BATTLETECH™

ARMOR DIAGRAM

Head

Left Torso Right Torso Left Torso Rear Right Torso Rear

Left Arm Center Torso Right Arm

Left Leg Right Leg

Center Torso Rear

Left Torso Head Right Torso

Left Arm Center Torso Right Arm

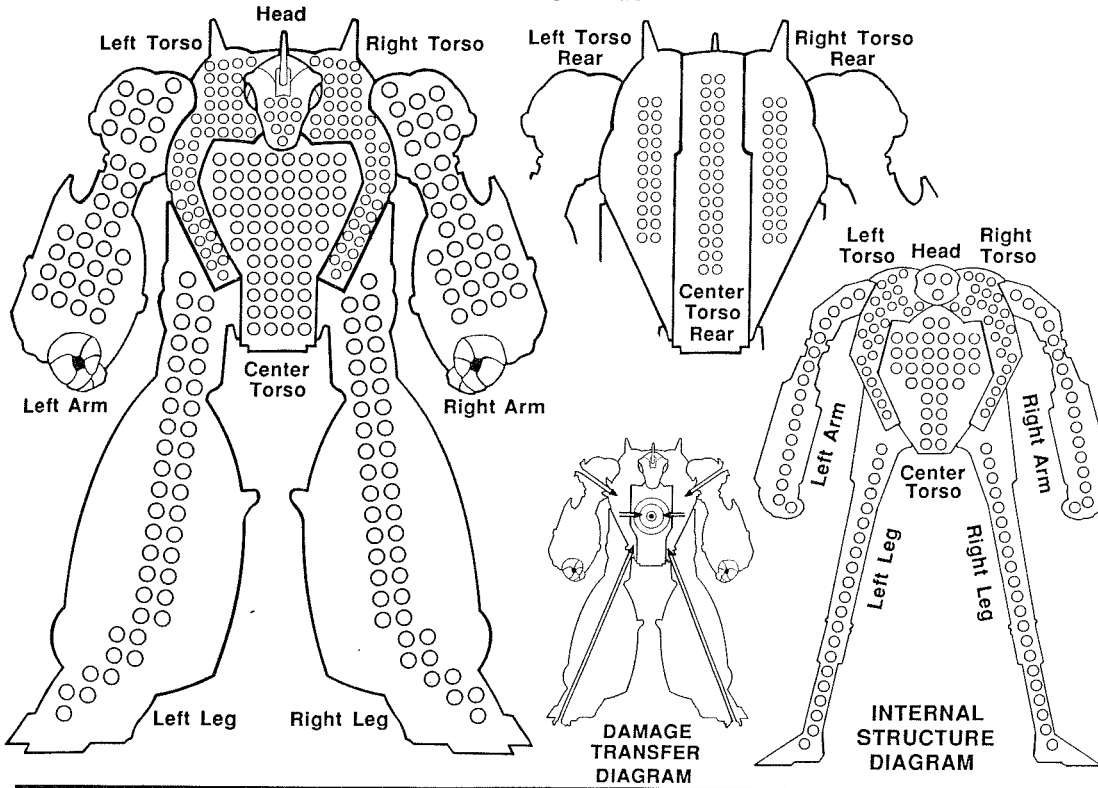Left Leg Right Leg

DAMAGE TRANSFER DIAGRAM

INTERNAL STRUCTURE DIAGRAM

MECH DATA

Type: _____
Tonnage: _____
Movement Points:
  Walking: _____
  Running: _____
  Jumping: _____

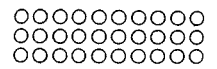### WEAPONS INVENTORY

#	Type	Loc.
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———
——	———————	———

AMMO:
AutoCannon Rounds _____
M.G. Rounds _____
S.R.M. Packs _____
  Missiles per pack _____
L.R.M. Packs _____
  Missiles per pack _____

TOTAL HEAT SINKS

OOOOOOOOOO
OOOOOOOOOO
OOOOOOOOOO

WARRIOR DATA

Name: _____
Gunnery Skill: _____
Piloting Skill: _____
Hits Taken: (Consciousness Number)

1st	2nd	3rd	4th	5th	6th
(3)	(5)	(7)	(10)	(11)	(Dead)

CRITICAL HIT TABLE

LEFT ARM

1. Shoulder
2. Upper Arm Actuator
1 3. Lower Arm Actuator
4. Hand Actuator
5. _____
6. _____

1. _____
2. _____
2 3. _____
4. _____
5. _____
6. _____

LEFT TORSO

1. _____
2. _____
1 3. _____
4. _____
5. _____
6. _____

1. _____
2. _____
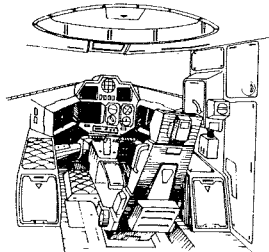2 3. _____
4. _____
5. _____
6. _____

