

INTRODUCTION

INCOMING
MESSAGE

SEND

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Mistakes happen. Even at the best of times researchers can be tripped up by preconceptions and incomplete data. Such was the case for the team who labored on the inglorious task of sifting through the data from the recently recovered Terran Hegemony memory core from New Dallas. Overwhelmed by the flood of data provided by this new fragment of the Hegemony's fabled Prometheus database, the people working frantically to update threat and combat data files overlooked critical details when analyzing the profiles of several "RetroTech" designs. In several cases designs were catalogued with the erroneous assumption that their construction incorporated modern components.

These errors were brought to light by the excellent work performed by my own research assistants as we continued to delve in the digital treasure trove from the past provided by the late Chandrasekhar Kurita. Rather than wait to add our findings to the next release of the 3075 Technical Readout and its supporting files it was decided to include these updates with new information gleaned from the depths of the Hegemony memory core. The progenitors of modern weapons date back to the bloody Age of War. It was in this crucible that the BattleMechs, combat vehicles, fighters, DropShips, JumpShips, and WarShips with which we are familiar were first forged. Many of the details of this fascinating process were all but lost over the centuries. Those antiquated examples that survived the Reunification War that marked the birth of the First Star League did not long survive its death. Stripped down to keep "modern" equipment functioning, they became little more than half-forgotten myths and legends.

It was the pursuit of these myths and legends that brought to light many of the discrepancies in the published material.

In this first volume of an ongoing series we seek to redress the situation as well as cast some light on several early BattleMech, vehicle, and fighter designs. In no way is this project an exhaustive collection of what often is referred to as "Primitive" units. Centuries of warfare have spawned far too great a variety of weapons to be encompassed by the work of a single lifetime of research. Instead the intent is to focus on two classes of weapon: those common enough to be considered generic or representative of their type, and others which serve as the cornerstones of modern weapon design.

—Professor Col Hari
18 February 3078

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HOW TO USE THIS BOOK

The 'Mechs, combat vehicles, and fighters described in *Experimental Technical Readout: Primitives, Volume 1* provide players with a sampling of designs from the period of time covered by the Age of War and the rise of the First Star League. While the focus of the designs featured in this book are historical, many of the designs have modern counterparts detailed in other Technical Readouts.

The rules for using 'Mechs, vehicles and fighters in *BattleTech* game play can be found in *Total Warfare*, while the rules for their construction can be found in *TechManual*. However, the primitive nature of these designs also draws upon the Experimental-level rules presented in *Tactical Operations*.

DEVELOPER'S ADDENDUM

Astute readers may notice that several of the designs that will appear in this and future volumes of the *XTR: Primitives* mini-series have appeared in previous Record Sheets books such as *Record Sheets: 3075*. This redundancy is intentional, both as a means of correcting minor errors in the original Primitive units' stats (where conflict arises, the Primitives XTRs supersede) and as a means of providing a clearer and more focused treatment of the primitive machines that were contemporaries during the Age of War.

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Special Thanks: To Randall for taking a chance all those years ago on somebody he has never met. To Herb for allowing me to continue to manipulate events from the shadows. To all those who undertake the thankless (well obviously less thankless now) task of trying to keep all the designs and record sheets straight. And to all the supporters of Thomas Hogarth for proof that I have equaled the feats of Dr. Frankenstein.



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CAT35646



SHD-1R SHADOW HAWK

Unit Summation: Original *Shadow Hawk* Primitive Chassis

Producer/Site: Lang Industries, Caph

Developing Engineer: Rodger Taylor

Introduction Date: 2457

Non-Production Equipment Analysis:

Primitive Engine

Primitive Cockpit

Primitive Armor

Overview

In the wake of the Lyrans' commando raid on Hesperus II in 2455, the Terran Hegemony knew that its monopoly on BattleMech technology was ending. Thus the Hegemony Armed Forces launched a crash program to build up their 'Mech forces as quickly as possible. Amongst the designs commissioned during this time was the SHD-1R *Shadow Hawk*. Better known for its work in the field of aerospace design, Lang Industries had rested on its laurels for far too long and now their competitors were grabbing the company's market share. Seeking to take advantage of the growing demand for the new BattleMechs to replace its lost business, the *Shadow Hawk* was Lang's first foray into 'Mech production.

