

INTRODUCTION

As we continue to dig into the history of the Terran Hegemony and the Age of War, we are continually amazed by the facts that we uncover. In this, the dawn of the "modern" era, many of the very concepts and "standard operating procedures" that we all have come to accept as a given had yet come into play, just as had many of the technologies we have similarly taken for granted. This was an age of wild advancement, led as always by the Terran Hegemony, but increasingly not exclusively so. The nations that we now know as the Successor States were birthed and then matured during the Age of War, and while they never eclipsed Terra, they did come close, in the process laying the foundations for the centuries to come.

In this third volume, you will find the history of some of the most iconic military units fielded during the Age of War (and beyond), such as the first BattleMechs designed and built by the Capellan Confederation, as well as the prototype *Bellerophon*, the Terran Hegemony's second (and failed) BattleMech design. You will also find the *Liberty*-class JumpShip, which revolutionized interstellar travel. And, of course, a host of other designs that served the various different nations as they fought to advance into the modern era and unite to form the Star League.

Just as this is not the first work in this series, it is certainly not the last. Every day that our researchers pour through the Age of War archives, they uncover bits of information that shed a new light upon the history of *Homo Stellaris*. And as we do so, we uncover more and more of our own story. This is who we are.

—Dr. Saga Brest, 28 October 3079

HOW TO USE THIS BOOK

The 'Mechs, combat vehicles, and fighters described in *Experimental Technical Readout: Primitives, Volume 3* 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 is 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 utilized the RetroTech construction rules found in *Jihad Secrets: The Blake Documents*, supplemented by 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 other volumes of the *XTR*: *Primitives* miniseries 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 XTR*s 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.

INCOMING

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INTRODUCTION

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Special Thanks: ... to carbon, really such a handy element.





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WAM-B FIREBEE

Field Testing Summation: Original Firebee Primitive Chassis Producer/Site: Confederation Defense Corporation, Boardwalk Supervising Engineer: Kristophe Ovtcharov Prototype Introduction Date: 2472

Non-Production Equipment Analysis:

Primitive Armor Primitive Cockpit Primitive Engine

Overview

The Capellan Confederation was the last of the Inner Sphere powers to move into the BattleMech age, debuting the 'Mech that would ultimately come to be known as the *Firebee* in 2472—some ten years after it originally acquired the technical specifications for the BattleMech (which included preliminary design concepts for the Free Worlds League's *Icarus*). During that decade, the Confederation seemingly focused the efforts of its entire economy and scientific community upon developing the industrial infrastructure required to mass-produce thousands of high-tech BattleMech components.

Meanwhile, Chancellor Jasmine Liao ordered Tikonov's Laryutin Design Bureau to develop the Confederation's first BattleMech. Working from design requirements for a light attack BattleMech capable of defeating enemy armor formations and also overwhelming heavy 'Mechs with sheer numbers, the Laryutin team built a handful of "Weapon Armed 'Mech-Alpha," or WAM-A, prototypes in 2472. Relying solely upon proven missile weapons—as much a measure to reduce engineering problems as it was a way to speed the manufacturing process—the WAM-A could engage targets at all range brackets and reliably knock out or kill most conventional armor opponents. However, the 'Mech was only capable of moderate sustained speeds and had difficulty in outpacing many of its simulated targets.

In response, the Laryutin team strengthened the base frame and installed a larger power plant, in the process adding five tons to the 'Mech's mass. While the team stripped some armor from the 'Mech's legs and torso in order to make this change, the result was an increase in top sustained speed of more than thirty percent, which was considered more than enough to pursue and overtake retreating enemy formations. This WAM-B was immediately placed into production at the Confederation Defense Corporation on Boardwalk—an immense state-owned manufacturing complex constructed specifically to mass-produce BattleMechs. Less than a year later, the 'Mech received its more common name when a filmographer dubbed it "Fire-B" after watching it launch a volley of inferno missiles at a target; from that point on, the 'Mech became officially known as the FRB-1E Firebee. It continued to serve the Capellan military in this configuration until the FRB-2E Firebee began to replace it in the early twenty-sixth century.

Type: Firebee

Technology Base: Inner Sphere (Primitive) Tonnage: 35



EFT-2 EISENFAUST

Field Testing Summation: Original Eisenfaust Primitive Chassis Producer/Site: Coventry Defense Conglomerate, Coventry Supervising Engineer: Ranomi Ndereba Prototype Introduction Date: 2471 **Non-Production Equipment Analysis:**

Primitive Armor Primitive Cockpit Primitive Engine

Overview

The age of the BattleMech was, in many different ways, an exciting time throughout the Inner Sphere. New technologies were developing, and with them came revolutionary ideas and entirely new schools of thought—in industry, technology, academia and, of course, the military. The Lyran Commonwealth found itself in a unique position in the latter half of the twenty-fifth century. As the second nation to develop the BattleMech, it was not constrained by the doctrinal "rut" the Terran Hegemony found itself in when its military clamored for one new 'Mech design after another to fill the same tactical role. The Commonwealth could instead pursue new concepts and new ideas freely, but it also had to ensure that it was not being left behind the BattleMech-fueled arms race sweeping across the Inner Sphere.

In 2469, the LCAF commissioned Coventry Defense Conglomerate to design and construct a prototype mediumclass BattleMech specifically for extended siege and defensive operations, one that would carry the heavy class-10 autocannon. Originally based upon a simple concept forwarded by a working group within the LCAF, the Lyran bureaucracy soon transformed that basic request into a bloated project requirement that clearly could never see fruition. The company nonetheless took the LCAF's money and by 2471 had produced the first (and only) proof-ofconcept prototype Eisenfaust-an under-armored, underpowered and poorly maneuverable BattleMech. The LCAF quickly put an end to the project, though its general concept nonetheless seemed to percolate through the Lyran High Command and resurface every decade or so.

That's precisely what happened in 2512, when the LCAF again asked for the 'Mech. This time utilizing far more modern technology and construction techniques, the resulting EFT-4J Eisenfaust (which debuted three years later) was still considered lackluster. Though mounting fifty percent better armor protection and likewise claiming a sixty percent greater top speed, extended combat trials with eight operational prototypes proved that cheaper and more readily available conventional tanks could still better fill the Eisenfaust's role.

The Eisenfaust project finally died there (in some ways its original concept did finally came to fruition with the UrbanMech a century and a half later), though all eight prototypes apparently served for several decades longer within the Coventry security force until finally scrapped.

Type: Eisenfaust Technology Base: Inner Sphere

Tonnage: 45

Mass

4.5

3.5

0

Equipment	
Internal Structure	Standard
Engine:	110 Primitive
Walking MP:	2
Running MP:	3
Jumping MP:	0
Heat Sinks:	10
Gyro:	2
Cockpit:	
Armor Factor (Primitive):	107
	Internal
	Structure
Head	3
Center Torso	14
Center Torso (rear)	
R/L Torso	11
R/L Torso (rear)	
R/L Arm	7
R/L Leg	11
-	

Weapons and Ammo	Location	Critical	Tonnage
AC/10	RT	7	12
Ammo (AC) 10	RT	1	1
Large Laser	LA	2	5
2 Medium Lasers	CT	2	2

Notes: Features the following Design Quirks: Bad Reputation, Improved Cooling Jacket (Large Laser), Poor Performance, Prototype, Obsolete/2472



Glenn Gibson (order #4067576)

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DV-1S DERVISH

Field Testing Summation: Original Dervish Primitive Chassis Producer/Site: Various Supervising Engineer: Victoria Merck-Staufstadt Prototype Introduction Date: 2520 Non-Production Equipment Analysis:

Primitive Armor Primitive Cockpit Primitive Engine

Overview

By the beginning of the second decade of the twentysixth century, the BattleMech had been in service with every major Inner Sphere and Periphery power for over five decades, with each of those nations having advanced their own states of the art beyond the "primitive" level common to the Age of War. While front-line units in each nation had been transferring their outdated, "primitive" 'Mechs to militia and reserve units as they placed modern designs into service, there were simply not enough to assign to each of the second-line regiments requesting them especially as many of the 'Mechs were reaching, or were long past, the end of their serviceable lives. Recognizing there was a market for low-tech militia *BattleMechs*, particularly within the surrounding Lyran Commonwealth, Coventry Defense Conglomerate moved to fill that need.