LEFT LEG

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

HEAD

1. Life Support
2. Sensors
3. Cockpit
4. _____
5. Sensors
6. Life Support

CENTER TORSO

1. Engine
2. Engine
1 3. Engine
4. Gyro
5. Gyro
6. Gyro

1. Gyro
2. Engine
2 3. Engine
4. Engine
5. _____
6. _____

Engine Hits OOO
Gyro Hits OO
Sensor Hits OO

RIGHT ARM

1. Shoulder
2. Upper Arm Actuator
1 3. Lower Arm Actuator
4. Hand Actuator
5. _____
6. _____

1. _____
2. _____
2 3. _____
4. _____
5. _____
6. _____

RIGHT TORSO

1. _____
2. _____
1 3. _____
4. _____
5. _____
6. _____

1. _____
2. _____
2 3. _____
4. _____
5. _____
6. _____

RIGHT LEG

1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. _____
6. _____

HEAT SCALE

30	Shutdown
29	
28	Ammo Explosion, avoid on 8+
27	
26	Shutdown, avoid on 10+
25	-5 Movement Points
24	-4 Modifier to Fire
23	Ammo Explosion, avoid on 6+
22	Shutdown, avoid on 8+
21	
20	-4 Movement Points
19	Ammo Explosion, avoid on 4+
18	Shutdown, avoid on 6+
17	-3 Modifier to Fire
16	
15	-3 Movement Points
14	Shutdown, avoid on 4+
13	-2 Modifier to Fire
12	
11	
10	-2 Movement Points
09	
08	-1 Modifier to Fire
07	
06	
05	-1 Movement Points
04	
03	
02	
01	
00	

Base To-Hit Numbers Table

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

Movement Modifiers Table

BattleMech	Movement	Modifier
Attacker		
	Stationary	None
	Walked	+1
	Ran	+2
	Jumped	+3
Target		
	Moved 0 - 2 Hexes	None
	Moved 3 - 4 Hexes	+1
	Moved 5 - 6 Hexes	+2
	Moved 7 - 9 Hexes	+3
	Jumped (add to above)	+1

Terrain Modifiers to Fire

Light wood	+ 1 per hex
Heavy wood	+ 2 per hex
Water	Level 1: – 1 to Hit, use **Punch Damage Table**
	Level 2: cannot fire into or out of
Partial Cover	+ 3 (Use punch damage location table)
Firing when down	+ 2
Firing at prone targets	(-2 from adjacent hex, +1 from all others)

BATTLETECH ™

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Hit Location Table

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

WEAPONS TABLE

Weapon Type	Heat	Damage	Minimum	Short (4)	Medium (6)	Long (8)	Tonnage	Critical Spaces	Ammo Shots Per Ton
Small Laser	1	3		1	2	3	.5	1	
Medium Laser	3	5		1 - 3	4 - 6	7 - 9	1	1	
Large Laser	8	8		1 - 5	6 - 10	11 - 15	5	2	
Particle Projection Cannon	10	10	3	1 - 6	7 - 12	13 - 18	7	3	
Long Range Missiles									
5 Rack	2	Δ	6	1 - 7	8 - 14	15 - 21	2	1	24
10 Rack	4	Δ	6	1 - 7	8 - 14	15 - 21	5	2	12
15 Rack	5	Δ	6	1 - 7	8 - 14	15 - 21	7	3	8
20 Rack	6	Δ	6	1 - 7	8 - 14	15 - 21	10	5	6
Short Range Missiles									
2 Rack	2	•		1 - 3	4 - 6	7 - 9	1	1	50
4 Rack	3	•		1 - 3	4 - 6	7 - 9	2	1	25
6 Rack	4	•		1 - 3	4 - 6	7 - 9	3	2	15
Auto Cannon	1	5	3	1 - 6	7 - 12	13 - 18	8	4	20
Machine Gun	0	2		1	2	3	.5	1	200
Flamer	3	2		1	2	3	1	1	

• = 2 points per missile that hit, see chart. Δ = 1point per missile that hit, see chart.

Missile Hit Table

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

Critical Hit Effects Table

Dice Roll	Effect
2 - 7	No Critical Hit
8 - 9	Roll 1 Critical Hit Location
10 - 11	Roll 2 Critical Hit Locations
12	Limb Blown Off or Roll 3 Critical Hit Locations

Critical Hit Effects

HEAD	Life Support	1 point of damage to MechWarrior per turn heat is 15-24
		2 points of damage to MechWarrior per turn heat is 25 +
	Cockpit	MechWarrior is dead, Mech is out of game
	Sensors	1st hit: + 2 to fire
		2nd hit: No fire
CENTER TORSO	Engine	1st hit: + 5 heat per turn
		2nd hit: + 10 heat per turn
		3rd hit: Engine Destroyed, 'Mech out of game.
	Gyro	1st hit: all *Piloting* Skill Rolls + 3
		2nd hit: Gyro Destroyed, 'Mech out of game.
ARM	Shoulder	+ 4 to hit with ranged weapons / + 2 if pushing
	All Arm Actuators	+ 1 to hit
	Hand	Cannot fire hand held weapons
LEG	Hip	1st Hip - MP is halved; 2nd hip - No movement
		+2 to all *Piloting* Skill Rolls per hip critical
	All Leg Actuators	– 1 MP and +1 to all *Piloting* Skill Rolls
	Weapon	Weapon destroyed
	Jump Jet	– 1 Jump MP per critcal hit
	Heat Sink	1 Heat Bleed off per critical hit.
	Ammo	MechWarrior takes 2 hits
		Ammo explodes doing damage to Internal Structure, and MechWarrior takes 2 hits.