The SHD-1R proved to be a phenomenal success, opening the door for Lang Industries to bid on many important military contracts over the coming century. (Indeed, Luthien Armor Works would be outraged when the SLDF chose Lang's SHD-2Hb *Shadow Hawk* over their DRG-1C *Dragon* in 2764 as a replacement for the aging SHD-2Hs. Accusations of espionage by a disgruntled LAW were never proven, but the incident only served to deepen the Combine's distrust of its fellow League Member States.)

Possessing what was considered to be exceptional speed and maneuverability for BattleMechs at the time, the SHD-1R was envisaged to be a multi-purpose fighter. The innovative over-the-shoulder mount for the Armstrong J-7 autocannon proved itself almost as flexible as an arm-mounted weapon. Deployed with the HAF's frontline BattleMech units in large numbers, the SHD-1R *Shadow Hawk* lingered on with some units into the early years of the Reunification War, where it served with the newly formed Star League Defense Force.

The *Shadow Hawk* was dogged by issues with the placement of armor plates, especially in the legs. Regular maintenance was required to replace myomer bundles damaged due to wear caused when the inner surface of the heavy armor snagged on them. This problem was ultimately corrected after Lang Industries issued an expensive (and humiliating) recall in 2550, but many SHD-1R and early examples of the SHD-2H never received this refit.

Type: **SHD-1R Shadow Hawk**

Technology Base: Inner Sphere (Primitive)

Tonnage: 50

Battle Value: 841

Equipment

Internal Structure:

Engine:

Walking MP:

Running MP:

Jumping MP:

Heat Sinks:

Gyro:

Cockpit (Primitive):

Armor Factor (Primitive):

240 (Primitive)

