

INTRODUCTION

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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

INTRODUCTION

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.

Project Development: Herbert A. Beas II BattleTech Line Developer: Herbert A. Beas II Primary Writing: David L. McCulloch Production Staff

Cover Design: Klaus Scherwinski Layout: Matt Heerdt Illustrations: Doug Chaffee

Brent Evans Chris Lewis Duane Loose *Record Sheets*: David L. McCulloch **Factchecking/Playtesting**: Joel Bancroft-Connors, Roland Boshnack, William Gauthier, Joshua Franklin, Keith Hann, Johannes Heidler, Daniel Isberner, Chris Marti, Luke Robertson, Chris Smith, Chris Wheeler and Patrick Wynne.

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COM-1A COMMANDO

Unit Summation: Original Commando Primitive Chassis Producer/Site: Coventry Defense Conglomerate, Coventry Developing Engineer: Andre Barcalow Introduction Date: 2463

Non-Production Equipment Analysis:

Primitive Engine Primitive Cockpit Primitive Armor

Overview

The Lyran Commonwealth had (literally) stolen the march over the Free Worlds League and Draconis Combine with its daring Operation Prometheus. The theft of Terran Hegemony BattleMech plans gave the Commonwealth a significant technological edge, but it was an advantage that would prove short lived. Kurita raiders struck Coventry in 2461 and secured data enabling the Combine to kick-start its own BattleMech program. Then in 2462, disgruntled workers on Alarion defected to the Free Worlds League with plans for Lyran designs. Knowing that it was now only a matter of time before its enemies would have their own BattleMechs, the Commonwealth rushed into service new designs, amongst which was the COM-1A Commando.

Built around a single Odin Heavy Laser, the *Commando* represented a marked departure from previous Commonwealth designs such as the *Ymir* and *Crossbow*. Light and fast, the *Commando* was better suited to the role of scout or raider—and it would excel in both duties during the campaigns to retake Nox and Skondia. In 2475, Lyran *Commandos* faced off against Kurita's heavier *Gladiators* on Nox in the first large-scale 'Mech Warriors used their numerical advantage to overwhelm the Kurita machines.

It was the campaign that would become known as the "Long March" that exposed the critical flaws in the Odin's cooling system. Excessive heat buildup resulted in the breakdown of lubricants in the actuators of the 'Mech's right arm. The result was a high failure rate for these components and irate MechWarriors who found they could not aim their only weapon accurately. Several attempts to fix the problem failed before Coventry switched to a predominantly missile-based weapon mix for its more advanced COM-2D *Commando*. This change was so successful, in fact, that the Commonwealth's second-generation COM-2Ds began to replace the COM-1A in 2486.

Some decommissioned COM-1As found their way into private hands, such as with the First Tamar Hussars (later known as the Tamar Tigers) regiment raised by the Duke of Tamar as his own personal BattleMech force. Others lingered on in service with Militia forces until the disarmament following the Reunification War provided a ready supply of modern equipment with which they could be replaced.

Type: COM-1A Commando

Technology Base: Inner Sphere (Primitive) Tonnage: 25 Battle Value: 475



KY2-D-01 KYUDO

Unit Summation: Original Kyudo Primitive Chassis Producer/Site: Martinson Armaments, Terra Developing Engineer: Brian May Introduction Date: 2443 Non-Production Equipment Analysis:

> Primitive Engine Primitive Cockpit Primitive Armor

Overview

Martinson Armaments unveiled their first production BattleMech, the KY2-D-01 *Kyudo*, in 2443. The company was at a disadvantage, having not been amongst those to participate in the development of the Terran Hegemony's *Mackie*. With only limited access to the blueprints, Martinson had been forced to develop many of the KY2-D-01's systems almost from scratch. Consequently, the result incorporated a number of radical design concepts—some innovative, others downright peculiar.

