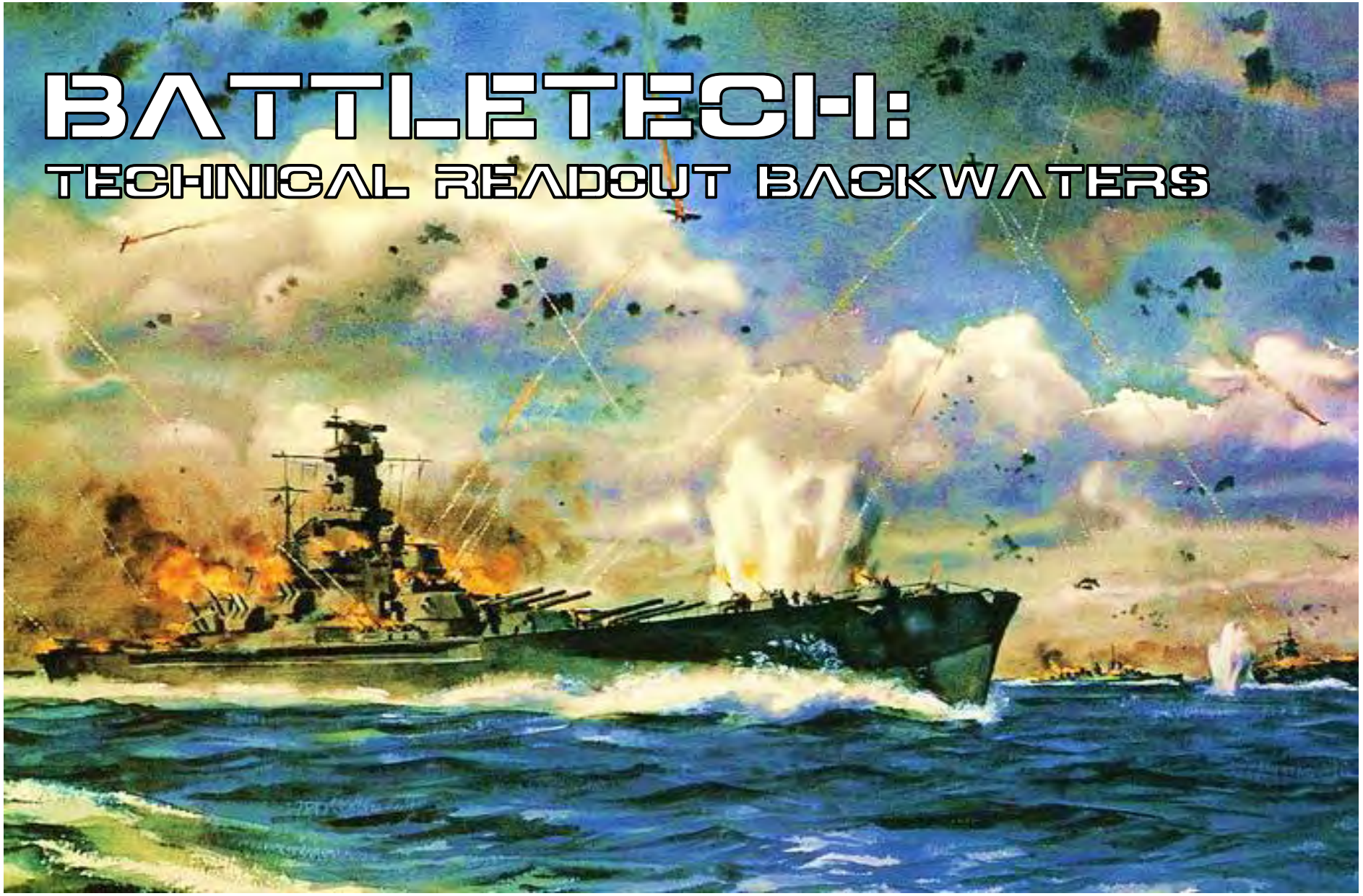
BATTLETECH:
TECHNICAL READOUT BACKWATERS



The big dogs get the glory. Everyone recognizes the Battlemaster, and quite a few know the sleek lines of a Stucka Aerospace Fighter or the massive cannon of a Demolisher Tank. In fact, Comstar and the Wolf's Dragoons have featured those systems no less than ten times in their various award winning publications. We would never criticize the production value of those publications or their accuracy; those periodicals and encyclopedia meet a high standard. However, in most cases, those documents amount to little more than marketing material for the various intersteller arms manufacturers rather than an accurate depiction of the military systems in use by militaries today. For every Battlemaster, there are 100 homegrown tanks, for every Hetzer there are 100 techicals. We can't dispute that industrial giantslike Defiance and Hesperus Arms produce the highest quality military systems, but every planet with any industrial base can produce a defensive system. The majority of these systems can't compete with the products coming off the lines of the major producers, but the sheer numbers of these vehicles represent a major force to be reckoned with.

Below we outline a number of designs that are common across the Inner Sphere. In our first section we outline some of the designs used by the first colonist after they left Terra. Many of these designs are in use today in poor or technologically backward countries, but many can be produced by cottage industries or utilizing standard parts that can be easily imported. Our second section features designs that many more established planetary militias utilize. These designs are relatively easy for an established industrial base to produce. Our third section features several designs that were common during the Age of War. For this publication, we focus on the designs of three different defense contractors whose designs were ubiquitous during that era; Rothstein Defense Solutions, BYE Defense Industries, and Christianson, Cappiazi, and Carter (C^3).

These designs are also common today, but they did not save the contracting companies during the Star League Era...the relative peace of the Star League and the psychological aspects of having the massive war machine of the Star League stationed almost everywhere resulted in less demand for the services of the contracting companies. Additionally, with regular maintenance and upgrades, these systems were surviving for several centuries, and once the customers had the technical aspects of production worked out they no longer needed the assistance of the contractors. There was very little demand for more production, and the defense contractors downsized with most transitioning to defense consutling and project management. Many of these systems were mothballed for centuries, some reactivated and seeing service during the Succession Wars, and when users needed new systems they simply produced them using their own manufacturing base.