4

6

3

10

3

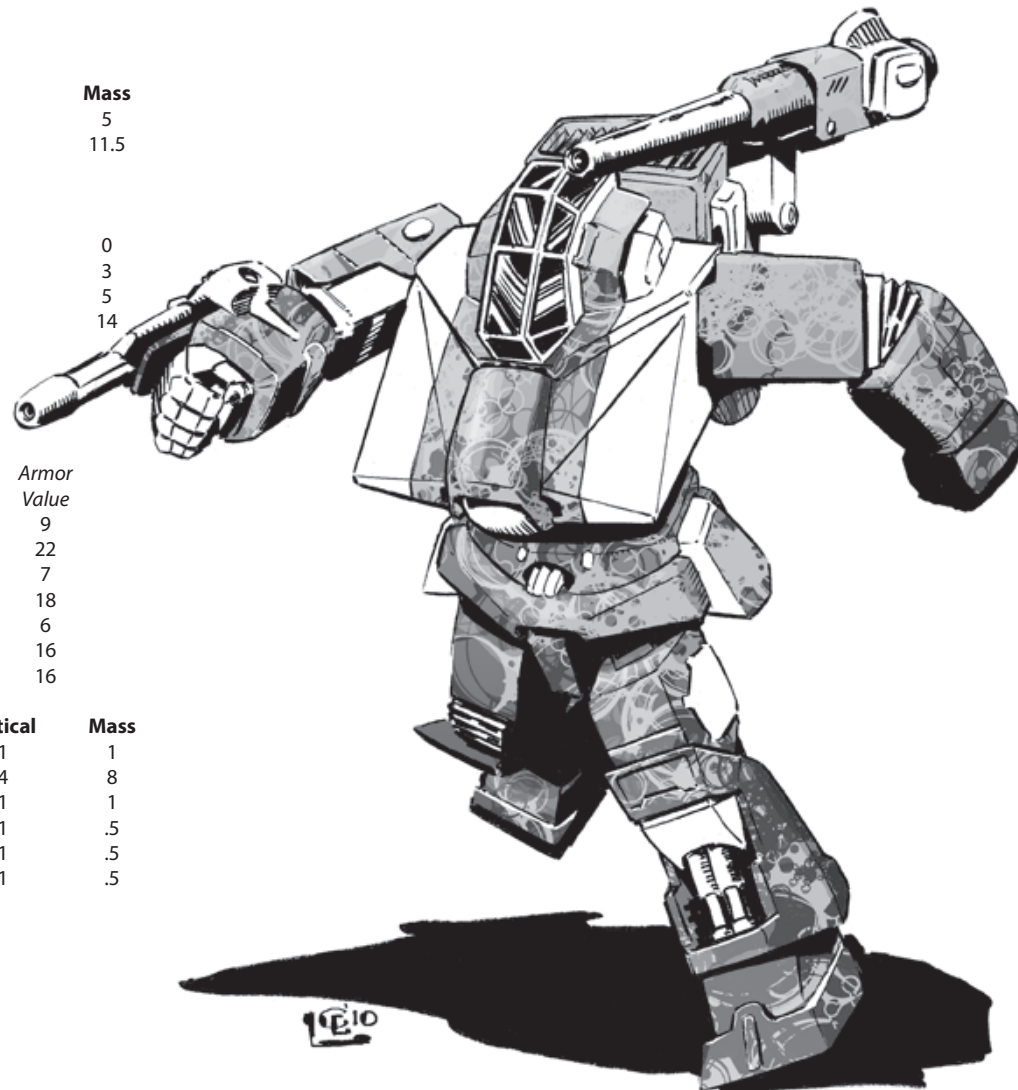
5

150

Mass

5

11.5



Internal Structure

Head

Center Torso

Center Torso (rear)

R/L Torso

R/L Torso (rear)

R/L Arm

R/L Leg

3

16

7

12

8

12

Armor Value

9

22

7

18

6

16

16

Weapons and Ammo

Medium Laser

Autocannon/5

Ammo (AC) 20

Jump Jet

Jump Jet

Jump Jet

Location

RA

LT

LT

RT

CT

LT

Critical

1

4

1

1

1

1

Mass

1

8

1

.5

.5

.5

EXPERIMENTAL

SAND DEVIL HOVER TANK

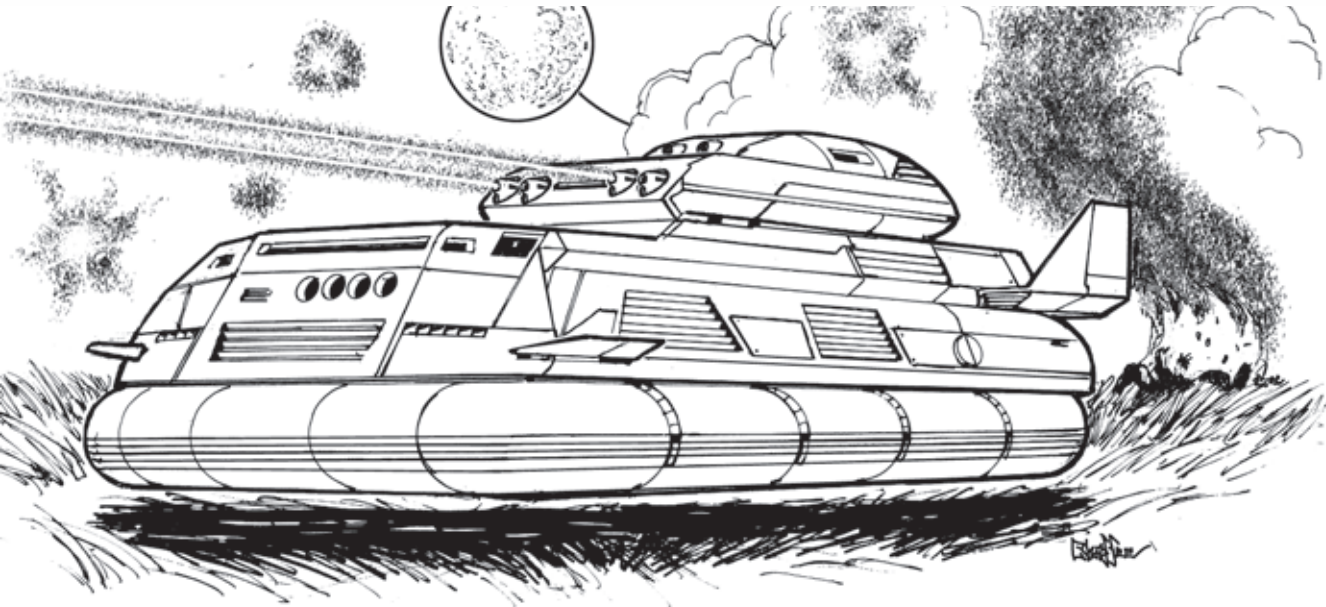
Unit Summation: Primitive Hover Tank
(predecessor to the Sabaku Kaze)
Producer/Site: Cairo Enterprises, Arkab
Developing Engineer: Unknown
Introduction Date: 2452
Non-Production Equipment Analysis:
Primitive Combat Vehicle