Armed with the rugged Conan LRM launcher and a single Sorenstein large laser, the *Kyudo* is well suited to its primary support role. Deployed alongside heavier armed and armored 'Mechs and assault tanks, the KY2-D-01 remained in service with the Hegemony Armed Forces during the Reunification War. Unfortunately in the war's aftermath, cutbacks in SLDF spending curtailed plans for a wholesale replacement program with the upgraded KY2-D-02. The older *Kyudo* was gradually shuffled off into the Hegemony's reserve, mothballed away in caches of obsolete equipment or sent to serve with rear echelon or militia commands. There they languished until gunned down by the forces of the Rim Worlds Republic when they seized control of the Terran Hegemony. The ensuing collapse of the Star League and subsequent Succession Wars eliminated the few surviving examples of this early BattleMech.

Although the *Kyudo* faded from memory, many of the innovations introduced by Martinson Armaments became standard features on modern BattleMechs. The unique suspension and leg actuator layout was effective, but its vulnerability to infantry attack meant that the concept was not adopted in later designs. On the other hand, the technique used to couple myomer bundles to actuators proved more reliable and easy to maintain than the bulky stem bolts Skobel introduced on their *Mackie*, and Martinson's solution became the de facto standard that continues in use today. Likewise, the layout of the *Kyudo's* internal systems made field maintenance easier and quicker than on the committee-spawned nightmare that was the *Mackie*. Future BattleMech designs were influenced heavily by Martinson's concepts, and it is little wonder that HAF technicians preferred assignment to commands equipped with the *Kyudo*.

Type: KY2-D-01 Kyudo

Technology Base: Inner Sphere (Primitive) Tonnage: 45 Battle Value: 748

Battle Value. 748						
Equipment Internal Structure:		Mas 4.5		_ /	/	
Engine:	220 (Primitive	e) 10				
Walking MP:	4					
Running MP:	6				TANK	
Jumping MP:	0					
Heat Sinks:	12	2	FT D			
Gyro:		3	HI			
Cockpit (Primitive):		5				
Armor Factor (Primitive):	101	9.5	FIST 1			
	Internal	Armor	ELFT SA			
	Structure	Value				
Head	3	9				
Center Torso	14	14				
Center Torso (rear)		4	/ / \			
R/L Torso	11	11	1			W/ie=in
R/L Torso (rear)		3				V
R/L Arm	7	9		XIIIAA		
R/L Leg	11	14		A D		VIGHTT
	e				Un	
Weapons and Ammo	Location C	ritical Ma	ss VIII		A TAK	
Large Laser	RA	2 5				-
Ammo (LRM) 12	LT	1 1			BAY DA	
LRM 10	LA	2 5	603	UK I		NO DIH
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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-theshoulder 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 (Primiti 4 6 3 10 150	ve)	Mass 5 11.5 0 3 5 14	
	Internal			
	Structure			
Head	3	9		and the second se
Center Torso	16	22		
Center Torso (rear)		7		
R/L Torso	12	18		
R/L Torso (rear)	0	6		and the second sec
R/L Arm	8	16		
R/L Leg	12	16		
Weapons and Ammo	Location	Critical	Mass	
Medium Laser	RA	1	1	
Autocannon/5	LT	4	8	
Ammo (AC) 20	LT	1	1	
Jump Jet	RT	1	.5	
Jump Jet	СТ	1	.5	
Jump Jet	LT	1	.5	

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OWR-2M OSTWAR

Unit Summation: Original Ostwar Primitive Chassis Producer/Site: Ostmann Industries, Terra Developing Engineer: Ernst Ostmann Introduction Date: 2470 Non-Production Equipment Analysis:

Primitive Engine Primitive Cockpit Primitive Armor

Overview

The Ostwar was the first of the revolutionary "walking pods" pioneered by Ostmann Industries. Design work and prototype testing was completed in early 2470, but Ostmann's limited resources delayed full-scale production until around 2500. By that time, the Ostwar was obsolete by Hegemony standards and—with few orders coming in—Ostmann Industries found itself facing financial ruin. Ernst Ostmann was forced to look beyond Hegemony borders, where the rest of the Inner Sphere continued to lag behind the Terrans in both technology and industrial might. Other nations, especially the Free Worlds League and Capellan Confederation, were more than happy to purchase "old" weapons from a Hegemony-based company. With the Terran Hegemony pursuing Director-General Deborah Cameron's "Strategy of Aggressive Peacemaking", Ostmann was able to get approval to export its antiquated 'Mechs to the other Great Houses.