Coventry's Dervish was designed from the ground up as a simple-to-operate and easy-to-maintain BattleMech. The 'Mech relied upon proven short and long-range missile launchers, ensuring that militia technicians—many of whom had no experience maintaining energy weapons—and logisticians would have little difficulty keeping them operational. Coventry Defense Conglomerate likewise utilized as many commonly available systems as possible to ensure the ease of maintenance. In fact, their only truly "modern" design feature was the inclusion of jump jets.

The Dervish gained an almost immediate acceptance within Lyran militia regiments across the nation, with Coventry Defense Conglomerate selling the Dervish to budget-conscious buyers for decades. After learning that virtual copies of the Dervish were being manufactured within the Draconis Combine, the company went on to license Dervish production to several other companies throughout the Inner Sphere during the mid-2500s, ultimately ensuring that the 'Mech would see service within every major Inner Sphere (and eventually Periphery) power.

With the dawn of the Star League, First Lord Ian Cameron asked Coventry Defense Conglomerate to revisit the *Dervish*, this time utilizing more modern technologies. Thousands of Leaguesubsidized *Dervish* refits were performed for the Star League member-states during the years leading up to the Reunification War even as new *Dervishes* poured off of production lines in each member-state, ensuring the 'Mech would have a truly lengthy service history.

Type: Dervish

LRM 10

SRM 2

Jump Jet

Jump Jet

Ammo (LRM) 12

Ammo (SRM) 50

Technology Base: Inner Sphere (Primitive) Tonnage: 55

	Equipment			Mass	
	Internal Structure:	Standard		5.5	
	Engine:	265 Primiti	ve	14	/
	Walking MP:	4			
	Running MP:	6			
	Jumping MP:	3			
wenty-	Heat Sinks:	10		0	
every	Gyro:Standard			3	
cades,	Cockpit:	Primitive		5	
ates of	Armor Factor (Primitive):	107		10	
of War.		Internal	Armo	or	
g their		Structure	Valu	е	
as they	Head	3	8		
nough	Center Torso	18	20		
hem—	Center Torso (rear)		3		
ig past,	R/L Torso	13	13		
market	R/L Torso (rear)		3		
unding	R/L Arm	9	9		
oved to	R/L Leg	13	13		
	2				
ıp as a	Weapons and Ammo	Location	Critical	Tonnage	
'Mech	SRM 2	RA	1	1	
nchers,	Ammo (SRM) 50	RA	1	1	
ad no	LRM 10	RT	2	5	
would	Ammo (LRM) 12	RT	1	1	
efense	Jump Jet	СТ	1	.5	

Notes: Features the following Design Quirks: Easy to Maintain, Obsolete/2520

LT

LT

LA

LA

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BEL-1X BELLEROPHON

Field Testing Summation: Primitive Bellerophon Prototype Producer/Site: Defiance Industries, Hesperus II Supervising Engineer: Ishiara Prototype Introduction Date: 2442 Non-Production Equipment Analysis:

Primitive Armor Primitive Cockpit Primitive Engine

Overview

The *Mackie*, of course, ushered in a new era of military technology and initiated an interstellar arms race unlike any seen before—both across the Inner Sphere as well as throughout the Terran Hegemony. Where dozens of Hegemony military contractors, including five of the largest manufacturers of military vehicles, had worked together to produce the *Mackie*, they were all now in direct competition with each other for future contracts.

Defiance Industries, having worked for years in partnership with Skobel MechWorks of Terra on the *Mackie* project, began working on its own BattleMech design shortly after the prototype *Mackies* took their first steps. Calling its 'Mech "the baby" in-house, the design they would eventually dub *Bellerophon* was in many ways a scaled-down copy of the *Mackie*.

Like its parent design, the "baby" carried its primary weapons within its arms. Two "large" class lasers constituted the 'Mech's main offensive power, backed up by a single four-tube short-range missile launcher. While this new design carried approximately sixty percent of the armor of the *Mackie*, it was capable of about a twenty percent greater top speed, which its designers hoped would make the 'Mech attractive to the Hegemony Armed Forces.

Unfortunately, the *Bellerophon* suffered from a number of design flaws, including several inherent within the early *Mackie* prototype that Defiance Industries' engineers had used as a basis for their design. From the very beginning, the *Mackie* was poorly balanced, with pilots having difficulty keeping the 'Mech upright during even moderate maneuvers until a combination of gyroscope upgrades and adjustments to internal mass distribution cleared the problems. Those problems were amplified in the *Bellerophon* due to the placement of both lasers in the right arm, with only the missile rack to offset the imbalance in the left. Despite their best efforts, the *Bellerophon*'s designers could never fully solve the 'Mech's worst flaws, at least without a complete ground-up redesign.

Defiance Industries constructed at least four operational prototype *Bellerophons*, which the HAF ultimately did not accept for production. The final disposition of these prototypes is unknown.

Type: Bellerophon

Technology Base: Inner Sphere (Primitive) Tonnage: 60

	Equipment Internal Structure: Engine: Walking MP:	Standard 290 Primitive 4	Mass 6 17.5	
	Running MP: Jumping MP:	6 0		
/	Heat Sinks:	14	4	
/	Gyro:		3	
t	Cockpit:		5	
/	Armor Factor (Primitive):	123	11.5	
,		Internal Structure	Armor Value	
-	Head	3	8	
)	Center Torso	20	20	\sim
ı	Center Torso (rear)		7	
ŕ	R Torso	14	12	
,	R Torso (rear)		6	
/	R/L Arm	10	12	
-	R/L Leg	14	14	
, I				
2				
/				
t				
1				
r	Weapons and Ammo	Location Crit	ical Tonnage	
,	2 Large Laser		4 10	
ł	Ammo (SRM) 25	LT	1 1	
2	SRM 4	LA	1 2	
J				
1	Notes: Features the follow Prototype, Unbalanc		owl, EM Interference,	
5	Prototype, Oribalaric	ed, Obsolete/2456		
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			Mr. 3. 12. 15	LALLE FALLENSELLE BALLES

TDR-IC THUNDERBOLT

Field Testing Summation: Original Thunderbolt Primitive Chassis Producer/Site: Earthwerks, Ltd., Tikonov Supervising Engineer: Sarkia Menendez Prototype Introduction Date: 2491 **Non-Production Equipment Analysis:**

Primitive Armor Primitive Cockpit Primitive Engine

Overview

In the closing years of the twenty-fifth century, the Capellan Confederation found itself significantly lagging behind the rest of the Inner Sphere in military technology. It was the last Inner Sphere power to develop the BattleMech and its heavy industries were still struggling to meet the combined production quality and quantity demands placed upon them by its nation's armed forces.