Overview

Named after the Sand Devil serpent inhabiting the wastes of Arkab, Cairo Enterprises' Sand Devil hover tank proved its worth to the Azami tribesmen in their battles with the Draconis Combine. Time and again, the Azami stung the Kurita forces that invaded their worlds in 2497. The constant raids and feints frustrated Combine attempts to secure the desert planets and bought the time for the Algedi blood burn and other viruses to overwhelm the unprepared Kurita troops. These victories ultimately won the Azami people a degree of autonomy within the expanding Combine.

Build around a massive ICE power plant, the tank subscribed to the "speed is armor" school of tactics. Indeed the vehicle's armor, while relatively thick, was extremely vulnerable to penetration by lasers and autocannon. Azami crews knew that not getting hit was therefore the best way to ensure their continued survival, and they were experts at maneuvering their swift craft amongst the dunes, wadis, and salt flats of their homeworlds.

With the conclusion of the conflict between the Azami and House Kurita, the Sand Devil was slowly replaced by more modern combat vehicles as the Azami began to operate alongside other Combine forces on other worlds (where the Sand Devil proved to be less efficient or reliable). Still, the veterans of the Azami struggle held a special affection for their vehicles, and their crews saved many from the scrap heap. Stripped of their armament, these vehicles were driven by their owners in informal races. Over time these evolved into organized competitions, such as the fabled "dune races" on Dabih. Those grueling five thousand-kilometer races pitted the Sand Devil and its crew against the desert and fellow competitors. The rugged vehicle won an impressive string of victories, and continued to perform well against more modern vehicles for many years. Indeed, even a century later the Sand Devil was still competing effectively—a testament to the design's suitability for the arid environment in which it was operating.



Type: **Sand Devil Hover Tank**
Technology Base: Inner Sphere
Movement Type: Hover (medium)
Tonnage: 50
Equipment Rating: D/D-X-X/E
Battle Value: 345

Equipment		Mass
Chassis/Controls:		12.5
Engine/Trans:		20.5
Type:	ICE	
Cruising MP:	8	
Flank MP:	12	
Heat Sinks:	8	
Fuel: 1,219 km		2.5
Power Amplifier:		.3
Turret:		.5
Armor Factor (BAR 5):	54	2
	Armor Value	
Front	12	
R/L Side	11/11	
Rear	10	
Turret	10	

Weapons and Ammo	Location	Mass
2 Medium Lasers	Turret	2
2 Small Lasers	Turret	1
Advanced Fire Control	Body	.5
Cargo	Body	.2

Crew: 8 (2 Officers, 2 enlisted/non-rated, 4 gunners)

HURRICANE CONVENTIONAL FIGHTER

Field Testing Summation: Primitive Conventional Fighter
Producer/Site: Martinson Armaments, Terra
Supervising Technician: Unknown
Project Start Date: 2297
Non-Production Equipment Analysis:
Primitive Conventional Fighter
Primitive Rocket Launcher