The Free Worlds League purchased a sizable number of *Ostwars* for service with the FWL Militia. Although the design was beginning to show its age, it served extensively with Captain-General Marion Marik's Expeditionary Forces in the campaign against the Magistracy of Canopus during the Reunification War. Ironically, the BattleMech's simplicity and ruggedness kept it in the field while more modern designs were kept languishing in the repair bays by the realities of fighting an extended campaign at the end of a supply line hundreds of light-years long. Canopian BattleMechs (many supplied by Lyran traders) may have had the technological edge, but against the numerically superior *Ostwar*, that advantage counted for little.

The end of the Reunification War also spelled the end for the *Ostwar*. Budget cuts and military downsizing were guaranteed to make the old 'Mech an obvious candidate for retirement. Most were scrapped, but their legacies lived on in Ostmann Industries' *Ostroc* and *Ostsol* chasses, which borrowed heavily from the *Ostwar's* design. Many subassemblies and components share enough similarities that they could be interchanged between the *Ostwar, Ostroc,* and *Ostsol*. Indeed, it was not uncommon during the Succession Wars to see an *Ostroc* sporting limbs salvaged from its ancient cousin. Though the *Ostwar* lived on as spare parts, no operational examples remained by the end of the Third Succession War.

Type: **OWR-2M Ostwar** Technology Base: Inner Sphere (Primitive) Tonnage: 65 Battle Value: 1.205

Equipment Mass Internal Structure: 6.5 235 (Primitive) 11 Engine: Walking MP: 3 Running MP: 5 Jumping MP: 0 2 Heat Sinks: 12 Gyro: 3 5 Cockpit (Primitive): 17.5 Armor Factor (Primitive): 187 Internal Armor Structure Value Head 3 9 Center Torso 21 30 Center Torso (rear) 10 **R** Torso 15 21 R Torso (rear) 7 18 R/L Arm 10 R/L Leg 15 23

Weapons and Ammo	Location	Critical	Mass
SRM 4	RA	1	2
LRM 20	RT	5	10
Ammo (LRM) 18	RT	3	3
2 Medium Lasers	LT	2	2
Ammo (SRM) 25	LT	1	1
SRM 4	LA	1	2



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HEP-1H HELEPOLIS

Unit Summation: Original *Helepolis* Primitive Chassis Producer/Site: Mitchell Vehicles, Graham IV Developing Engineer: Gregory Kean Introduction Date: 2460 Non-Production Equipment Analysis:

Primitive Engine Primitive Cockpit Primitive Armor

Overview

When its strategic thinking switched from offensive to defensive in the mid-twenty-fifth century, the Terran Hegemony began constructing fortifications that would be the precursors of the mighty Castle Brian. The culmination of this was embodied in Director-General Deborah Cameron's "Strategy of Aggressive Peacemaking", which paved the way for the creation of the Star League. The growing emphasis on defensive weapons systems inspired Mitchell Vehicles to design the first BattleMech-based artillery system. Named the *Helepolis* (an obscure reference to an ancient siege engine) this slow and lumbering creation was met with some skepticism when it was unveiled in 2460. Some felt that this drive to hammer square peg BattleMechs into the round holes traditionally filled by perfectly capable vehicles was little more than a waste of money and time.