Victor Rezende, CEO of Tikonov-based Earthwerks, Ltd., stepped up and convinced Chancellor Hendrik Liao that his company could exceed the Confederation's production requirements. Though Earthwerks had to date only produced BattleMechs designed by other entities, its production capacity had been hampered significantly by a ponderous bureaucracy designed by Chancellor Jasmine Liao to prevent military conspiracy. Rezende knew that his company could do much better if only given the chance.

As Rezende finalized his agreement with Chancellor Hendrik, Earthwerks built a 'Mech assembly factory on Tikonov and absorbed the Kanayeva Design Bureau (which had created numerous military vehicle designs for the Confederation's nationalized factories). The company's first BattleMech, the *Thunderbolt*, reached prototype stage in record time, and after a similarly brief testing and evaluation phase quickly transitioned into full production.

The *Thunderbolt*, both on paper and in actuality, was an impressive BattleMech. Though some dubbed its weapons array "eclectic", the *Thunderbolt* ultimately proved to be the first effective multi-role 'Mech. Its array of laser and missile weapons could engage targets at all ranges, and proved especially effective at eliminating opposing infantry and other soft targets that its peers often found difficult to handle. At the same time it carried almost as much armor as the Mackie-still the gauge by which all other 'Mechs were judged. Together, these qualities made it as ideal a 'Mech for planetary assault campaigns as for defensive operations.

Earthwerks did indeed exceed the Confederation's production expectations, though minor engineering and metallurgical defects-many of the same that impacted other early Capellan 'Mechs-limited their serviceable lives more so than other nations' designs. Few of these original Thunderbolts remained in Capellan service until the end of the Age of War. By that time the more modern—and far more successful—TDR-5S had debuted, ultimately becoming one of the Star League's primary heavy 'Mechs after Earthwerks expanded production into several nations, especially the Free Worlds League.

Type: Thunderbolt

Technology Base: Inner Sphere (Primitive) Tonnage: 65

Equipment			Mass
Internal Structure:	Standard		6.5
Engine:	235 Primit	ive	11
Walking MP:	3		
Running MP:	5		
Jumping MP:	0		
Heat Sinks:	10		0
Gyro:			3
Cockpit:			5
Armor Factor (Primitive):	203		19
, and races (Internal	Armo	
	Structure		
Head	3	9	
Center Torso	21	30	
Center Torso (rear)	<i>L</i> :	10	
R/L Torso	15	24	(1
R/L Torso (rear)	15	6	
R/L Arm	10	20	
	10	20	V
R/L Leg	CI	21	L.
Weapons and Ammo	Location	Critical	Tonnage
Large Laser	RA	2	5
LRM 15	RT	2	7
SRM 2	RT	5 1	1
			1
Ammo (LRM) 8	RT	1	1
Ammo (LRM) 8	CT	1	1
Ammo (SRM) 50	CT	1	1
3 Medium Lasers	LT	3	3
2 Machine Guns	LA	2	1
Ammo (MG) 100	LA	1	.5
Notes: Features the follow			t to Maintain
Multi-Trac, Poor Worl	kmanship, Obso	olete/2509	



7 Glenn Gibson (order #4067576)

LGB-OC LONGBOW

Field Testing Summation: Original Longbow Primitive Chassis Producer/Site: Lockenburg-Holly Industries, Emris IV Supervising Engineer: Dante Aligheri Mikonos Prototype Introduction Date: 2480 Non-Production Equipment Analysis:

Primitive Armor Primitive Cockpit Primitive Engine

Overview

By the final quarter of the twenty-fifth century, the Free Worlds League had acquired the BattleMech and had advanced its own industrial state of the art to the point that each new BattleMech design no longer required a coordinated national effort. Locally produced clones of the *Mackie* and *Banshee* had filled the ranks of the Free Worlds League Military, while the *Hector* was fast becoming the League's front-line 'Mech. But the FWLM leaders noted two roles within its burgeoning BattleMech corps that had yet to be adequately filled: reconnaissance and fire support.

While the Helleckson Corporation focused on filling the first role with its *Trooper* design, Lockenburg-Holly Industries focused on the latter. Taking inspiration from the Terran Hegemony's successful *Archer*, Lockenburg-Holly's chief engineer scaled the 'Mech up by fifteen tons, making this new *Longbow* a true assault BattleMech. They further mounted its missile launchers within the 'Mech's iconic barrel arms, allowing for much wider firing arcs than the *Archer*—even directly behind the 'Mech, which gave it the ability to truly engage in a fighting withdrawal.

In testing, and in actual combat, the *Longbow* gave the FWLM everything it needed in a fire support BattleMech. Though complaints about the 'Mech's relatively light armor continued to filter in from the field, the *Longbow* proved its abilities time and again as pairs, or entire lances, of these 'Mechs could eliminate even the heaviest of 'Mechs in just a few salvos. The 'Mech remained popular with Leaguers, and feared by opponents, throughout the rest of the century, and was the only native Free Worlds' 'Mech to receive a complete upgrade in the early twenty-sixth century—in the process gaining ten missile tubes and a much-needed boost to its top speed, now in excess of sixty kph.

The Longbow would go on to be the Free Worlds League's longest-enduring BattleMech design, due solely to the interstellar agreements that would pave the way to forming the Star League. Expanded trade policies soon gave way to the first truly Inner Sphere-wide corporations. StarCorps Industries, formed from the merger of a number of Terran, Free Worlds League and Capellan interests, including Lockenburg-Holly Industries, quickly dominated business in the Inner Sphere—producing both the FWL's Longbow and the Terran Hegemony's Warhammer throughout the Inner Sphere.

Type: Longbow

Technology Base: Inner Sphere (Primitive) Tonnage: 85

	Equipment			Mass
	Internal Structure:	Standard	4	8.5
	Engine:	310 Primiti		20.5
	Walking MP:	3		20.3
	Running MP:	5		
	Jumping MP:	0		
	Heat Sinks:	15		5
ee		15		4
ed	Gyro: Cockpit:			4 5
ew	Armor Factor (Primitive):	144		5 13.5
nal	Armor Factor (Primitive):		A	
ed		Internal		
/as		Structure		е
ers	Head	3	9	
ad	Center Torso	27	21	
	Center Torso (rear)		10	$\int \int \int dz$
rst	R/L Torso	18	18	
ed	R/L Torso (rear)		7	In
y's	R/L Arm	14	9	
he	R/L Leg	18	18	4
ult				
nin				V
rcs				1
he				
				_
he	Weapons and Ammo	Location	Critical	Tonnage
gh	LRM 20	RA	5	10
to	Medium Laser	RT	1	1
nd	Ammo (LRM) 18	RT	3	3
ate	Medium Laser	LT	1	1
ed	Ammo (LRM) 18	LT	3	3
he	LRM 20	LA	5	10
to	Small Laser	Н	1	.5
-in				
ost	Notes: Features the follo			
	Extended Torso-			nunicatio
			to/2506	
e's	Searchlight (RT), We	ak Legs, Obsole	10/2000	
e's Iar	Searchlight (RT), We	ak Legs, Obsole	12/2000	
	Searchlight (RT), We	ak Legs, Obsole	16/2300	
lar tar	Searchlight (RT), We	ak Legs, Obsole	te/2300	
lar tar uly	Searchlight (RT), We	ak Legs, Obsole	10/2300	
lar tar uly ed	Searchlight (RT), We	ak Legs, Obsole	10/2500	
lar tar uly ed ue	Searchlight (RT), We	ak Legs, Obsole		
lar tar	Searchlight (RT), We	ak Legs, Obsole		