Overview

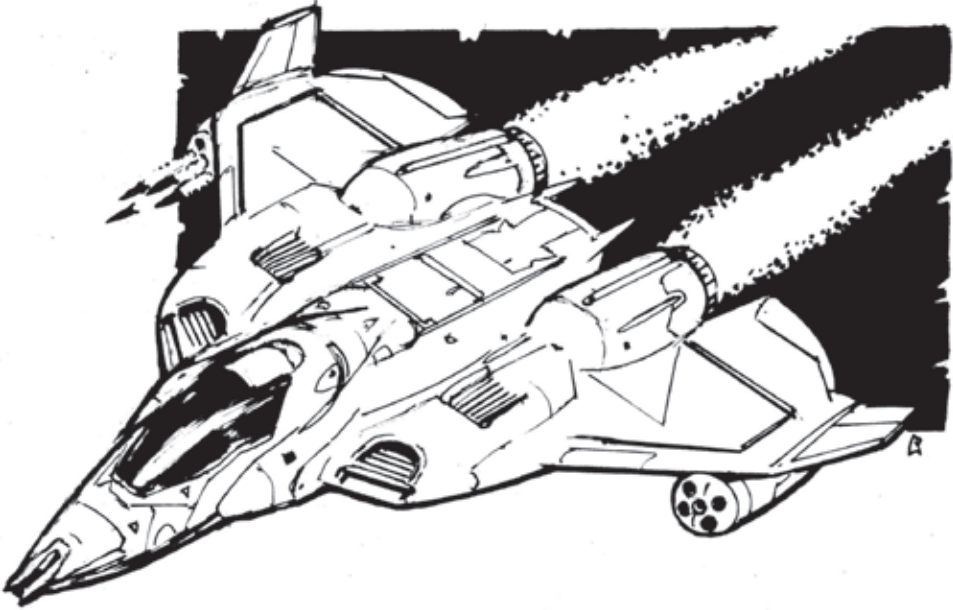
One of the Terran Alliance's main medium strike fighters, the Hurricane was a product of a rearmament program supported by both the Liberal and Expansionist parties (both of which considered it essential to possess a strong military force they could co-opt should the Alliance continue its slide towards civil war). With control of the skies uncontested by the primitive, unstreamlined space fighters of the day, the Hurricane was noteworthy for the extended reach of its internal Kestrel 15 rocket launcher. Many contemporary designs were faster or more heavily armed, but in practice, these advantages often proved illusory when they were blown out of the sky before they could fire a shot in return.

The only recorded instances of the Hurricane finding itself hard pressed came in 2315. In September the political situation deteriorated as the Alliance's two major political parties finally resorted to force. While many military commands—most significantly the Space Navy—remained neutral, both factions could call upon sizable forces on Terra. Aircraft from both parties clashed in the skies above Zurich with neutral peacekeepers sent in by Fleet Admiral James McKenna. With all three groups deploying the Hurricane, the fighter essentially canceled itself out. Losses in the air were horrific, and it was only through superior numbers that the peacekeepers prevailed. Squadron after squadron of Hurricanes had blown each other (and any other fighter unfortunate enough to be airborne that day) from the sky with massed volley fire.

The Hurricane was a runaway success for Martinson Armaments and established the company as one of the premier manufacturers of conventional and aerospace fighters for over a century. The company would go on to produce the first true aerospace fighter: the *Chimera*. The introduction of a craft truly capable of operating on both sides of the atmospheric interface ultimately doomed the Hurricane's days of atmospheric supremacy.

Type: **Hurricane Conventional Fighter**
Technology Base: Inner Sphere (Primitive)
Tonnage: 25
Equipment Rating: D/D-X-X/E
Battle Value: 92

Equipment		Mass
Chassis/Controls:	Fixed Wing, Medium	2.5
Engine:		15
Type:	ICE	
Safe Thrust:	6	
Maximum Thrust:	9	
Structural Integrity:	6	0
Heat Sinks:	0	0
Fuel:	150	3
Armor Factor (BAR 5):	29	1
	Armor Value	
Nose	10	
Wings	7/7	
Aft	5	



Weapons and Ammo	Location	Tonnage	Heat	SRV	MRV	LRV	ERV
Machine Gun	N	.5	0	—	—	—	—
Ammo (MG) 100	Body	.5	—	—	—	—	—
Primitive Rocket Launcher 15*	N	1	0	9	9	—	—
Basic Fire Control	Body	.5	—	—	—	—	—
2 External Stores Hardpoints	Body	1	—	—	—	—	—

Crew: 3

Notes: The Primitive Rocket Launcher 15 uses the normal rules for a standard Rocket Launcher 15 with the following exception: Apply a -1 modifier to all rolls on the Cluster Hits Table, to a minimum modified result of 2.