Literally built around Armstrong Industries' powerful and accurate Sniper artillery piece, the *Helepolis* epitomizes the trend of highly specialized designs that emerged in the Terran Hegemony. The other Inner Sphere and Periphery nations were just beginning to master BattleMech technology and their early attempts placed an emphasis on multi-role designs. The Hegemony, on the other hand, had the financial and industrial might to produce all the standard "line" BattleMechs it needed and still have the capacity to produce a plethora of military vehicles with much more specific (and narrow) combat roles. This trend would continue into the Star League era, and during the Succession Wars many of these "Jack-of-one-trade" designs were later pressed into service on the battle line as combat losses mounted. (Unsuited to this new role, many, including the *Helepolis*, would not survive the Succession Wars.

Despite the misgivings with which it was received, the *Helepolis* excelled in its intended duties. When providing prolonged long-range fire support or undertaking the task of breaking down the most stubborn of static defenses, the design performed well. Even with its heavily reinforced leg actuators, the BattleMech had to come to a full stop in order to deal with the recoil from firing the main gun. Knowledgeable foes became quick to offer counter-battery fire, and so MechWarriors piloting a *Helepolis* learned to be fast off their mark once a salvo was away.

Type: HEP-1H Helepolis

Technology Base: Inner Sphere (Primitive) Tonnage: 75 Battle Value: 1,055

Equipment		
Internal Structure:		
Engine:	180 (Primitive)	
Walking MP:	2	
Running MP:	3	
Jumping MP:	0	
Heat Sinks:	11	
Gyro:		
Cockpit (Primitive):		
Armor Factor (Primitive):	216	
	Internal	Armor
	Structure	Value
Head	3	9
Center Torso	23	32
Center Torso (rear)		12
R/L Torso	16	22
R/L Torso (rear)		10
R/L Arm	12	21
R/L Leg	16	30
5		50

Weapons and Ammo	Location	Critical	Mass
Sniper Artillery	RA/RT	10/10	20
Medium Laser	Н	1	1
SRM 6	СТ	2	3
Ammo (Sniper) 20	LT	2	2
Ammo (SRM) 15	LT	1	1
Large Laser	LA	2	5



MSK-5S MACKIE

Unit Summation: Original Mackie BattleMech Prototype Producer/Site: Hegemony Research and Development Department (Weapons Division), New Earth **Developing Engineer:** Various Introduction Date: 2439

Non-Production Equipment Analysis:

Primitive Engine Primitive Cockpit Primitive Armor

Overview

The product of a massive military development project instigated by Jacob Cameron, Director General of the Terran Hegemony, the MSK-5S Mackie was the first true BattleMech. Based on Professor Gregory Atlas' groundbreaking myomer research, the Mackie took the familiar IndustrialMech and transformed it into a design that would not merely survive on the battlefield, but would come to dominate it. Twenty of Terra's best weapons and support firms worked on the project at the Hegemony's top-secret weapons development center on New Earth. After final trials at the Yakima test range on Terra, the contract to manufacture the production-version Mackie was awarded to the Skobel Corporation.

The prototype Mackie was put through its paces in 2439, turning in a brilliant performance at the hands of Colonel Charles Kincaid during live fire tests against a series of static and drone targets. This version was deployed with formations such as the 801st Heavy Armored Regiment. In 2443, a strong Kurita force raided Styx in an attempt to test Hegemony resolve. Determined to put a brake on Combine aggression, Director General Jacob Cameron gave permission for deployment of the new BattleMech. Lt. Colonel Amanda Cunningham of the 801st Heavy Armored Regiment led her lance of Mackies against-and over-the armored spearhead of the Kurita attack, sending the Combine forces into headlong retreat. In 2455, the Lyran Commonwealth stole the plans for the Mackie from the Hesperus II manufacturing plant, and began producing its own Mackies within four years. Lyran Mackies led the 2459 campaign against the forces of the Free Worlds League on Loric.

Shortly before these events, however, the Hegemony had introduced the MSK-6S Mackie, which sported many incremental improvements over the prototype, and subsequently became the standard production version. The most notable change was the introduction of a heavier autocannon. The HAF had feared (correctly) that their monopoly on BattleMech technology would not last, and requested the weapons loadout for greater punch. Within decades of the introduction of this upgraded design, most of the prototype 5S models were scrapped. A few survived as museum exhibits until the fall of the Star League.