CARTER MEDICAL EMERGENCY RESPONSE VEHICLE

Field Testing Summation: Common Primitive Mobile Medical Vehicle Producer/Site: Dortmein Wagons, Ltd., Arcturus Supervising Engineer: Minka Albrecht Prototype Introduction Date: 2341 Non-Production Equipment Analysis: Primitive Combat Vehicle

Overview

The sooner a battlefield casualty could be treated by a doctor, the better chance that casualty had of surviving his or her wounds. This was a fact long recognized, and which resulted in more and more military personnel trained as medics even as hospitals and dedicated trauma specialists were brought closer to the front lines. The classic Mobile Army Surgical Hospital, or MASH—really a low-tech hospital housed within a tent city that could be erected and disassembled in days or hours—gave way to air-transportable modular constructs, which gave way to VTOL air ambulances and fixed-wing air hospitals by the Age of War. And those soon were replaced by dedicated hospital DropShips, supplemented by highly mobile medical vehicles that could drive right up to the front lines to treat the wounded.

Oftentimes still referred to as a MASH, vehicles like the Carter Medical Emergency Response Vehicle were found in every major military as well as within emergency services organizations throughout the Inner Sphere. Designed to work in groups of two to twelve vehicles, each relied upon a small staff of trained medical responders supplemented by the best technological innovations available to help them evaluate, treat and monitor patients with all manner of injuries or illnesses. The Carter MERV was a long vehicle featuring an expanding "pop-out" design, which allowed a fairly large interior floor plan while sited in place and also provided a compact footprint on the move.

Apart from the "command section"—really the driver's compartment with an additional workspace for the MERV manager—the Carter MERV was divided into four interior compartments. Triage and treatment of "walking wounded" took place in the rear compartment, which could carry up to two tons of cargo or approximately twenty unequipped personnel. The center of the vehicle served as its "emergency room," where serious cases could be evaluated and either cared for by the vehicle's paramedics in the four treatment beds or moved to one of the two operating theaters, one each to the fore and aft of the center section. Once stabilized, patients could be evacuated to better-equipped field hospitals or, if necessary, could be transported within the MERV, attended to by the vehicle's medical staff, who had a complete suite of medical imaging and monitoring equipment at their disposal to aid them.

Type: **Carter MERV** Movement Type: Wheeled (Medium) Equipment Rating: D/C-X-X/D

Mass: 25 tons

Equipment			Mass
Chassis:			6
Engine/Controls:			8.5
Туре	ICE		
Cruise MP:	5		
Flank MP:	8		
Heat Sinks:	0		0
Fuel:	1,176 km		1
Turret:			0
Armor Factor (BAR 6):	52		2
	Internal	Armor	
	Structure	Value	
Front:	3	14	
R/L Side:	3/3	14/14	
Rear:	3	10	

Weapons and Ammo Location Tonnage None Crew: 15 (3 officers, 12 enlisted/non-rated) Cargo: 2 tons 1 Door (rear)

Notes: Features Off-Road Chassis and Control Modification, MASH Equipment (2 theaters) and 4 Paramedic Equipment (1 ton). Features the following Design Quirks: Easy to Maintain, Gas Hog, Obsolete/2580



KVN-2 KORVIN

Field Testing Summation: Primitive Korvin Tank Producer/Site: New Hessen ArmorWorks, New Hessen Supervising Engineer: Wu Han Prototype Introduction Date: 2367 Non-Production Equipment Analysis: Primitive Combat Vehicle

Overview

The Capellan Confederation's Korvin tank was the typical "product" of the pre-Age of War chaos. As the seat of humanity, the Terran Hegemony was the clear leader technologically, economically and politically. Meanwhile, the many smaller powers throughout the Inner Sphere struggled with each other before they ultimately united with their neighbors and formed the remaining five great nations (which themselves would later come together to become the Star League).

It was in this era that designs like the Korvin tank were born. The TIkonov Grand Union had sparred with the neighboring Terran Hegemony many times throughout the previous decades and, despite suffering numerous defeats, managed to reverse-engineer several of the Hegemony's technological advancements salvaged from the battlefield. This led directly to the design and deployment of Tikonov's first fusion-powered battle tank—the Hessen heavy tank.

Relying upon a single heavy "large-class" laser, supported by a longrange missile launcher, the Hessen could easily defeat the armor of almost every other tank it might expect to encounter—be it of Terran or other origin. In turn, the Hessen was both speedy and protected by relatively heavy armor, while a machine gun capable of shredding opposing infantry covered the tank's fore.

The Hessen was the foundation of the Tikonov military for decades, serving its nation well in its battles against the Terrans and the Federated Suns as well as at home in putting down civil unrest fueled by raging inflation and unemployment. After Franco Liao united the disparate states within the so-called Capellan Zone and formed the Capellan Confederation, Tikonov's Hessen quickly became the new Confederation's primary tank. This second model, renamed after explorer and philosopher Alana Korvin DeVall (and given the designation KVN-2 to indicate it was a follow-on to the original Hessen), featured a lighter and more powerful fusion engine, which increased its top speed by some thirty percent. Production of this Korvin expanded onto Sian with the formation of Wu Industries, where the tank (including the KVN-3 model, which debuted in 2430) remained in production for some two and a half centuries.

Type: KVN-2 Korvin

Technology Base: Inner Sphere (Primitive) Movement Type: Tracked (Medium) Equipment Rating: D/C-X-X/E Mass: 50 tons

Equipment Mass Advanced FCS Body Chassis: 7.5 Engine/Controls: 19 Crew: 8 (2 officers, 2 enlisted/non-rated, 4 gunners) Type Fusion Notes: Features the following Design Quirks: Easy to Maintain, Hard to Pilot, Cruise MP: 5 Obsolete/2612 Flank MP: 8 Heat Sinks: 8 8 Turret: Armor Factor (BAR 6): 105 Internal Armor Structure Value Front: 5 22 R/L Side: 5/522/22 17 Rear: 5 5 22 Turret: ۲ 0 5

Weapons and Ammo Location Tonnage Large Laser Turret 5 LRM 5 Turret 2 Machine Gun Front .5 Ammo (LRM) 24 Bodv Ammo (MG) 200 Body

ALACORN HEAVY TANK

Field Testing Summation: Original Alacorn Heavy Tank Prototypes Producer/Site: Corben Motors, New Earth Supervising Engineer: Teremar Olmin Prototype Introduction Date: 2561 Non-Production Equipment Analysis: Prototype Ferro-Fibrous Armor

Overview

In the years immediately preceding the official formation of the Star League, even as Director-General Ian Cameron continued to negotiate with the leaders of the other five Inner Sphere nations to create the greatest alliance Humanity had ever seen, the Terran Hegemony fought bitterly to remain the clear technological leader within the Human Sphere. As such, the Hegemony Armed Forces maintained a policy of open competitions, making it easy for defense contractors willing to spend their own R&D money to submit design proposals. Corben Motors took advantage of this program with the Alacorn heavy tank in 2559. The design they submitted, employing the principle of "overkill", came in two models—each mounting three heavy autocannon in its turret. The Mk. I Alacorn was the most promising option—its three class-10 autocannon gave it more firepower than any tank in service (and most 'Mechs, for that matter) while its more than ten tons of Ferro-Fibrous armor likewise provided better protection than any standard tank in service. The Mk. II was interesting because it carried three of the devastating class-20 autocannon, though its short range, insufficient three-ton ammunition bin and mere six tons of armor all but ensured the HAF did not look long at the design. The evaluators put the Mk. I through a full series of combat trials, but ultimately rejected the tank. Though it possessed superior firepower, its revolutionary armor proved brittle and easily defeated, no matter the adjustments Corben's engineers made to the armor forging process over the course of three years of evaluations.