Physical Attacks Damage

Type	Base To-Hit	Damage
Punch	4 +	Tonnage/10; Halved for each arm actuator missing
Kicking	3 +	Tonnage/5; Halved for each leg actuator missing
Pushing	4 +	Moves target 1 hex, forces *Piloting* Skill Roll
Charging	5 +	To Target; [(Attackers tonnage/10) x hexes moved]
		To Attacker; (Targets tonnage/10)

Punch Hit Location Table

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

Kick Hit Location Table

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

Piloting Skill Roll Table

BattleMech's Situation	Modifier
Physical Attacks On 'Mech	
'Mech Kicked	None
'Mech Pushed	None
'Mech Charged	+2
Damage To 'Mech	
'Mech Takes 20 Damage Points In 1 Turn	+1
'Mech's Reactor Shut Down	+3
Per Leg/Foot Actuator Destroyed	+1
Per Hip Critical Hit (2 Maximum)	+2
'Mech's Gyro Hit	+3
Mech's Actions	
'Mech Missed Kick	None
'Mech Charging/Death from Above	+2
'Mech Entering/Leaving Depth 1 Water	-1
'Mech Entering/Leaving Depth 2 Water	None
'Mech Entering/Leaving Depth 3 Water	+1
'Mech Trying To Get Up	None
MechWarrior Trying To Avoid Falling Damage Per Level Fallen	+1

Terrain Effects On Movement

Terrain Type	Cost Per Hex
Clear	1 MP
Light Woods	2 MP
Heavy Woods	3 MP
Water, Depth 1	2 MP
Water, Depth 2	4 MP
Elevation Change	1 MP/Level
Facing Change	1 MP per hexside
Dropping to ground	1 MP
Standing up	2 MP

Heat Point Table

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (min. of 3 per turn)
Trying To Stand Up	+1
Weapon Fire	Given on Weapons Table
Heat Sinks	-1 per sink operational
	-1 additional for heat sink under water (6 max.)
1st Engine Critical Hit	+5 per turn
2nd Engine Critical Hit	+10 per turn

Facing After A Fall

Die Roll	New Facing	Damage Location Table
1	Same Direction (on face)	Front/Back Side
2	1 Hexside Right (on side)	Right Side
3	2 Hexsides Right (on side)	Right Side
4	Opposite Direction (on back)	Front/Back Side
5	2 Hexsides Left (on side)	Left Side
6	1 Hexside Left (on side)	Left Side

Type: ARC-2R Archer			Tons
Tonnage:	70 tons		70
Internal Structure:			7
Engine:	280 Vox		16
Walking MP's:	4		
Running MP's:	6		
Jumping MP's:	0		
Total Heat Sinks:	10		0
Gyro:			3
Cockpit:			3
Armor Factor:	208		13

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	22	34/10
Rt./Lt. Torso:	15	24/6
Rt./Lt. Arm:	11	23
Rt./Lt. Leg:	15	25

Weapons and Ammo:

Type	Loc.	Critical	
LRM 20	RT	5	10
LRM 20	LT	5	10
Ammo (LRM) 12	RT	2	2
Ammo (LRM) 12	LT	2	2
Med. Laser	RA	1	1
Med. Laser	LA	1	1
Med. Laser	CT(R)	1	1
Med. Laser	CT(R)	1	1

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Type: SHD-2H Shadow Hawk			Tons
Tonnage:	55 tons		55
Internal Structure:			5.5
Engine:	275 CoreTek		15.5
Walking MP's:	5		
Running MP's:	8		
Jumping MP's:	3		
Total Heat Sinks:	12		2
Gyro:			3
Cockpit:			3
Armor Factor:	152		9.5

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	18	23/8
Rt./Lt. Torso:	13	18/6
Rt./Lt. Arm:	9	16
Rt./Lt. Leg:	13	16

Weapons and Ammo:

Type	Loc.	Critical	
Auto Cannon	LT	4	8
Ammo (AC) 20	LT	1	1
LRM 5	RT	1	2
Ammo (LRM) 24	RT	1	1
SRM 2	H	1	1
Ammo (SRM) 50	CT	1	1
Med. Laser	RA	1	1
Jump Jet	LT	1	.5
Jump Jet	RT	1	.5
Jump Jet	CT	1	.5

Determining Spreading

During the End Phase of every game turn, the players check to see if any of the fires currently on the map spread to new hexes. Roll two dice for each hex directly downwind of and adjacent to a fire hex. If the roll is equal to or greater than a 7, the fire will spread into that hex. Also roll two dice for each of the two hexes on either side of that hex. If the roll is equal to or greater than a 9, the fire will spread into that hex as well.
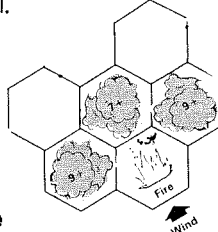
Fire spreads to these hexes on rolls shown

Fire   Smoke

Effects of Fire

Fire hexes will add heat to any 'Mech that moves through or ends its turn in a Fire Hex. The heat costs are 2 heat points added for every Fire hex through which a "Mech moves, and 5 heat points are added if the 'Mech ends its turn in a Fire Hex. These heat points are added to the heat scale immediately, but any effects due to overheating do not take place until the Heat Phase of the turn.

SMOKE

A fire spreads smoke for three hexes downwind of the fire hex. All attacks from or into smoke hexes are more difficult to make, with a To-Hit Modifier of +2.

CLUBS

Whenever a 'Mech has one of its legs or arms blown off, the limb is left lying in the hex where the 'Mech that occupies that hex at a later time can pick up the arm or leg and use it as a giant club.

In order to attack another 'Mech with this club, the 'Mech's shoulders and hand actuators must be in working order, and no arm-mounted weapons can have been fired in the turn. The club is used in a two-handed swing and has a Base To-Hit Number of 4. If any of the 'Mech's upper or lowr arm actuators have been destroyed, use the punch modifiers listed. A 'Mech making an attack with a club does 1 point of damage for every 5 tons that the 'Mech weights, rounding up.