After the discovery of the Helm memory core, demand for defense systems spiked and many factories began churning out these designs in preparation for impending conflicts. By 3050, most major industrialized planets had dozens of these designs in their inventories. Unfortunately, when these systems met real opposition their deficiencies were readily apparent. Some defense forces attempted to remedy these problems by installing new, modern hardware. For some systems, these enhancements gave the systems actual viability, but most were consistenly outclassed by actual combat vehicles. While these vehicles cost a fraction of the price of a dedicated combat vehicle, combat vehicles could neutralize four or five of these systems, offsetting the cost savings.

One would think that the theory that these types of systems could compete with Battlemechs and Combat Vehicles would be well repudiated based on the evidence, but BYE and Christianson, Cappiazi, and Carter have conducted a merger and are currently releasing new designs which are showcased in the fourth section of our publication. We hope you enjoy our offerings We look forward to their designs.

Any errors in this publication I hope are minor, but errors are inevitable in a document like this. I know I have made many errors of omission, but I hope that future publications will enable me to correct those errors. I am afraid I have also oversimplified many of the topics discussed in this publication, but it is inevitable. Thank you to John Wembly, the best Defense Analyst in the industry, and to the fine folks at the Bayorn LIbrary and invaluable help running down the original documents for these systems.

William Randal

Harlech, Outreach

New Janes Information Group

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CHAIN GUNS (Primative)

Chain guns existed since the 20th century and were a precurser ballistic weapon to the modern autocannon. The light and heavy models of chain gun were introduced in 2110 and 2113 respectively as an advancement over more primitive models used to that point. Like modern autocannon, the first advanced chain guns utilized an external power source to drive the firing mechanism. Like rifled cannon of their time, the light and heavy chain gun were less effective against armor BAR 8 or higher to the point of being ineffective unless a special munition were used.

LIGHT CHAIN GUN (Primative)

The light chain gun ranges in calibur size from 20mm to 40mm with most models utilizing a common 30mm HE round. The weapon has a very high rate of fire and most systems regulate bursts to 16-20 rounds with the number of bursts per ton of ammunition consistently weighing 1 ton per 100 bursts. The exception to this is special penetrator ammunitions which are heavier and require software modification so that rates of fire can be increased. Ammunition can be stored in full or half ton lots. Subtract 3 damage against BAR 8+ armor (1 damage)

HEAVY CHAIN GUN (Primative)

The heavy chain gun ranges in calibur size from 40mm to 60mm with most models utilizing a common 45mm HE round. The weapon has a very high rate of fire and most systems regulate bursts to 10-14 rounds with the number of bursts per ton of ammunition consistently weighing 1 ton per 50 bursts. The exception to this is special penetrator ammunitions which are heavier and require software modification so that rates of fire can be increased. Ammunition can be stored in full or half ton lots. Subtract 3 damage vs BAR 8+ armor (2 damage).