AQUILLA-CLASS TRANSPORT JUMPSHIP

Field Testing Summation: Primitive JumpShip
Producer/Site: Boeing Interstellar, Lunar Orbit
Supervising Technician: Unknown
Project Start Date: 2148
Non-Production Equipment Analysis:
Primitive JumpShip

Overview

The Kearny-Fuchida Drive opened the door to the universe for humanity and during the period known as The Exodus thousands would flee the confines of Terra in search of freedom, adventure, or opportunity. Born of the demand for interstellar transports, the *Aquila*-class vessel came out of Boeing Interstellar's shipyards. At that time the technique of manipulating the KF-field was still in its infancy. Later improvements in drive core construction and control of higher energy charge levels would ultimately increase the size of the drive core and push jump ranges up to today's levels, but the *Aquila* and other contemporary designs were limited to a maximum of fifteen light-years per jump. Also, the now-familiar DropShip/JumpShip combination had yet to be developed, requiring the vessel to mount far more powerful drive systems than the simple station-keeping systems used in modern JumpShips. Finally, the introduction of the Jump Sail was still five decades in the future. As a result, the *Aquila* was dependent on its fusion reactor and internal fuel bunkers to charge its primitive drive core.

The *Aquila*-class became one of the workhorses of mankind's colonization of the stars. Those operating in the core systems around Terra hauled low bulk/high value cargo, but many others were refitted with basic passenger accommodations and were used to carry a veritable tidal wave of humanity to the stars. Samantha Calderon led a flotilla of converted *Aquila*-class transports into uncharted space, penetrating the Hades Cluster and ultimately founding the Taurian Concordat.

On many occasions the *Aquila* was pressed into service as a naval auxiliary. During the Outer Reaches Rebellion the vessel was used to mine the jump points in the Ryde system and destroy several Terran Alliance troop transports. The Periphery states employed up-gunned versions of the *Aquila*-class during the Reunification War. Lacking the heavy shipbuilding industrial base required to build up a war fleet, the Magistracy of Canopus depended heavily on such armed merchants in its struggle with the powerful Star League navy.

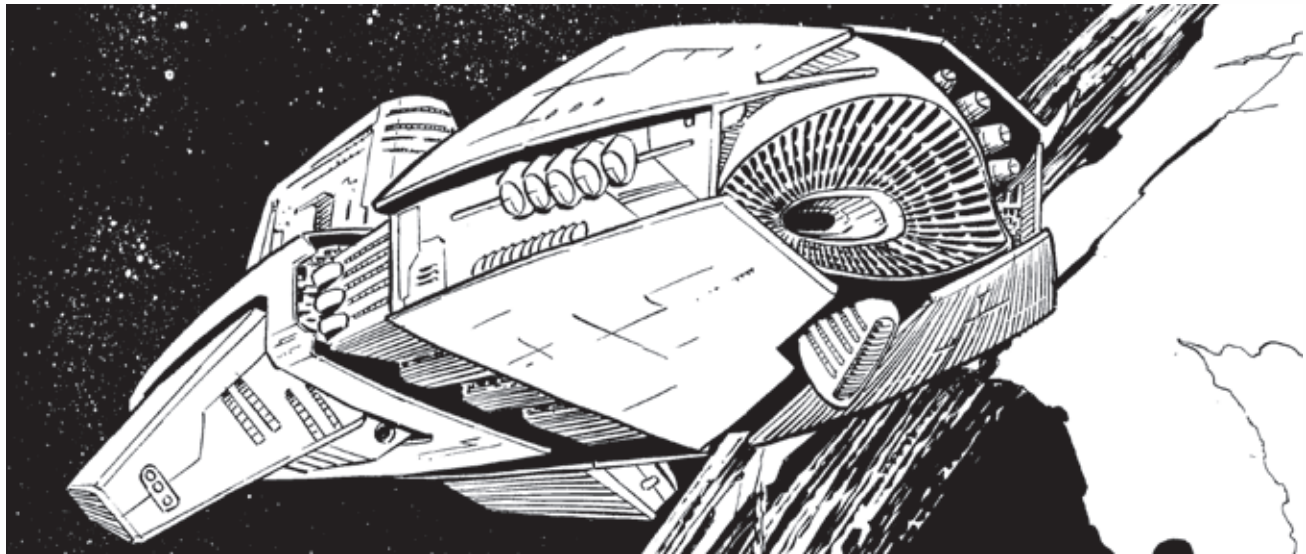
Ultimately, the improved performance and economics of the JumpShip/DropShip combination killed off the aging *Aquila*-class.