VARIABLE SKILLS

At the beginning of the game, the players could roll randomly for the *Piloting* and *Gunnery* skill of every MechWarrior. This will produce an interesting mixture of green and seasoned MechWarriors.

DETERMINING SKILLS

Roll one die for the MechWarrior's *Piloting* skill and *Gunnery* skill. Compare the roll to the table below.

MechWarrior Skills Table		
Die Roll	Piloting Skill	Gunnery Skill
1	6	4
2	6	4
3	5	4
4	5	4
5	4	3
6	4	3

SKILL IMPROVEMENT

Players may want to keep any of the MechWarriors they've created for use in future games or in **BattleTech** campaign games, assuming, of course, that the warrior survives the current battle. If they want to do this, the players should keep track of the number of enemy 'Mechs killed by each surviving MechWarrior. For every four 'Mechs he kills, the MechWarrior can improve either his *Gunnery* skill or his *Piloting* skill. For the skill chosen, the player can subtract 1 from the current Skill Level.

BATTLEMECH DESIGN

The following system makes it possible for players to construct their own 'Mechs choosing their own mix of speed, armor, and weaponry. Then, they can pit their designs against others on the battlefield.

In order to design a 'Mech, the player will need a piece of scratch paper, a pen, the Weapons Chart, and an unused Record Sheet. The procedure is as follows:

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

CHOOSE THE TONNAGE

BatteMechs weigh between 10 and 100 tons (in increments of 5 tons). Choose any tonnage desired. Record the 'Mech's tonnage at the top of the sheet of scratch paper. The total weight of the 'Mech's engine, weapons, armor, and other components may not exceed this figure.

For example, a player wants to design a medium-sized 'Mech, the Merlin. He assigns the 'Mech a total weight of 60 tons.

DETERMINE ENGINE RATING

A 'Mech's engine rating is determined by its weight and desired speed. Multiply the 'Mech's tonnage by the walking movement point allowance you want it to have. The resulting number is its engine rating.

Tonnage x MP allowance = Engine Rating

The table below lists the tonnage requirements for 10-ton- to 400-ton-rated engines. On the sheet of scratch paper, subtract the weight of the engine itself from the total tonnage of your 'Mech. The remaining tonnage will be available for other components and systems.

ENGINE TABLE

Rating	Manufacturer	Tonnage	Rating	Manufacturer	Tonnage
10	Omni	.5	210	GM	9.0
15	GM	.5	215	CoreTek	9.5
20	Pitban	.5	220	DAV	10.0
25	Omni	.5	225	VOX	10.0
30	Nissan	1.0	230	Leenex	10.5
35	VOX	1.0	235	GM	11.0
40	GM	1.0	240	Pitban	11.5
45	GM	1.0	245	Magna	12.0
50	DAV	1.5	250	Magna	12.5
55	VOX	1.5	255	Strand	13.0
60	Leenex	1.5	260	Magna	13.5
65	Nissan	2.0	265	Vlar	14.0
70	Omni	2.0	270	GM	14.5
75	GM	2.0	275	CoreTek	15.5
80	VOX	2.5	280	VOX	16.0
85	DAV	2.5	285	Pitban	16.5
90	DAV	3.0	290	Omni	17.5
95	Nissan	3.0	295	GM	18.0
100	Hermes	3.0	300	Vlar	19.0
105	DAV	3.5	305	GM	19.5
110	GM	3.5	310	Magna	20.5
115	GM	4.0	315	GM	21.5
120	GM	4.0	320	Pitban	22.5
125	Nissan	4.0	325	VOX	23.5
130	Vlar	4.5	330	VOX	24.5
135	Magna	4.5	335	Leenex	25.5
140	Hermes	5.0	340	VOX	27.0
145	Leenex	5.0	345	Vlar	28.5
150	Omni	5.5	350	Magna	29.5
155	Nissan	5.5	355	LTV	31.5
160	LTV	6.0	360	Hermes	33.0
165	VOX	6.0	365	Hermes	34.5
170	DAV	6.0	370	Magna	36.5
175	Omni	7.0	375	GM	38.5
180	GM	7.0	380	GM	41.0
185	GM	7.5	385	LTV	43.5
190	DAV	7.5	390	Magna	46.0
195	Nisson	8.0	395	Hermes	49.0
200	Nisson	8.5	400	LTV	52.5
205	Vlar	8.5			

Type:	MAD-3R Marauder		Tons
Tonnage:		75 tons	75
Internal Structure:			7.5
Engine:		300 Vlar	19
Walking MP's:		4	
Running MP's:		6	
Jumping MP's:		0	
Total Heat Sinks:		16	6
Gyro:			3
Cockpit:			3
Armor Factor:		184	11.5

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	23	34/12
Rt./Lt. Torso:	16	16/8
Rt./Lt. Arm:	12	22
Rt./Lt. Leg:	16	16

Weapons and Ammo:

Type	Loc.	Critical	
PPC	RA	3	7
PPC	LA	3	7
Med. Laser	RA	1	1
Med. Laser	LA	1	1
Auto Cannon	RT	4	8
Ammo (AC) 20	LT	1	1

Type:	TDR-5S Thunderbolt		Tons
Tonnage:		65 tons	65
Internal Structure:			6.5
Engine:		260 Magna	13.5
Walking MP's:		4	
Running MP's:		6	
Jumping MP's:		0	
Total Heat Sinks:		15	5
Gyro:			3
Cockpit:			3
Armor Factor:		208	13