The HAF passed on the Alacorn, but the company revisited the design a decade later, this time investing in the use of an extralight fusion engine. It took Corben's engineering team almost five years to properly integrate the new engine, debuting the Mk. III and IV for approval. The new SLDF accepted both for production, but commissioned only a few hundred of each—not enough for Corben Motors to recover from the massive R&D and pre-production costs. The company fell into bankruptcy as a result, but was bought out by New Earth Trading Company, which delivered the Mk. IIIs and IVs to the SLDF. The SLDF later passed on its upgraded Mk. V—really just a Mk. III mounting now-perfected Ferro-Fibrous armor, but NETC soon rolled out what is now known as the standard Alacorn Mk. VI mounting three of the still-experimental, but massively powerful Gauss rifles—in 2587. Type: Alacorn Mk. I Heavy Tank Technology Base: Inner Sphere Tonnage: 95 tons Movement Type: Tracked

Equipment Internal Structure Engine: Type: Cruise MP: Flank MP:	Standard 285 Fusion 3 5	Mass 9.5 25
Heat Sinks: Control Equipment: Turret:	10	0 5 4
Armor Factor (Ferro):	188 Internal Structure	10.5 Armor Value
Front R/L Side Rear Turret	10 10/10 10 10	40 40/40 28 40
Weapons and Ammo 3 AC/10 Ammo (AC) 50	Location Turret Body	Tonnage 36 5

Notes: Features the following Design Quirks: Difficult to Maintain, Improved Communications, Poor Performance, Trailer Hitch, Obsolete/2587 Type: **Alacorn Mk. II Heavy Tank** Technology Base: Inner Sphere Tonnage: 95 tons Movement Type: Tracked

Equipment		Mass
Internal Structure	Standard	9.5
Engine:	285	25
Type:	Fusion	
Cruise MP:	3	
Flank MP:	5	
Heat Sinks:	10	0
Control Equipment:		5
Turret:		4.5
Armor Factor (Ferro):	107	6
	Internal	Armor
	Structure	Value
Front	10	23
R/L Side	10/10	23/23
Rear	10	15
Turret	10	23
Weapons and Ammo	Location	Tonnage
3 AC/20	Turret	42
Ammo (AC) 15	Body	3

Notes: Features the following Design Quirks: Difficult to Maintain, Improved Communications, Poor Performance, Trailer Hitch, Obsolete/2587



CARAVAN HEAVY TRANSPORT

Field Testing Summation: Common Primitive Cargo Aircraft Producer/Site: Morrison-O'Connor-Marquand Corporation Supervising Engineer: Phillip Farnsworth Prototype Introduction Date: 2346 Non-Production Equipment Analysis:

Primitive Conventional Transport Aircraft

Overview

During the twenty-third and twenty-fourth centuries, air transport and space transport were still two different concepts serviced by two very different kinds of dedicated cargo haulers. While spacecraft, such as short-range shuttles and much heavier DropShips, could be used for relatively short-haul cross-planet transport missions, most of these "hops" could be done just as easily—and far less expensively—by conventional atmospheric aircraft. The Caravan Heavy Transport was just one example, albeit one of the largest, of this breed of conventional transport that dominated the skies of every major world before and during the Age of War.

The Caravan was designed to carry massive amounts of cargo across a planet. With a standard cargo capacity of some sixty metric tons, plus an additional thirteen ton fuel capacity, it could carry palletized supplies or heavy war materiel with ease, at least as long as there was a dedicated airfield with a long runway at the destination. Additionally it sported a massive seven tons of armor protection, though this was as much due to the need for a tremendously strong structure to carry such a heavy load as it was to provide protection for military cargoes.

The Caravan was an unquestionable success, with more than ninety percent sold to civilian and government operators. To keep up with demand, the Morrison-O'Connor-Marquand Corporation built primary factories on six different worlds, and final assembly facilities on dozens more, organizing a tremendous fleet of DropShips and JumpShips to transport the thousands of partially constructed Caravans from their factories to final assembly on their destination worlds.

The Caravan, and designs like it, dominated air cargo transport throughout most of the Age of War, until advances in spacecraft design and construction brought the cost of purchase and operation down to more reasonable levels, allowing the more flexible intra-atmospheric shuttles and DropShips to begin taking on those additional roles. The Caravan, and other super-heavy cargo aircraft like it, faded into obscurity by the final decades of the twenty-fifth century, replaced almost entirely by drop-shuttles and DropShips. Conventional aircraft, whether they haul passengers or cargo, of course remain in wide use throughout the stars, though no single design since has ever quite managed to capture the popularity of the Caravan and its ilk.

Type: Caravan Heavy Transport

Technology Base: Inner Sphere (Primitive) Movement Type: Fixed Wing (Large) Equipment Rating: D/C-X-X/C Mass: 200 tons



Crew: 3 (3 enlisted/non-rated)

Cargo:

60 tons 4 Doors (2 Front & 2 Rear)

Notes: Features the following Design Quirks: Atmospheric Flyer, Easy to Maintain, Fragile Fuel Tank, Gas Hog, No Ejection System, Obsolete/2490

VENDETTA MEDIUM FIGHTER

Field Testing Summation: Primitive Conventional Fighter Producer/Site: European Aerospace Consortium, Terra Supervising Engineer: Arcturus Godeau Prototype Introduction Date: 2328 **Non-Production Equipment Analysis:**

Primitive Conventional Fighter

Overview

The development of the large-class laser in the early twentyfourth century, in conjunction with the further miniaturization of compact fusion engines, revolutionized combat vehicle design. The weapon could penetrate nearly any type of armor in common use without the need to carry what was often a too-limited supply of dangerously high explosive ammunition. Though it would be some time before the price of coupling the weapon with a fusion power plant would be economical, it also took Hegemony weapons designers some time to "perfect" the design and operational concepts needed to best employ the weapon.

After commissioning several lackluster fighter designs that mounted this weapon, the Hegemony Armed Forces finally received a design proposal that seemed to answer the needs of the Hegemony's air forces. The XKA 44, later dubbed Vendetta, was a combination air superiority and ground-attack conventional fighter. Though it was neither the fastest nor most nimble fighter in service, it was without a doubt the most capable and most powerful fighter ever fielded to that point. At sixty tons, it was also the heaviest common fighter yet flown.

Unlike most fighters in service at the time, the Vendetta carried an arsenal of exclusively energy weapons. One large, one small and two medium lasers gave it the ability to take almost any target it might encounter out of the skies in just one salvo, or to deliver a one hundred and fifty meter-long zone of destruction to ground targets in a strafing run. It could also carry a combination of ordnance and/or additional fuel on its six external hardpoints, though except for the rarest of long-range missions the Vendetta's five-ton fuel capacity was more than sufficient.