Type: MSK-5S Mackie

Technology Base: Inner Sphere (Primitive) Tonnage: 100 Battle Value: 1,436

Internal Structure: 10 Engine: 360 (Primitive) Walking MP: 3 Running MP: 5	
Walking MP: 3	
Walking MP: 3 Running MP: 5	
Bunning MP: 5	
Jumping MP: 0	
Heat Sinks: 17 7 V Mark 17	
Gyro: 4	
Cockpit (Primitive): 5	
Armor Factor (Primitive): 214 20	
Internal Armor	
Structure Value	
Head 3 9	STREET, STREET
Center Torso 31 31	Manual Internet
Center Torso (rear) 10	
R/LTorso 21 20	
R/L Torso (rear) 10	
R/L Arm 17 24	
R/L Leg 21 28	
Weapons and Ammo Location Critical Mass	
PPC LA 3 7	
Large Laser CT 2 5	
Autocannon/5 RA 4 8	
Ammo (AC) 20 RT 1 1	
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APC (PRIMITIVE)

Unit Summation: Generic Armored Personnel Carriers Producer/Site: Various Developing Engineer: Various Introduction Date: 2390 Non-Production Equipment Analysis: Primitive Combat Vehicle

Overview

The ubiquitous armored personnel carrier has been part of the modern battlefield since the invention of the internal combustion engine on pre-spaceflight Terra. Technology may have evolved, but the basic function of this class of vehicle remains at its core the transport of a squad of infantry in some degree of safety—if not comfort. Although these vehicles were rendered obsolete by the rapid development of weapons and armor technology during the Age of War, many remained in service. Variants remain in production throughout the Inner Sphere and beyond even today, and serve with militia, paramilitary, and private security forces.

Designed to be rugged and reliable, these APCs commonly employ components (especially in the drive train and transmission) found on civilian vehicles. Technicians can be assured of finding parts for makeshift repairs on all but the most backwards of planets. If there is one flaw with this class of vehicle, it is a dependence on a reliable supply of petrochemicals. Of all the Inner Sphere militaries, the Star League Defense Force came closest to being a pure fusion-driven army. Its elite Royal and Striker formations achieved this goal, but many line commands were not so lucky. The other Great Houses were even further from eliminating ICEpowered vehicles from their order of battle.

The basic chassis has been adapted to a variety of non-combat roles. House Steiner based its standard Prime Mover on a Wheeled APC stripped of weapons and fire control to convert the infantry bay into cargo space. The Draconis Combine uses a similar modification to the Tracked APC chassis while the Federated Suns use the Hover APC as a battlefield ambulance.

Type: Wheeled APC (Primitive)

Technology Base: Inner Sphere Movement Type: Wheeled (Medium) Tonnage: 10 Equipment Rating: D/D-X-X/E Battle Value: 57

Equipment		Mass
Chassis/Controls:		2.5
Engine/Trans:		2.5
Type:	ICE	
Cruising MP:	4	
Flank MP:	6	
Heat Sinks:	0	0
Fuel: 2,000 km		.5
Turret:		.5
Armor Factor (BAR 6):	24	1
	Armor	
	Value	
Front	5	
R/L Side	5/5	
Rear	4	
Turret	5	





Weapons and Ammo	Location	Mass
2 Machine Gun	Turret	1
Ammo (MG) 100	Body	.5
Basic Fire Control	Body	.5
Infantry	Body	1

Crew: 4 (2 enlisted/non-rated, 2 gunners) **Notes:** Features Off-Road chassis/controls modification.