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	21	30/11
Rt./Lt. Torso:	15	24/6
Rt./Lt. Arm:	10	20
Rt./Lt. Leg:	15	29

Weapons and Ammo:

Type	Loc.	Critical	
Lg. Laser	RA	2	5
LRM 15	RT	3	7
Ammo (LRM) 16	CT	2	2
Med. Laser	LT	1	1
Med. Laser	LT	1	1
Med. Laser	LT	1	1
SRM 2	RT	1	1
Ammo (SRM) 50	CT	1	1
Machine Gun	LA	1	.5
Machine Gun	LA	1	.5
Ammo (MG) 200	LA	1	1

Type: **WSP-1A Wasp**

		Tons
Tonnage:	20 tons	20
Internal Structure:		2
Engine:	120 GM	4
Walking MP's:	6	
Running MP's:	9	
Jumping MP's:	6	
Total Heat Sinks:	10	0
Gyro:		2
Cockpit:		3
Armor Factor:	48	3

	Internal Structure	Armor Value
Head:	3	4
Center Torso:	6	6/4
Rt./Lt. Torso:	5	6/2
Rt./Lt. Arm:	3	4
Rt./Lt. Leg:	4	5

Weapons and Ammo:

Type	Loc.	Critical	
Med. Laser	RA	1	1
SRM 2	LL	1	1
Ammo (SRM) 50	CT	1	1
Jump Jets	RL	3	3
Jump Jets	LL	3	3

Type: **WVR-6R Wolverine**

		Tons
Tonnage:	55 Tons	55
Internal Structure:		5.5
Engine:	275 CoreTek	15.5
Walking MP's:	5	
Running MP's:	8	
Jumping MP's:	5	
Total Heat Sinks:	12	2
Gyro:		3
Cockpit:		3
Armor Factor:	152	9.5

	Internal Structure	Armor Value
Head:	3	8
Center Torso:	18	20/8
Rt./Lt. Torso:	13	20/6
Rt./Lt. Arm:	9	16
Rt./Lt. Leg:	13	16

Weapons and Ammo:

Type	Loc.	Critical	
Auto Cannon	RA	4	8
Ammo (AC) 20	RA	1	1
SRM 6	LT	2	3
Ammo (SRM) 15	LT	1	1
Med. Laser	H	1	1
Jump Jets	RL	2	1
Jump Jets	LL	2	1
Jump Jets	CT	1	.5

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The player gives his 60-ton Merlin a Movement Point allowance of 4. As a result, the 'Mech needs a 240-ton-rated engine (60 tons x 4 MPs = 240-ton-rating). Looking at the Engine Table, the player finds that a 240-ton-rated Pitban engine weighs 11.5 tons. He subtracts this number from the Merlin's 60 tons available. This leaves 48.5 tons for armor, weapons, controls, and other components.

ADD CONTROL COMPONENTS

Every 'Mech must have a cockpit containing the MechWarrior's control station, life support system, and electronic sensors. All 'Mech cockpits weigh 3 tons, regardless of the 'Mech's overall tonnage. Subtract 3 tons from the 'Mech's remaining tonnage.

In addition to its cockpit, every 'Mech must be equipped with a powerful gyroscope to keep it upright and able to move. The exact size of a 'Mech's gyroscope depends on its engine rating. Divide the 'Mech's engine rating by 100 and round up. The resulting number is the weight of its gyroscope. Subtract this figure from the tonnage remaining.

The Merlin's cockpit weighs 3 tons, leaving 45.5 tons available. Its 240-ton-rated Pitban engine requires a 3-ton gyroscope (240/100 = 2.4, rounded up to 3.). The 'Mech has 42.5 tons left for its Internal structure, jump jets, extra heat sinks, armor, and weaponry.

ALLOCATE TONNAGE FOR INTERNAL STRUCTURE

Of every 'Mech's total tonnage, 10 percent is taken up by its internal structure. The table shows the number of tons needed by every 'Mech of a given weight. It also shows the number and allocation of the 'Mech's Internal Structure Boxes. Every 'Mech has 3 Internal Structure boxes in the head location.

Use the Internal Structure Diagram on the Record Sheet to record the number of boxes in each hit location, simply blocking out any unneeded boxes.

Internal Structure Table

Total Tonnage	Tons Required	Internal Structure Boxes			
		Center Torso	Left/ Right Torso	Each Arm	Each Leg
10	1.0	4	3	1	2
15	1.5	5	4	2	3
20	2.0	6	5	3	4
25	2.5	8	6	4	6
30	3.0	10	7	5	7
35	3.5	11	8	6	8
40	4.0	12	10	6	10
45	4.5	14	11	7	11
50	5.0	16	12	8	12
55	5.5	18	13	9	13
60	6.0	20	14	10	15
65	6.5	21	15	10	14
70	7.0	22	15	11	15
75	7.5	23	16	12	16
80	8.0	25	17	13	17
85	8.5	27	18	14	18
90	9.0	29	19	15	19
95	9.5	30	20	16	20
100	10.0	31	21	17	21

The Merlin weighs a total of 60 tons. The Internal Structure Table shows that the 'Mech's internal structure takes up 6 tons, leaving 36.5 tons available. The table also shows that the internal structure of the Merlin's center torso has 20 boxes, both the right and left torso have 14 boxes, the arms have 10 boxes apiece, and the legs have 14 boxes.