***Aquila*-class Transport JumpShip**

Type: JumpShip
Use: Interstellar Transport
Tech: Inner Sphere (Primitive)
Introduced: 2148
Tonnage: 100,000
Battle Value: 957

Dimensions

Length: 305 meters
Width: 53 meters
Height: 45 meters



Sail Diameter: None
Fuel: 2,500 tons (25,000)

Tons/Burn-day: 19.75

Safe Thrust: 1

Maximum Thrust: 2

Sail Integrity: N/A

KF Drive Integrity: 4

Heat Sinks: 165

Structural Integrity: 10

Armor (Capital)

Nose: 9

Fore-Sides: 7

Aft-Sides: 6

Aft: 5

Cargo

Bay 1: Small Craft (8)
Bay 2: Cargo (18,057 tons)
Bay 3: Cargo (18,057 tons)

4 Doors
1 Door
1 Door

DropShip Capacity: 0

Grav Decks: None

Escape Pods: 20

Life Boats: 0

Crew: 13 officers, 65 crew, 12 gunners, 30 Second-Class Passengers

Ammunition: 6 tons Autocannon 5 ammo, 10 tons MG ammo.

Weapons and Ammo	Tonnage	Capital Attack Values (Standard)					Class
		SRV	MRV	LRV	ERV		
Arc (Heat) Type							
Nose (0 Heat)							
2 Machine Gun	1	1(4)	—	—	—		Point
Ammo (MG) 400	2	—	—	—	—		—
FL/FR (1 Heat)							
Autocannon/5	8	1(5)	1(5)	—	—		AC
Ammo (AC) 60	3	—	—	—	—		—
1 Machine Gun	.5	1 (2)	—	—	—		Point
Ammo (MG) 200	1	—	—	—	—		—
LBS/RBS (0 Heat)							
1 Machine Gun	.5	1 (2)	—	—	—		Point
Ammo (MG) 200	1	—	—	—	—		—
AL/AR (0 Heat)							
1 Machine Gun	.5	1 (2)	—	—	—		Point
Ammo (MG) 200	1	—	—	—	—		—
Aft (0 Heat)							
2 Machine Gun	1	1(4)	—	—	—		Point
Ammo (MG) 400	2	—	—	—	—		—

Note: Uses 80 tons of primitive armor. Features 30 Second-Class Passenger Quarters (210 tons). Primitive K-F Drive range is limited to 15 light-years per jump.

BATTLETECH™

'MECH RECORD SHEET

'MECH DATA

Type: SHD-1R SHADOW HAWK

Movement Points: Tonnage: 50
 Walking: 4 Tech Base: Inner Sphere
 Running: 6 (Primitive)
 Jumping: 3 Star League

Weapons & Equipment Inventory (hexes)

Qty	Type	Loc	Ht	Dmg	Min	Sht	Med	Lng
1	Autocannon/5	LT	1	5 [DB]	3	6	12	18
1	Medium Laser	RA	3	5 [DE]	—	3	6	9