Type: Hover APC (Primitive)

Technology Base: Inner Sphere Movement Type: Hover (Medium) Tonnage: 10 Equipment Rating: D/D-X-X/E Battle Value: 41

Equipment Chassis/Controls:		Mass 2.5
Engine/Trans:		3.5
Type:	ICE	
Cruising MP:	7	
Flank MP:	11	
Heat Sinks:	0	0
Fuel: 1,428 km		.5
Turret:		.5
Armor Factor (BAR 5):	14	.5

APC (PRIMITIVE)

	Armor
	Value
Front	4
R/L Side	3/3
Rear	2
Turret	2

Weapons and Ammo	Location	Mass
Machine Gun	Turret	.5
Ammo (MG) 100	Body	.5
Basic Fire Control	Body	.5
Infantry	Body	1

Crew: 3 (2 enlisted/non-rated, 1 gunner)

Type: Tracked APC (Primitive)

Technology Base: Inner Sphere Movement Type: Tracked Tonnage: 10 Equipment Rating: D/D-X-X/E Battle Value: 61

Equipment Chassis/Controls: Engine/Trans:	Tracked, Mediu	Mass ım 1.5 3
Type:	ICE	
Cruising MP:	3	
Flank MP:	5	
Heat Sinks:	0	0
Fuel: 1,666 km		.5
Turret:		.5
Armor Factor (BAR 6):	24	1
	Armor	
	Value	
Front	5	
R/L Side 5/5		
Rear	4	
Turret	5	
Weapons and Ammo	Location	Mass
2 Machine Gun	Turret	1
Ammo (MG) 200	Body	1
Basic Fire Control	Body	.5

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2 Machine Gun	Turret	1
Ammo (MG) 200	Body	1
Basic Fire Control	Body	.5
Infantry	Body	1

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



STOAT SCOUT CAR

Unit Summation: Common Primitive Scout Vehicle Producer/Site: Unknown **Developing Engineer:** Unknown Introduction Date: 2250 **Non-Production Equipment Analysis:** Primitive Combat Vehicle

Overview

Based on an early exploratory rover design, the Stoat scout car possessed all the advantages that a fusion-driven vehicle enjoys over one with an ICE- or fuel cell-based power plant. Primitive even by the standards of the Age of War, the Demiter-Campbell fusion plant gave the Stoat unlimited endurance, while the chassis itself (based on the Terran Alliance's Ranger) was designed to operate in rugged terrain. The Stoat's interior was surprisingly spacious-another holdover from the civilian vehicle upon which it was based. Its four-man crew could stay in the field for up to a week—or longer if additional stores were carried on external cargo points.

Fitted with powerful communications equipment, the Stoat could tie in to a network of emplaced sensors. This greatly extended the vehicle's reach while also minimizing its exposure when monitoring a static battlefield. On a mobile front, the vehicle's speed and excellent handling were assets that served it well when the crew was called upon to monitor enemy movements or probe for weaknesses.

The Stoat and designs like it were introduced some years before the Age of War. With the signing of the Ares Conventions, the emphasis placed on maneuver in modern warfare made the role filled by such vehicles ever more important. As a consequence, scout vehicles became a particular focus for technological upgrades and older designs like the Stoat were replaced. By the start of the Reunification War vehicles of this type had been consigned to museums throughout the Inner Sphere.

The type continued to see action with the Periphery states in their struggle against the forces of the new Star League. Once again the fundamental strength of the designs of this kind shone through. The Taurian Concordat's successful hit and run tactics owed much to their use of such vehicles to scout out the positions of the League's Expeditionary Force. Combined with the familiarity that comes with fighting on home ground, the information provided by its scouts allowed the Concordat troops to deliver stinging blows to the invaders and draw out the conflict far longer than the League's most pessimistic estimates.



Type: Stoat Scout Car Technology Base: Inner Sphere (Primitive) Movement Type: Wheeled (Medium)

Tonnage: 15 Equipment Rating: C/D-X-X/E Battle Value: 88

Equipment		Mass
Chassis/Controls:		6
Engine/Trans:		5
Type:	Fusion	
Cruising MP:	5	
Flank MP:	8	
Heat Sinks:	0	0
Fuel: N/A		0
Turret:		.5
Armor Factor (BAR 7):	31	2
	Armor	
	Value	
Front	7	
R/L Side	6/6	
Rear	5	
Turret	7	