DETERMINE JUMP CAPABILITY

BattleMechs may be equipped with jump jets in their legs or backs to allow jump movement. The weight of the jump jets depends on the weight of the 'Mech and the jump movement desired. The following table gives these costs:

'Mech Tonnage	Jump Jet Weight
00-55	.5 tons/movement point
60-85	1.0 tons/movement point
90-100	2.0 tons/movement point

Subtract the total weight of the 'Mech's jump jets from the remaining tonnage.

Allocate space on the Equipment Charts for a jump jet exhaust ports on the Equipment Charts for the legs, the center torso, the right torso, or the left torso.

The player gives the Merlin a jump movement point allowance of 4, requiring 4.0 tons for jump jets. (4 MPs x 1.0 tons/MP = 4 tons.) The 'Mech has 32.5 tons left.

ADD EXTRA HEAT SINKS

Heat sinks ar used to dissipate heat produced by rapid movement and by weapons fire. Every 'Mech's engine includes 10 heat sinks more than it needs to get rid of the heat generated by the engine itself. Therefore, every undamaged 'Mech can automatically dissipate 10 points of heat per turn. Most 'Mechs, however, will need the ability to get rid of more heat. Extra heat sinks can be acquired at the cost of 1 ton per heat sink.

The player decides that he wants the Merlin to be able to dissipate up to 18 points of heat per turn. The Merlin automatically gets 10 heat sinks with its 240-ton-rated Pitban engine, and so the player must get another 8 heat sinks. These weigh a total of 8 tons. The 'Mech now has 26.5 tons remaining.

ADD ARMOR

Armor helps protect the 'Mech's internal structure and critical components. An Armor Value of 16 weighs 1 ton. Determine the total number of armor points that the 'Mech will carry. These points will be allocated among the 'Mech's hit location areas at a later stage in the design process. Armor can only be added in 1/2- or 1-ton units.

The player decides to allocate 10 tons of the Merlin's remaining tonnage to armor. As a result, the 'Mech carries an Armor Value of 160 (10 tons x 16 points/ton = 160 points). Ther Merlin has 14.5 tons of space left for its weapons and extra ammunition.

ADD WEAPONS AND AMMUNITION

Every weapon placed on a 'Mech weighs a certain amount, as listed on the Weapons Chart. Select the weapons that the newly-designed 'Mech will carry. At least 1 ton must be used for each missile launcher's or ballistic weapon's ammunition. This will provide a varying number of shots, depending of the launcher or weapon. The 'Mech's weapons are placed in specific hit location areas in the next design step.

The Merlin carries a particle projector cannon (7 tons), 2 medium lasers (1 ton apiece), 1 flamer (1 ton), a machine gun (.5 tons), and 1 5-pack, long-range-missile launcher (2 tons). In addition, 1 ton is set aside for 24 missile reloads and 1 ton is reserved for machine gun ammunition (100 shots). After its weapons are added, the Merlin has 0 tons remaining for extra equipment.

COMPLETE THE EQUIPMENT TABLES

The Record Sheet contains Equipment Tables for every part of the 'Mech's body. These hit tables are already partially filled in. Allocate the 'Mech's heat sinks and weapons to different parts of his body, and place them on the Equipment Table for that location.

Type: PXH-1 Phoenix Hawk			Tons
Tonnage:	45 tons		45
Internal Structure:			4.5
Engine:		270 GM	14.5
Walking MP's:	6		
Running MP's:	9		
Jumping MP's:	6		
Total Heat Sinks:	10		
Gyro:			3
Cockpit:			3
Armor Factor:	128		8

	Internal Structure	Armor Value
Head:	3	6
Center Torso:	14	23/5
Rt./Lt. Torso:	11	18/4
Rt./Lt. Arm:	7	10
Rt./Lt. Leg:	11	15

Weapons and Ammo:

Type	Loc.	Critical	
Lg. Laser	RA	2	5
Med. Laser	RA	1	1
Med. Laser	LA	1	1
Machine Gun	RA	1	.5
Machine Gun	LA	1	.5
Ammo (MG) 200	CT	1	1
Jump Jets	RT	3	1.5
Jump Jets	LT	3	1.5

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Type: RFL-3N Rifleman			Tons
Tonnage:	60 tons		60
Internal Structure:			6
Engine:		240 Pitban	11.5
Walking MP's:	4		
Running MP's:	6		
Jumping MP's:	0		
Total Heat Sinks:	10		0
Gyro:			3
Cockpit:			3
Armor Factor:	120		7.5

	Internal Structure	Armor Value
Head:	3	6
Center Torso:	20	22/4
Rt./Lt. Torso:	14	15/2
Rt./Lt. Arm:	10	15
Rt./Lt. Leg:	15	12

Weapons and Ammo:

Type	Loc.	Critical	
Lg. Laser	RA	2	5
Lg. Laser	LA	2	5
Auto Cannon	RA	4	8
Auto Cannon	LA	4	8
Ammo (AC) 20	CT	1	1
Med. Laser	RT	1	1
Med. Laser	LT	1	1

The number of blank spaces remaining on the table for a given location acts as a limit on the number of weapons and heat sinks that may be placed there. A Heat sink occupies one space on the table. Many weapons take up more than one space, as shown on the Weapons Table. For example, the center torso has 2 spaces left empty on the Equipment Table, but a particle projector cannon takes up 3 spaces. Therefore, the particle projector cannon cannot be placed in the 'Mech's central torso. Do not worry about using up every space left open on the Equipment Tables. Simply space the weapons and heat sinks where you want them, and ignore any empty spaces when rolling for critical hits.