The Hegemony Armed Forces quickly made the Vendetta its standard front-line fighter, commissioning tens of thousands for production on a number of different worlds. Supplemented by a series of different interceptors and bombers through the years, but never truly superseded, the Vendetta served the Terran Hegemony well for nearly a century—and even longer within opposing armed forces that developed their own clones of the Vendetta. Only after more powerful and agile aerospace fighters, piloted by crews of just one or two, debuted was the Vendetta replaced in front-line service, though it and its clones continued to serve ably in militia and other conventional units for many years longer.

Type: Vendetta Medium Fighter

Technology Base: Inner Sphere (Primitive) Equipment Rating: D/D-X-X/E Mass: 60

Equipment



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

Notes: Features Armored Chassis. Features the following Design Quirks: Atmospheric Flyer, Cramped Cockpit, Difficult Ejection, Variable Range Targeting, Weak Undercarriage, Obsolete/2580



CZAR DROPSHIP

Field Testing Summation: Early Military DropShip Producer/Site: Deimos Clipperships, Mars Supervising Engineer: Calgary von Wong Prototype Introduction Date: 2462 Non-Production Equipment Analysis: Prototype DropShip K-F Boom

Overview

In the early centuries of space travel, JumpShips carried cargo and passenger spacecraft—classes of ships known as DropShuttles and DropShips—in internal cargo bays as they jumped from system to system. There was almost no standardization of design in this early age of space travel, though most DropShips tended to mass on the low end. There were, of course, exceptions to the rule, but the majority of ships in use looked more like overgrown shuttles than mass cargo carriers.

That trend began to change in the twenty-fifth century as large DropShips designed specifically to move cargoes between planets and system transfer stations began to enter service. Deimos Clipperships of Mars entered that arena in 2422 with the debut of the *Clippership IV*. Though a small ship by today's standards, its four thousand ton cargo capacity made it a very popular throughout the Terran Hegemony, and brought the company into partnership with Blue Nose Interstellar Technologies, a fellow Martian company that looked toward nothing more than revolutionizing interstellar transportation.

Deimos Clipperships built the DCS Nimbus III, a modified Clippership IV, which made the first hyperspace jump by an externally mounted DropShip in 2458 on the BNS Olympus. Within a decade, the company began producing the Clippership V, a model IV with the additional docking ring and K-F boom necessary for hyperspace travel. In response to an HAF Request for Proposals, they also debuted the Czar-class DropShip. Based on the proven Clippership IV hull, it included relatively heavy self-defense armaments and further split the top cargo deck into three personnel decks that provided berthing, recreation, and dining space for more than a thousand personnel. Up to four full standard infantry battalions could be carried on this ship (as well as some 3,800 tons of cargo). Alternately, the berthing space and cargo decks could be reconfigured to carry a far more comfortable battalion of armor and mechanized infantry (the development of dedicated combat vehicle cubicles with crew berthing space was still many decades away).

The HAF began buying the *Czar* in 2468, and soon made it the standard combat transport for its designated invasion regiments, mating it with three other *Czars* and a *Liberty* Jumpship to transport an assault brigade. It served the HAF, and later the SLDF, for nearly three centuries—including a number that were converted to carry four lances of *BattleMechs* and a company of light armor—until replaced in service by larger dedicated troop and cargo ships. Decommissioned SLDF *Czars* nonetheless remained in civilian service for many years longer, with a handful of ancient models reportedly still operating on deep space transport routes.

Name: Czar-class DropShip Type: Civilian Spheroid Use: Combat Transport Tech: Inner Sphere Introduced: 2468 Mass: 6,400 tons

Dimensions

Length: 82 meters Width: 82 meters Height: 99 meters

Fuel: 150 tons (4,500) Tons/Burn-Day: 3.37 Safe Thrust: 3 Maximum Thrust: 5 Heat Sinks: 112 Structural Integrity: 7

Armor

Nose: 98 Sides: 74 Aft: 50

Cargo

Bay 1: Small Craft (1)	1 Door
Bay 2: Infantry (18 foot platoons)	1 Door
Bay 3: Infantry (18 foot platoons)	1 Door
Bay 4: Cargo (1,900 tons)	2 Doors
Bay 5: Cargo (1,901 tons)	2 Doors

Life Boats: 10 Escape Pods: 4

Crew: 9 Officers, 35 Enlisted/Non-rated, 10 Gunners, 1,013 Bay Personnel

Ammunition: None.

Notes: Mounts 25 tons of primitive DropShip armor. Features the following Design Quirks: Atmospheric Flight instability, Difficult to Maintain, Docking Arms, Improved Targeting (Short Range), Sensor Ghosts, Obsolete/2740

Weapons	Capital Attack Values (Standard)					
Arc (Heat) Type	Heat	Short	Medium	Long	Extreme	Class
Nose (28 heat)						
2 Large Lasers	28	4 (36)	2 (16)	_	—	Laser
4 Medium La	sers					
FL/FR (28 heat)						
2 Large Lasers	28	4 (36)	2 (16)	_	—	Laser
4 Medium La	sers					
AL/AR Aft (28 hea	at)					
2 Large Lasers	28	4 (36)	2 (16)	_	—	Laser
4 Medium La	sers					
Aft (28 heat)						
2 Large Lasers	28	4 (36)	2 (16)	_	_	Laser
4 Medium La	sers					



LIBERTY JUMPSHIP

Field Testing Summation: Early Common JumpShip Producer/Site: Blue Nose Interstellar Technologies, Mars Supervising Engineer: Dr. Eunice Wernstrom Prototype Introduction Date: 2461 **Non-Production Equipment Analysis:**

Prototype JumpShip Docking Collars

Overview

Interstellar transport during the early twenty-fifth century still relied entirely upon JumpShips with massive bays that could carry anywhere from a few small to a dozen or more large DropShips internally. The cost of building what amounted to a hollowed-out cylinder surrounding a jump core was tremendous, though, as were the costs to maintain and repair these extremely fragile constructs. While researchers had long theorized that a jump field could be extended well beyond the hull of a JumpShip, allowing for the external carriage of cargo, their best efforts had only resulted in the development of more compact jump cores with a greater range.

Working with a number of independent aerospace manufacturers and in conjunction with Mars University's Department of Theoretical Physics, Blue Nose Interstellar Technologies of Mars finally made the breakthrough necessary to marry an external DropShip with a JumpShip, in the process significantly dropping the price of jump operations while also creating a much more resilient JumpShip—the needle-like thin ships we are all familiar with today. The first modern JumpShip, the BNS Olympus, with its externally coupled DropShip, the DCS Nimbus III, made its historic jump across the Terran system in 2458 with an approving Terran Hegemony admiralty observing.

Eleven years later Blue Nose debuted their first dozen Liberty-class JumpShips to the Terran Hegemony public. Within a month, the company had sold out their next ten years of planned production, and had signed contracts to provide the docking collars and K-F booms that seven other JumpShip and eleven DropShip manufacturers would need to construct their own modern models. With the profits from their JumpShip and component pre-orders, the company invested in expansion, constructing the largest Martian shipyard (the second largest in the Terran system at the time) and merging with six of their partner companies to form Blue Nose Clipperships—a conglomerate that became an exclusive supplier of JumpShips and WarShips to the Hegemony Armed Forces in the early twenty-fifth century.

The Liberty itself, of course, became the template for all follow-on JumpShip designs for centuries to come. Its single grav deck proved too small for its almost seventy crew and passengers, prompting a redesign that also incorporated a small hydroponic garden and other such amenities now considered standard. Likewise, increased automation and better technologies allowed a decrease in crew while also expanding their cramped guarters to the standard. The last new Liberty was delivered on New Year's Eve 2550, having seen more than two dozen major design upgrades during its production history.