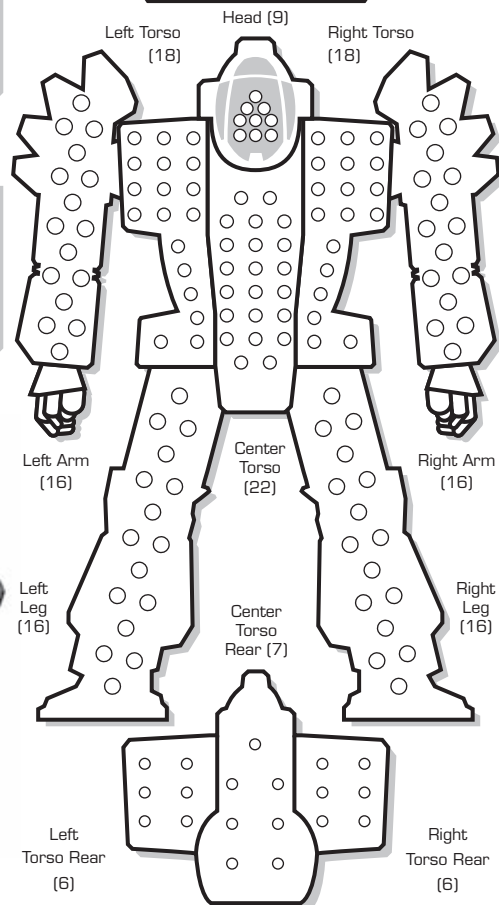
BV: 841

WARRIOR DATA

Name: _____
 Gunnery Skill: _____ Piloting Skill: _____
 Hits Taken: 1 2 3 4 5 6
 Consciousness#: 3 5 7 10 11 Dead



ARMOR DIAGRAM



CRITICAL HIT TABLE

Left Arm

- Shoulder
- Upper Arm Actuator
- Lower Arm Actuator
- Hand Actuator
- Roll Again
- Roll Again

Head

- Life Support
- Sensors
- Primitive Cockpit
- Roll Again
- Sensors
- Life Support

Right Arm

- Shoulder
- Upper Arm Actuator
- Lower Arm Actuator
- Hand Actuator
- Medium Laser
- Roll Again

Center Torso

- Primitive Fusion Engine
- Primitive Fusion Engine
- Primitive Fusion Engine
- Gyro
- Gyro
- Gyro

Right Torso

- Roll Again
- Roll Again
- Roll Again
- Roll Again
- Roll Again
- Roll Again

Left Torso

- Jump Jet
- Autocannon/5
- Autocannon/5
- Autocannon/5
- Autocannon/5
- Ammo (AC/5) 20

- Gyro
- Primitive Fusion Engine
- Primitive Fusion Engine
- Primitive Fusion Engine
- Jump Jet
- Roll Again

Right Torso

- Jump Jet
- Roll Again
- Roll Again
- Roll Again
- Roll Again
- Roll Again

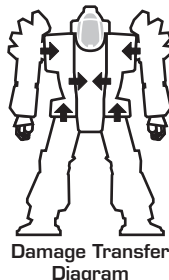
Engine Hits ○○○
 Gyro Hits ○○
 Sensor Hits ○○
 Life Support ○

Left Leg

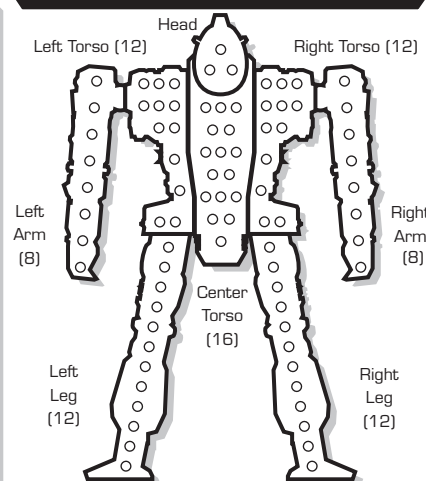
- Hip
- Upper Leg Actuator
- Lower Leg Actuator
- Foot Actuator
- Heat Sink
- Roll Again

Right Leg

- Hip
- Upper Leg Actuator
- Lower Leg Actuator
- Foot Actuator
- Roll Again
- Roll Again



INTERNAL STRUCTURE DIAGRAM



Heat Scale

Overflow

30*
29
28*
27
26*
25*
24*
23*
22*
21
20*
19*
18*
17*
16
15*
14*
13*
12
11
10*
9
8*
7
6
5*
4
3
2
1
0

HEAT DATA

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