The Merlin's particle projector cannon is placed on its right torso, one of its medium lasers occupies its right arm and the other its left. The Merlin's 5-pack, long-range-missile launcher goes to its right torso, while the 'Mech's machine gun and flamer occupy the left torso. The 'Mech's 18 heat sinks are divided among all 8 hit locations on its body.

ALLOCATE ARMOR

Divide the total Armor Value carried by the 'Mech among the 11 different locations shown on the Record Sheet's Armor Diagram. The exact Armor Value used to protect a given area is left to your discretion, but the Armor Value may not be more than twice the number of internal structure boxes at that location. For example, if a 'Mech has 10 boxes in its left arm, no more than an Armor Value of 20 can be placed on that arm. The only exception is that all 'Mechs can have an Armor Value of up to 9 on their heads.

It is important to notice that the center, left, and right torso areas are divided into sections for front armor and rear armor. The armor allocated to a front section cannot be allocated again to the rear and vice versa.

Use the Armor Diagram on the Record Sheet to indicate the Armor Value carried on each part of the 'Mech's body. To use the schematic, simply block out any unneeded boxes in much the same way that you filled out the Internal Structure Diagram.

The Merlin carries a total of 160 armor points. The player divides these points as follows: Head - 9; Arms - 15 points apiece; Left Torso Front - 4; Left Torso Rear - 7; Center Torso Front - 11; Center Torso Rear - 17; Right Torso Front - 17; Right Torso Rear - 7; and Legs - 19 points apiece.

COMPLETE RECORD SHEET

Fill out the record sheet by recording the 'Mechs tonnage and movement point allowances.

Type: **LCT-1V Locust**   *Tons*

Tonnage:	20 ton	20
Internal Structure:		2
Engine:	160 LTV	6
Walking MP's:	8	
Running MP's:	12	
Jumping MP's:	0	
Total Heat Sinks:	10	0
Gyro:		2
Cockpit:		3
Armor Factor:	64	4

	Internal Structure	Armor Value
Head:	3	8
Center Torso:	6	10/2
Rt./Lt. Torso:	5	8/2
Rt./Lt. Arm:	3	4
Rt./Lt. Leg:	4	8

Weapons and Ammo:

Type	Loc.	Critical	
Med. Laser	CT	1	1
Machine Gun	RA	1	.5
Machine Gun	LA	1	.5
Ammo (MG) 200	CT	1	1

BATTLETECH
ARMOR DIAGRAM

'MECH DATA
Type: *MERLIN*
Tonnage: *60 TONS*
Movement Points:
Walking ___*4*___
Running ___*6*___
Jumping ___*4*___

WEAPONS INVENTORY

#	Type	Loc.
1	*PPC*	*LT*
1	*MED. LASER*	*LA*
1	*MED. LASER*	*RA*
1	*FLAMER*	*RT*
1	*MACHINE GUN*	*LT*
1	*LRM 5*	*LT*

AMMO:
AutoCannon Rounds ____
M.G. Rounds *100*
S.R.M. Packs ____
  Missiles per pack ____
L.R.M. Packs *24*
  Missiles per pack *5*

TOTAL HEAT SINKS
○○○○○○○○○○
○○○○○○○○○○
○○○○○○○○○○

WARRIOR DATA
Name: ____
Gunnery Skill: ____
Piloting Skill: ____
Hits Taken: (Consciousness Number)
1st 2nd 3rd 4th 5th 6th
(3) (5) (7) (10) (11) (Dead)

HEAT SCALE

[30]	Shutdown
[29]	
[28]	Ammo Explosion, avoid on 8+
[27]	
[26]	Shutdown, avoid on 10+
[25]	-5 Movement Points
[24]	-4 Modifier to Fire
[23]	Ammo Explosion, avoid on 6+
[22]	Shutdown, avoid on 8+
[21]	
[20]	-4 Movement Points
[19]	Ammo Explosion, avoid on 4+
[18]	Shutdown, avoid on 6+
[17]	-3 Modifier to Fire
[16]	
[15]	-3 Movement Points
[14]	Shutdown, avoid on 4+
[13]	-2 Modifier to Fire
[12]	
[11]	
[10]	-2 Movement Points
[09]	
[08]	-1 Modifier to Fire
[07]	
[06]	
[05]	-1 Movement Points
[04]	
[03]	
[02]	
[01]	
[00]	

CRITICAL HIT TABLE

LEFT ARM
1. Shoulder
2. Upper Arm Actuator
1 3. Lower Arm Actuator
4. Hand Actuator
5. *Med. Laser*
6. *Heat Sink*

1. ____
2. ____
2 3. ____
4. ____
5. ____
6. ____

HEAD
1. Life Support
2. Sensors
3. Cockpit
4. *Heat Sink*
5. Sensors
6. Life Support

RIGHT ARM
1. Shoulder
2. Upper Arm Actuator
1 3. Lower Arm Actuator
4. Hand Actuator
5. *Med. Laser*
6. *Heat Sink*

1. ____
2. ____
2 3. ____
4. ____
5. ____
6. ____

LEFT TORSO
1. *PPC*
2. *PPC*
1 3. *PPC*
4. *LRM 5*
5. *Heat Sink*
6. *Heat Sink*

1. *Heat Sink*
2. *Jump Jet*
2 3. *Jump Jet*
4. ____
5. ____
6. ____

CENTER TORSO
1. Engine
2. Engine
1 3. Engine
4. Gyro
5. Gyro
6. Gyro

1. Gyro
2. Engine
2 3. Engine
4. Engine
5. *Heat Sink*
6. *Heat Sink*

RIGHT TORSO
1. *Machine Gun*
2. *Flamer*
1 3. *Heat Sink*
4. *Heat Sink*
5. *Heat Sink*
6. *Heat Sink*