Name: Liberty-class JumpShip **Type:** JumpShip **Use:** Interstellar Transport Tech: Inner Sphere Introduced: 2469 Mass: 203,000 tons Sail Diameter: 1,650 meters Fuel: 300 tons (1,500) Tons/Burn-Day: 39.52 Station-Keeping Thrust: 0.1 Sail Integrity: 4 KF Drive Integrity: 5 Heat Sinks: 114 Structural Integrity: 1

Armor (Capital) Nose: 6

Fore-Sides: 6 Aft-Sides: 6 **Aft:** 6

Cargo

Bay 1: Small Craft (2) 2 Doors Bay 2: Cargo (566.5 tons) 2 Doors

DropShip Capacity: 4 Grav Decks: 1 45-meter diameter

Life Boats: 5

Escape Pods: 4

- Crew: 7 Officers, 38 Enlisted/Non-rated, 22 Steerage Passengers, 10 Bay Personnel
- Notes: Mounts 60 tons of standard armor; crew guarters assigned as Enlisted/Non-Rated (7 tons per crewman, for officers) or Steerageclass (Enlisted/Non-Rated, 5 tons per crewman). Features the following Design Quirks: Difficult to Maintain, Docking Arms, Obsolete/2570

Weapons	Capital Attack Values (Standard)					
Arc (Heat) Type	Heat	Short	Medium	Long	Extreme	Class
None						





GAME RULES

Design Quirks

Every prototype and primitive unit described in this Experimental Technical Readout has one or more listed positive and/or negative Design Quirks (see p. 193, SO). These quirks are included to give each design a unique flavor based upon its history and use in this era before and during the earliest years of the Star League. Use of these quirks is optional and should be agreed upon by all players before play begins.

Primitive Aerospace Unit Construction

Primitive aerospace fighters, small craft, and DropShips are built using the standard Aerospace Unit Construction rules (see pp. 180-199, *TM*), with the changes described below (based on Primitive BattleMech Construction rules found in *Jihad Secrets: The Blake Documents*). All of these aerospace units designed and constructed prior to the introduction of "modern" technology in each of the major Inner Sphere and Periphery powers will adhere to these construction rules.

Introduction of "Modern" Tech "Modern" technology—which utilizes

the standard construction rules for BattleMechs, combat vehicles and aerospace units as found in the *Tech Manual*—debuted in each of the major Inner Sphere and Periphery powers in the years listed below.

Year Realm

- 2470 Terran Hegemony
- 2475 Federated Suns & Lyran Commonwealth
- 2487 Draconis Combine
- 2501 Free Worlds League
- 2503 Rim Worlds Republic
- 2504 Capellan Confederation
- 2505 Taurian Concordat

Primitive Aerospace Fighter Construction

Primitive aerospace fighters are constructed using the rules found on p. 146, of Jihad Secrets: The Blake Documents.

Primitive Small Craft and DropShip Construction

Step 3: Add Armor

Primitive small craft and DropShip armor is identical to the armor used by primitive *BattleMechs* (see p. 145, *The Blake Documents*), and is mounted using the standard limits (see pp. 190-191, *TM*).

Prototype DropShip and JumpShip Equipment

Until the dual developments of the DropShip K-F Boom and the JumpShip Docking Hardpoint in the mid-twenty-fifth century, JumpShips carried their DropShips within internal bays that significantly limited both the number of ships and the maximum total tonnage they could carry. The development of the K-F Boom technologies allowed JumpShip designers to discard the inefficient internal bays and instead mount one or more DropShips—of much greater mass than previously possible—on external docking points and carry them through a hyperspace jump. This technology revolutionized interstellar transport, quickly becoming the standard while at the same time drastically slashing transport costs—JumpShips could be built smaller and more economically while massive DropShips that could carry more cargo tonnage than ever before became the norm.



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GAME RULES

Prototype DropShip K-F Boom

Every modern DropShip—one capable of completing a hyperspace jump while docked with a JumpShip—is built with an integral K-F Boom, a device that extends the JumpShip's K-F field beyond its own hull to encompass the DropShip. DropShips constructed without a K-F Boom could be later retrofitted with the K-F Boom systems, though at a significant cost and only at a dedicated shipyard (in fact, hundreds of refit services emerged during the latter twenty-fifth century throughout the Inner Sphere an Periphery, many legit but some not, specifically to "modernize" older DropShips).

For game purposes, the standard K-F Boom is an integral part of a DropShip's Docking Collar (see p.238, *TM*). The Prototype K-F Boom becomes available in 2462 and is superseded by the Standard K-F Boom in 2470. The Prototype K-F Boom has no mass (its systems, like that of the Docking Collar, are integrated into the DropShip's structure), but has a cost of 1,000,000 C-Bills.

DropShips built before the development of the K-F Boom may be retrofitted to incorporate a K-F Boom (as well as a number of additional minor upgrades, such as the standardization of the Docking Collar). This is a Class E Refit (see p. 188, SO) that requires a total of 30 days to complete at a cost of 12 million C-Bills.

Prototype JumpShip Docking Hardpoint

JumpShip design radically changed after the introduction of the DropShip K-F Boom. The elimination of tremendous internal cargo bays was the most obvious, but by and far the incorporation of the myriad of the systems needed to incorporate a DropShip's K-F Boom into the parent JumpShip's K-F Drive is the most important. Unfortunately for existing JumpShip operators, the sheer complexity of the support systems required for a K-F Drive to make a jump with an externally docked DropShip meant their extant ships could not be retrofitted with the systems needed. New JumpShip construction simply exploded in the last half of the twenty-fifth century, leading to the near-extinction of the "primitive" JumpShip by the beginning of the next century.

For game purposes, the systems required to connect a DropShip's K-F Boom to the JumpShip's K-F Drive are an integral part of the Docking Hardpoint (see p. 304, *TM*) and have no additional mass (all of these sub-systems are integrated into the JumpShip's K-F Drive, structure, and the Docking Hardpoint). The Prototype JumpShip Docking Hardpoint becomes available in 2461 and is superseded by the standard Docking Hardpoint in 2470. The cost of the Prototype JumpShip Docking Hardpoint is 2,500,000 C-Bills.

Prototype Ferro-Fibrous Armor

Prototype Ferro-Fibrous Armor becomes available in 2557 and is superseded by standard Ferro-Fibrous Armor in 2571. Prototype Ferro-Fibrous Armor occupies two additional critical slots within BattleMechs and costs three times as much as usual.