Weapons and Ammo	Location	Mass
Machine Gun	Turret	.5
Ammo (MG) 100	Body	.5
Basic Fire Control	Body	.5
Communications Equipment	Body	1

Crew: 4 (3 enlisted/non-rated, 1 gunners)

Notes: Features Off-Road and Armored chassis/control modifications



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 thousandkilometer 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

Equipment		Mass
Chassis/Controls:		12.5
Engine/Trans:		20.5
Type:	ICE	
Cruising MP:	8	
Flank MP:	12	
Heat Sinks:	8	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)



MERKAVA MK. VI HEAVY TANK

Unit Summation: Primitive Merkava Heavy Tank Producer/Site: Leopard Armor, Terra Developing Engineer: Unknown Introduction Date: 2384 Non-Production Equipment Analysis: Primitive Combat Vehicle

Overview

Named in homage to a late twentieth century armored vehicle of the same name, Leopard Armor's Merkava Mk. II ("Chariot" in Hebrew) main battle tank design became the mainstay of Terran Alliance armor formations after entering service in 2294. The Mk. VI, which debuted in 2384, was the latest in a string of upgraded versions produced in the decades that followed. Boasting better armor, improved fire control, and a new LRM 10 launcher, the classic Mk. VI continued to serve the Terran Hegemony (the descendent of the ill-fated Alliance) as the main component in its heavy armor platoons. The design served on many fronts and in many actions during the Age of War, where it earned a reputation for ease of maintenance and its ability to soak up considerable damage but still keep on fighting. To the general public, the Merkava Mk. VI symbolized the might of the Hegemony military as much as the mighty battleships of the Hegemony Navy.

Called upon more and more to operate in hostile territory and on worlds that deviated from the Terran or terraformed norm of the Hegemony, the Mk. VI began to demonstrate the limitations of an ICEpowered combat tank. In 2435, the fusion-powered Mk. VII began to replace its progenitor. Ironically, the tank that was once dubbed the "King of the Battlefield" helped usher in the weapon that would supplant it. Four modified Mk. VIs—outfitted as remote-controlled target drones participated in the 2439 live fire tests at the Yakima test range on Terra, where the new *Mackie* BattleMech was put through its paces.

The Mk. VI ended its days in service with militia troops, sold for scrap, or as targets for the new BattleMechs on the target ranges. The Mk. VII was quick to follow it and the Mk. VIII superseded it in turn, only to be phased out of service itself at the conclusion of the Reunification War. Even so, the Merkava series continued to influence heavy armor design for centuries to come. Tank designs such as the Manticore and Von Luckner Heavy Tank were influenced by the battlefield experiences of the older tank.

Type: Mk. VI Merkava Heavy Tank

Technology Base: Inner Sphere (Primitive) Movement Type: Tracked (Medium) Tonnage: 75 Equipment Rating: C/D-X-X/E Battle Value: 477



Equipment Chassis/Controls:		Mass 19.5
Engine:		25.5
Type:	ICE	
Cruising MP:	3	
Flank MP:	5	
Heat Sinks:	0	0
Fuel: 784 km		2
Turret:		2
Armor Factor (BAR 7):	80	4.5
	Armor	
	Value	
Front	17	
R/L Side	16/16	
Rear	15	
Turret	16	

Weapons and Ammo	Location	Mass
Autocannon/5	Turret	8
Ammo (AC) 20	Body	1
LRM 10	Turret	5
Ammo (LRM) 12	Body	1
SRM 4	Turret	2
Ammo (SRM) 25	Body	1
Machine Gun	Turret	.5
Machine Gun	Front	.5
Ammo (MG) 100	Body	.5
Advanced Fire Control	Body	2

Crew: 10 (2 officers, 2 enlisted/non-rated, 6 gunners) **Notes:** Features Armored Chassis modification

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 Chassis/Controls: Engine:	Fixed Wing, Medium	Mass 2.5 15
Type:	ICE	15
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.



