 per box
Target is:	
Fighter or small craft	+4v
DropShip	+2
Cannot spend thrust	−2
Attacker is:	
Fighter or small craft	−2
DropShip	−1

CONTROL ROLL TABLE

Base Target Number: Piloting Skill
Situation*
Movement
Hovering (spheroids)
Exceed normal operational ceiling (conventional fighters, Airships and Fixed Wing Support Vehicles)
Atmospheric re-entry
Rolling more than once in a turn
Using thrust in excess of current SI rating
Unit with velocity over 2x Safe Thrust in a atmosphere hex
Stalling
Descending 3+ altitudes in a single turn
Damage
Avionics critical
Control critical
Sustaining damage while in atmosphere

Modifiers	
Pilot/crew damage	+1 per crossed box
Avionics damage	+1 per crossed box
Life support damage	+1 per crossed box
Atmospheric operations	+2
Above safe thrust	+1
Above 2x Safe Thrust	+1 per velocity point above 2x Safe Thrust

*Requires a Control Roll; apply all appropriate modifiers

FAILED BRAKING MANEUVER TABLE

Margin of Failure	Effect
1–4	Landing requires full distance. The pilot can attempt to land normally or abort the landing, circle and try again in a subsequent turn.
5	The unit must land. However, the unit becomes harder to control, adding 1 to the landing Control Roll target number.
6+	The unit must land and requires 20 hexes of runway to do so, regardless of unit type. The unit suffers 20 points of damage on the nose and the landing gear is destroyed. Add 2 to the landing Control Roll target number.

AEROSPACE UNITS HIT LOCATION TABLE

FIGHTERS				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Weapon	Aft/Weapon	Nose/Weapon	Nose/Weapon
3	Nose/Sensors	Aft/Heat Sink	Wing/Gear	Wing/Gear
4	Right Wing/Heat Sink	Right Wing/Fuel	Nose/Sensors	Nose/Sensors
5	Right Wing/Weapon	Right Wing/Weapon	Nose/Crew	Nose/Crew
6	Nose/Avionics	Aft/Engine	Wing/Weapon	Wing/Weapon
7	Nose/Control	Aft/Control	Wing/Avionics	Nose/Avionics
8	Nose/FCS	Aft/Engine	Wing/Bomb	Wing/Weapon
9	Left Wing/Weapon	Left Wing/Weapon	Aft/Control	Aft/Control
10	Left Wing/Heat Sink	Left Wing/Fuel	Aft/Engine	Aft/Engine
11	Nose/Gear	Aft/Heat Sink	Wing/Gear	Wing/Gear
12	Nose/Weapon	Aft/Weapon	Aft/Weapon	Aft/Weapon

DROPSHIPS/SMALL CRAFT				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Crew	Aft/Life Support	Nose/Weapon	Nose/Weapon
3	Nose/Avionics	Aft/Control	Nose/FCS	Nose/FCS
4	Right Side/Weapon	Right Side/Weapon	Nose/Sensors	Nose/Sensors
5	Right Side/Thruster	Right Side/Door	Side/Thruster	Side/Thruster
6	Nose/FCS	Aft/Engine	Side/Cargo	Side/Cargo
7	Nose/Weapon	Aft/Weapon	Side/Weapon	Side/Weapon
8	Nose/Control	Aft/Docking Collar	Collar Side/Door	Side/Door
9	Left Side/Thruster	Left Side/Door	Side/Thruster	Side/Thruster
10	Left Side/Weapon	Left Side/Weapon	Aft/Avionics	Aft/Avionics
11	Nose/Sensors	Aft/Gear	Aft/Engine	Aft/Engine
12	Nose/K-F Boom	Aft/Fuel	Aft/Weapon	Aft/Weapon

AEROSPACE WEAPON RANGE TABLE

Range Bracket	Hexes (Standard)	Hexes (Capital)
Short	0–6	0–12
Medium	7–12	13–24
Long	13–20	25–40
Extreme	21–25	41–50

CAPITAL MISSILE CRITICAL HIT TABLE

Missile	Critical Hit Chance
Barracuda	11+
White Shark	9+
Killer Whale	10+
Kraken	8+

RANDOM MOVEMENT TABLE

1D6 Result	Effect
1	Forward 1 hex, turn left 2 hexsides
2	Forward 1 hex, turn left 1 hexside
3–4	Forward 1 hex
5	Forward 1 hex, turn right 1 hexside
6	Forward 1 hex, turn right 2 hexsides

AEROSPACE ATTACK MODIFIERS TABLE

Range	Modifier
Short	+0
Medium	+2
Long	+4
Extreme	+6
Target/Intervening Conditions	
Angle of Attack	
Attack against aft	+0
Attack against nose	+1
Attack against side	+2

Range	Modifier
Target is at 0 Velocity	–2
Weapon is capital-scale	
vs. unit less than 500 tons	+5†
Firing through atmospheric hex*	+2 per hex
Firing into or out of screen hex	+2
Target is evading	Variable
Attacker Conditions	
Attacker exceeded Safe Thrust this turn	+2
Attacker is out-of-control	+2

Range	Modifier
Attacker has pilot/crew damage	+1 per box crossed
Attacker has CIC or FCS critical damage	+2 per box crossed
Attacker has sensors critical damage	+1 per box crossed, or +5 if sensors destroyed
Attacker is evading	Variable
Special Weapons and Equipment	
Barracuda missile (not tele-operated)	–2§

*This applies to atmospheric hexes on the high-altitude map, not to hexes on a low-altitude map, or when using Aerospace Units on Ground Mapsheets rules.
†Modifier does not apply to capital missiles, which are designed to track small targets.
§Modifier does not apply if Barracuda missiles are fired in conjunction with other capital missiles (see *Large Craft Weapon Bays*, p. 234).