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GROUND COMBAT VEHICLE HIT LOCATION TABLE

		ATTACK DIRECTION	
2D6 Roll	FRONT	REAR	SIDE§
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side †	Left Side †	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table below (see *Combat*, p. 192 in *Total Warfare* for more information). A result of 12 on the Ground Combat Vehicles Thics Table below (see *Combat*, p. 192 in *Total Warfare* for more information). A result of 12 on the Ground Combat Vehicles Thic Location Table may inflict critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction. The static may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table at right (see *Combat*, p. 192 in *Total Warfare* for more information). Apply damage at the end of the phase in which the damage takes effect. Side hit strike the side as indicated by the attack direction. For example, if an attack hits the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

ΜΟΤΙ	/E SYSTE	M DAMAGE TAE	BLE	
2D6 Roll 2-5	EFFECT* No effect			
6–7 8–9		+1 modifier to all Driving Skil ge; –1 Cruising MP, +2 modi s		
10-11	Heavy damage; only half Cruising MP (round fractions up), +3 modifier to all Driving Skill Rolls			
12+ Major damage; no movement for the rest of the game. Vehicle is immobile.			the game.	
Attack Direction M Hit from rear Hit from the sides	Aodifier: +1 +2	Vehicle Type Modifiers: Tracked, Naval Wheeled Hovercraft, Hydrofoil Wicc	+0 +2 +3	
WiGE +4 *All movement and Driving Skill Roll genaties are cumulative. However, each Driving Skill Roll modifier can only be applied once. For example, if a roll of 6-7 is made for a vehicle, inflicting a +1 modifier, that is the only time that particular +1 can be applied, a subsequent roll of 6-7 has no additional effect. This means the maximum Driving Skill Roll modifier that can be inflicted from the Motive System Damage Table is +6. If a unit's Cruising MP is reduced to 0, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the Weapon Attack Phase and the first unit inflicts motive system damage take the vehicle is rendered immobile target modifier would not apply for the second nut. However, the -4 modifier would take effect during the Phase in while over a Depth 1 or deeper water hex, it sinks and is destroyed.				

GROUND COMBAT VEHICLE CRITICAL HITS TABLE

LOCATION HIT

2D6 Roll 2–5 N 6 Vea 8 9 10 Co 11 Vea

12

FRONT No Critical Hit Driver Hit Weapon Malfunction Stabilizer Sensors Commander Hit Weapon Destroyed Crew Killed SIDE No Critical Hit Cargo/Infantry Hit Weapon Malfunction Crew Stunned Stabilizer Weapon Destroyed Engine Hit Fuel Tank* REAR No Critical Hit Weapon Malfunction Cargo/Infantry Hit Stabilizer Weapon Destroyed Engine Hit Ammunition ** Fuel Tank * TURRET No Critical Hit Stabilizer Turret Jam Weapon Malfunction Turret Locks Weapon Destroyed Ammunition ** Turret Blown Off

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



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



		ATTACK DIRECTION	
2D6 Roll	FRONT	REAR	SIDES
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side†	Left Side †	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table below (see *Combat*, p. 192 in *Total Warfare* for more information). A result of 12 on the Ground Combat Vehicles Thics Table below (see *Combat*, p. 192 in *Total Warfare* for more information). A result of 12 on the Ground Combat Vehicles Thic Location Table may inflict critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction. The static may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table at right (see *Combat*, p. 192 in *Total Warfare* for more information). Apply damage at the end of the phase in which the damage takes effect. Side hit strike the side as indicated by the attack direction. For example, if an attack hits the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

ΜΟΤΙ	/E SYSTE	M DAMAGE TAE	BLE	
2D6 Roll 2–5	EFFECT* No effect			
6-7		+1 modifier to all Driving Skill	Rolls	
8–9	Moderate dama Driving Skill Rolls	ge; –1 Cruising MP, +2 modil	ier to all	
10–11	Heavy damage; only half Cruising MP (round fractions up),			
12+	+3 modifier to all Driving Skill Rolls Major damage; no movement for the rest of the game. Vehicle is immobile.			
Attack Direction Modifier: Vehicle Type Modifiers:				
Hit from rear	+1	Tracked, Naval	+0	
Hit from the sides	+2	Wheeled Hovercraft, Hydrofoil	+2 +3	
		WiGE	+4	
*All movement and Driving Skill Roll penalties are cumulative. However, each Driving Skill Roll modifier can only be applied once. For example, if a roll of 6-7 is made for a vehicle, inflicting a +1 modifier, that is the only time that particular +1 can be applied; a subsequent roll of 6-7 has no additional effect. This means the maximum Driving Skill Roll modifier that can be inflicted from the Motive System Damage Table is +6. If a unit's Cruising MP is reduced to 0, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the Weapon Attack Phase and the first unit inflicts motive system damage takes reduced take effect during the Physical Attack Phase. If a hover vehicle is rendered immobile target modifier would take effect during the Physical Attack Phase, it is how and is destroyed.				

GROUND COMBAT VEHICLE CRITICAL HITS TABLE

LOCATION HIT

2D6 Roll	
2-5	N
6	
7	Weap
8 9	
10	Co
11	Wea

12

FRONT o Critical Hit Driver Hit oon Malfunction Stabilizer Sensors mmander Hit apon Destroyed Crew Killed

SIDE No Critical Hit Cargo/Infantry Hit Weapon Malfunction **Crew Stunned** Stabilizer Weapon Destroyed Engine Hit Fuel Tank*

REAR No Critical Hit Weapon Malfunction Cargo/Infantry Hit Stabilizer Weapon Destroyed Engine Hit Ammunition ** Fuel Tank*

TURRET No Critical Hit Stabilizer Turret Jam Weapon Malfunction Turret Locks Weapon Destroyed Ammunition* Turret Blown Off

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



GROUND COMBAT VEHICLE HIT LOCATION TABLE

		ATTACK DIRECTION	
2D6 Roll	FRONT	REAR	SIDE§
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side†	Left Side†	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table below (see *Combat*, p. 192 in *Total Warfare* for more information). A result of 12 on the Ground Combat Vehicles Hit Location Table may inflict critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction. The attacking player also rolls once on the Store attack direction. The state corresponding to the attack direction in that section, but the attacking player also rolls once on the Motive System Damage Table at right (see *Combat*, p. 192 in *Total Warfare* for more information). Apply damage at the end of the phase in which the damage takes effect. SSide hits strike the side as indicated by the attack direction. For example, if an attack hits the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

ΜΟΤΙ	/E SYSTE	M DAMAGE TAE	BLE	
2D6 Roll 2-5 6-7 8-9		+1 modifier to all Driving Skill ge; –1 Cruising MP, +2 modif		
10–11 12+	+3 modifier to al	only half Cruising MP (round I Driving Skill Rolls no movement for the rest of ille.		
Attack Direction Modifier: Vehicle Type Modifiers:				
Hit from rear Hit from the sides	+1 +2	Tracked, Naval Wheeled Hovercraft, Hydrofoil WiGE	+0 +2 +3 +4	
*All movement and Driving Skill Roll penalties are cumulative. However, each Driving Skill Roll modifier can only be applied once. For example, if a roll of 6-7 is made for a vehicle, inflicting a +1 modifier, that is the only time that particular +1 can be applied; a subsequent roll of 6-7 has no additional effect. This means the maximum Driving Skill Roll modifier that can be inflicted from the Motive System Damage Table is +6. If a unit's Cruising MP is reduced to Q, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the -4 immobile target modifier would not apply for the second unit. However, the -4 modifier would take effect during the Physical Attack Phase. If a hover vehicle is rendered immobile while over a Depth 1 or deeper water hex, it sinks and is destroyed.				

GROUND COMBAT VEHICLE CRITICAL HITS TABLE

LOCATION HIT

12

FRONT No Critical Hit Driver Hit Weapon Malfunction Stabilizer Sensors Commander Hit Weapon Destroyed Crew Killed

SIDE No Critical Hit Cargo/Infantry Hit Weapon Malfunction **Crew Stunned** Stabilizer Weapon Destroyed Engine Hit Fuel Tank*

REAR No Critical Hit Weapon Malfunction Cargo/Infantry Hit Stabilizer Weapon Destroyed Engine Hit Ammunition ** Fuel Tank*

TURRET No Critical Hit Stabilizer Turret Jam Weapon Malfunction Turret Locks Weapon Destroyed Ammunition* Turret Blown Off

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