1. *Heat Sink*
2. *Jump Jet*
2 3. *Jump Jet*
4. ____
5. ____
6. ____

LEFT LEG
1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. ____
6. ____

Engine Hits ○○○
Gyro Hits ○○
Sensor Hits ○○

RIGHT LEG
1. Hip
2. Upper Leg Actuator
3. Lower Leg Actuator
4. Foot Actuator
5. *Heat Sink*
6. *Heat Sink*

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Type: **CRD-3R** Crusader			Tons
Tonnage:	65 tons		65
Internal Structure:			6.5
Engine:	260 Magna		13.5
Walking MP's:	4		
Running MP's:	6		
Jumping MP's:	0		
Total Heat Sinks:	10		0
Gyro:			3
Cockpit:			3
Armor Factor:	192		12

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	21	34/8
Rt./Lt. Torso:	15	24/6
Rt./Lt. Arm:	10	20
Rt./Lt. Leg:	14	25

Weapons and Ammo:

Type	Loc.	Critical	
LRM 15	RA	3	7
LRM 15	LA	3	7
Ammo (LRM) 8	RT	1	1
Ammo (LRM) 8	LT	1	1
SRM 6	RL	2	3
SRM 6	LL	2	3
Ammo (SRM) 15	CT	1	1
Ammo (MG) 200	CT	1	1
Med. Laser	RA	1	1
Med. Laser	LA	1	1
Machine Gun	RA	1	.5
Machine Gun	LA	1	.5

Type: **STG-3R** Stinger			Tons
Tonnage:	20 ton		20
Internal Structure:			2
Engine:	120 GM		4
Walking MP's:	6		
Running MP's:	9		
Jumping MP's:	6		
Total Heat Sinks:	10		0
Gyro:			2
Cockpit:			3
Armor Factor:	48		3

	Internal Structure	Armor Value
Head:	3	4
Center Torso:	6	6/4
Rt./Lt. Torso:	5	6/2
Rt./Lt. Arm:	3	4
Rt./Lt. Leg:	4	5

Weapons and Ammo:

Type	Loc.	Critical	
Med. Laser	RA	1	1
Machine Gun	RA	1	.5
Machine Gun	LA	1	.5
Ammo (MG) 200	CT	1	1
Jump Jets	RT	3	1.5
Jump Jets	LT	3	1.5

Type: **GRF-1N** Griffin			Tons
Tonnage:	55 tons		55
Internal Structure:			5.5
Engine:	275 CoreTek		15.5
Walking MP's:	5		
Running MP's:	8		
Jumping MP's:	5		
Total Heat Sinks:	12		2
Gyro:			3
Cockpit:			3
Armor Factor:	152		9.5

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	18	20/7
Rt./Lt. Torso:	13	20/7
Rt./Lt. Arm:	9	14
Rt./Lt. Leg:	13	17

Weapons and Ammo:

Type	Loc.	Critical	
PPC	RA	3	7
LRM 10	RT	2	5
Ammo (LRM) 24	RT	2	2
Jump Jets	RT	2	1
Jump Jets	LT	2	1
Jump Jets	CT	1	.5

Type: **BLR-1G** BattleMaster			Tons
Tonnage:	85 tons		85
Internal Structure:			8.5
Engine:	340 VOX		27
Walking MP's:	4		
Running MP's:	6		
Jumping MP's:	0		
Total Heat Sinks:	18		8
Gyro:			3
Cockpit:			4
Armor Factor:	232		14.5

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	27	40/11
Rt./Lt. Torso:	18	28/8
Rt./Lt. Arm:	14	24
Rt./Lt. Leg:	18	26

Weapons and Ammo:

Type	Loc.	Critical	
PPC	RA	3	7
Med. Laser	RT	1	1
Med. Laser	RT	1	1
Med. Laser	RT(R)	1	1
Machine Gun	LA	1	.5
Machine Gun	LA	1	.5
Ammo (MG) 200	LT	1	1
SRM 6 pack	LT	2	3
Ammo (SRM) 30	LT	2	2
Med. Laser	LT	1	1
Med. Laser	LT	1	1
Med. Laser	LT(R)	1	1

Type: **WHM-6R** Warhammer			Tons
Tonnage:	70 tons		70
Internal Structure:			7
Engine:	280 VOX		16
Walking MP's:	4		
Running MP's:	6		
Jumping MP's:	0		
Total Heat Sinks:	18		8
Gyro:			3
Cockpit:			3
Armor Factor:	160		10

	Internal Structure	Armor Value
Head:	3	9
Center Torso:	22	22/9
Rt./Lt. Torso:	15	17/8
Rt./Lt. Arm:	11	20
Rt./Lt. Leg:	15	15

Weapons and Ammo:

Type	Loc.	Critical	
PPC	RA	3	7
PPC	LA	3	7
SRM 6 pack	RT	2	3
Ammo (SRM) 15	RT	1	1
Med. Laser	RT	1	1
Med. Laser	LT	1	1
Small Laser	RT	1	.5
Small Laser	LT	1	.5
Machine Gun	RT	1	.5
Machine Gun	LT	1	.5
Ammo (MG) 200	CT	1	1