AIR-TO-GROUND ATTACK MODIFIER TABLE

Attack Type	Modifier
Strafing	+4*
Striking	+2‡
Bombing	+2†

*Aerospace units flying at Altitude 1 (NOE) also suffer a +2 to-hit modifier as described in *Movement* (see p. 80).
†Terrain and target movement modifiers (including the –4 modifier for an immobile target) do not apply to any type of bombing attack; an additional 8 hexes directly forward. fighters can make altitude-bombing attacks from any altitude, but suffer a to-hit modifier equal to their altitude (see *Altitude-Bombing*, p. 246).
‡As noted under Weapons and Equipment, rapid-fire weapons always fire at their maximum rate, and so players must check for jamming every time they fire these weapons (see p. 114).

AEROSPACE FIGHTER/SMALL CRAFT HEAT POINT TABLE

Activity	Heat Points
Weapons fire	Per Weapons and Equipment Tables, p. 303
Heat-causing weapons	Per Weapons and Equipment Tables, p. 303, or *Other Combat Weapons and Equipment*, p. 129
Heat sink	–1 per operational heat sink; –2 per operational double heat sink
Engine damage	+2 per hit

LANDING MODIFIERS TABLE

Condition	Modifier
Unit has damaged thrusters	+4
Unit is out-of-control	Automatic failure (assume MoF of 10)
Unit is attempting vertical landing	+1 per point of Velocity above 1
Unit is attempting horizontal landing	+1 per point of Velocity above 3
Landing gear damaged	+3 per box crossed

Condition	Modifier
Nose armor destroyed (fighters and aerodyne units)	+2
Unit reduced to 50% or less of starting thrust	+2
No thrust available (aerodyne)	+4
No thrust available (spheroid)*	+8
Runway too short for unit	+2
Unit is aerospace fighter making vertical landing	+2†
Terrain Modifiers‡	
Unit landing at manned, friendly airfield‡‡	–2
Unit landing at unmanned, friendly airfield‡‡	–1
Unit landing on road or paved hex	0
Unit landing at unfriendly airfield‡‡	+1
Unit landing in clear hex	+2
Unit landing in water hex	+3
Unit landing in rough or rubble hex (landing gear damaged, cross off 1 box)	+3
Unit landing in elevated hex (non-vertical landing)§	+3
Unit landing in building hex (non-vertical landing)§§	+3
Unit landing in light woods hex	+4
Unit landing in heavy woods hex	+5

*Only applies if spheroid unit lost thrust this turn, otherwise the unit falls and is destroyed (see *Crashes*, p. 81).
†Only applies in atmospheres and does not apply to VSTOL-equipped conventional fighters.
‡Determine all appropriate modifiers based on the hexes of the landing area and then apply only the highest modifier (if there are multiple "highest" modifiers, still only add a single hex modifier). These modifiers are halved for vertical landings.
‡‡The placement of such features, which do not appear on *BattleTech* maps, depends on the scenario being played or a designated gamemaster.
§If the hex is greater than a one level change, the unit automatically crashes in the elevated hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying.
§§The unit automatically crashes in the building hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying. If a unit makes a successful vertical landing into a building hex, immediately check for a collapse (see *Collapse*, p. 176).

SPECIAL MANEUVERS TABLE

Maneuver	Min/Max Velocity	Thrust Cost	Control Modifier	Effect
Loop	Min 4	4	+1	The unit spends its first 4 points of velocity in the loop, though the actual velocity remains unchanged. It ends in the same hex where it started the move, then spends the remainder of its velocity normally.
Immelmann	Min 3	4	+1	The unit gains two altitudes and ends the maneuver facing any hexside. Velocity drops by 2. The remainder is spent normally.
Split-S	Any	2	+2	The unit loses two altitudes and ends the maneuver facing any hexside. Velocity increases by 1.
Hammerhead	Any	Velocity	+3	The unit remains in the hex it started, but changes facing 180 degrees.
Half-roll	Any	1	–1	The unit rolls 180 degrees, reversing left and right sides and up/down facings.
Barrel roll	Min 2	1	0	The unit rolls 360 degrees, ending with the same facing. Velocity drops by 1.
Side-slip	Any	1	0/–1*	Instead of moving into the hex directly ahead, the unit moves into the front-left or front-right hex without changing facing. (Modifier is –1 for VSTOL units.) When using *Aerospace Units on Ground Mapsheets* rules (see p. 91), the unit moves 8 hexes in the front-left or front-right hex direction and then an additional 8 hexes directly forward.
VIFF	Any*	Velocity +2	+2	Successfully using this "Vector in Forward Flight" maneuver, a VSTOL unit halts its forward momentum and gains one altitude.

*VSTOL units only