VLC-3N VULCAN

Field Testing Summation: Primitive Variant of the Vulcan Producer/Site: Roe Weapon Systems, Apollo Supervising Technician: Unknown Project Start Date: 2525 Non-Production Equipment Analysis: Primitive Aerospace Fighter

Overview

It is perhaps ironic that the House of Amaris, with its roots in the Terran Hegemony, came to view the Hegemony and the rest of the Inner Sphere with such hatred and envy. The aid of Rim World Republic operatives enabled Lyran Commonwealth commandos to steal BattleMech plans from the Hegemony manufacturing plant on Hesperus II in 2455, but the Republic lacked the industrial base necessary to fully make use of this new technology. Greater emphasis was therefore placed on building up the Republic's conventional armor and aerospace forces. One design to emerge as a result was the *Vulcan*.

Possessing superb handling qualities when operating in atmosphere, the *Vulcan* was also a foe to be reckoned with in the vacuum of space. Few fighters of the era could withstand the punishment meted out by the wing-mounted Republic Mk. VII autocannon, and the fighter itself was well armored even by modern standards. The *Vulcan* proved to be a nasty surprise for the pilots of the newly formed Star League Expeditionary Force when it landed on Republican worlds in 2681. Ironically, the troops had been dispatched to support the rulers of House Amaris, who publicly professed their loyalty to the new Star League and were now threatened by a popular uprising in the Republic in support of the other Periphery States in their stand against the League. Expecting their more advanced *Lucifers* and *Chippewas* to sweep their opponents from the skies of Black Earth, the first wave of Operation Mailed Fist soon had their expectations adjusted by the graceful curved-wing fighters that began ripping through their formations.

Following the Reunification War that "reunited" humanity under one government, Roe Weapon Systems continued to produce the fighter in secret and many were passed on covertly to the other Periphery states. The leaders of House Amaris, unable to forget or forgive the fact that they owed their position to the Star League, clearly felt that anything that caused trouble for the Inner Sphere (and the Terran Hegemony in particular) could only be a good thing. Thus were the seeds of the Star League's destruction sown.

Type: VLC-3N Vulcan

Technology Base: Inner Sphere (Primitive) Tonnage: 80 Battle Value: 1,067

Equipment		Mass
Engine:	290	17.5
Type:	Fusion (Primitive)	
Safe Thrust:	5	
Maximum Thrust:	8	
Structural Integrity:	8	0
Heat Sinks:	13	3
Fuel:	400	5
Cockpit:	Primitive	5
Armor Factor (Primitive):	187	17.5
	Armor	
	Value	
Nose	66	
Wings	44/44	
Aft	33	



weapons and Ammo	Location	Tonnage	пеа	SKV	IVIKV	LKV	ERV	
Medium Laser	Nose	1	3	5	_	_	_	
SRM 6	Nose	3	4	8	_	_	_	
Ammo (SRM) 15	Nose	1	_	_	_	_	_	
Autocannon/10	RW	12	3	10	10	_	_	
Ammo (AC) 10	RW	1	_	_	_	_	_	
Autocannon/10	LW	12	3	10	10	_	_	
Ammo (AC) 10	LW	1	_	_	_	_	_	
Medium Laser	Aft	1	3	5	_	_	_	



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 Aquilla-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 Aquilla 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 stationkeeping systems used in modern JumpShips. Finally, the introduction of the Jump Sail was still five decades in the future. As a result, the Aqulla was dependent on its fusion reactor and internal fuel bunkers to charge its primitive drive core.

The Aquilla-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 Aquilla-class transports into uncharted space, penetrating the Hades Cluster and ultimately founding the Taurian Concordat.

On many occasions the Aquilla 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 Aquilla-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 *Aquilla*-class.

Aquilla-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)

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.

4 Doors

1 Door

1 Door

		Capital Attack Values (Standard)				ndard)
Weapons and Ammo	Tonnage	SRV	MRV	LRV	ERV	Class
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.





























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WARSHIP RECORD SHEET





0

Aft:

ARMOR DIAGRAM

Capital Scale