REVOLVER CANNON (Primative)

The revolver cannon came as weapon designers sought larger, more powerful weapons to effectively overcome more effective armor. Like weapons of its day, the revolver cannon was less effective against armor rated BAR 8 and greater unless a special munition were used. The revolver cannon normally utilized a round that ranged from 60mm to 90mm with most models utilizing a 75mm round with a 6-9 round burst. Ammunition for revolver cannon consistently weights 1 ton per 25 bursts. Ammunition must be added in full ton lots. Like rifles and chain guns, the revolver cannon is less effective against BAR 8+ armor and inflicts 3 less damage against armor of these types (3 damage).

ULTRA HEAVY RIFLE

The Ultra Heavy Rifle was developed in the early 2200's in response to advances in armor technology. It was no true innovation, simply a more robust barrel, chamber, and feed mechanism. The Ultra Heavy Rifle would quickly be over shadowed by the development of the AC-5 less than a generation later. As a weapon system, it never gained great popularity especially after the advent of heavier autocannon, but it remains a cheap, easily produced weapon system capable of damaging even the most advanced armor composites.

ANTI-TANK MISSILE (Primative)

The Anti-Tank Missile is the predescessor to the SRM. Most systems are one-shot systems that require manual reloads. The missile warhead contains a tandem charge. Upon a successful attack, the warhead inflicts 10 damage (7 to BAR 8+ armor) and also rolls for a critical hit (no damage from the tandem effects against armor BAR 8+).

AIR to AIR MISSILE (Primative)

Air to Air Missiles would eventually be supplanted by general purpose SRM and LRM missiles until Air to Air Missiles would be re-introduced in the 31st Century. One of the primary reasons this weapon system would be abandoned is that the sensor systems had difficulty in targeting combat systems that did not require zero net-heat (aerospace fighters) and the sensor systems were completely ineffective against systems with any kind of ECM. Additionally, the most advanced air to air missiles of the 24th century were incable of manuevering at thrust levels above 12. Additionally, these missiles generally targeted flight control surfaces on conventional aircraft and were less effective in damaging aerospace fighter armor. Most Air to Air Missiles are one shot weapons.

LIGHT AIR to AIR MISSILE (Primative)

The light air to air missile is less effective against BAR 6+ armor. Attacks against BAR 6+ armor inflict 3 fewer damage and attacks against BAR 8+ armor inflicts 0 damage. Attacks against aerospace fighters and units expending 6+ thrust points in a single turn are +3 to-hit. Attacks against units expending 9+ thrust points in a single turn are completely ineffective.

HEAVY AIR to AIR MISSILE (Primative)

The heavy air to air missile is less effective against BAR 6+ armor. Attacks against BAR 6+ armor inflict 3 fewer damage and attacks against BAR 8+ armor inflicts 6 fewer damage. Attacks against aerospace fighters and units expending 6+ thrust points in a single turn are +3 to-hit. Attacks against units expending 9+ thrust points in a single turn are completely ineffective.

SURFACE to AIR MISSILE (Primative)

Similar to air to air missiles, Surface to Air Missiles would be supplanted by SRMs, LRMs, and Autocannon in after the 24th Century due to their ineffectiveness against advanced combat systems and their suseptibility to anti-missile systems. In the interim, however, they were pretty effective in engaging the combat systems of their day. S2A missiles would later be re-introduced in the late-31st Century.

MANPACK SURFACE to AIR MISSILE (Primative)

The manpack surface to air missile inflicts -1 damage against BAR 6+ armor and is ineffective effective against BAR 8+ armor. Attacks against all aerospace fighters or any units expending 3+ thrust points in a single turn are +3 to-hit. Attacks against units expending 6+ thrust points in a single turn are completely ineffective.

LIGHT AIR to AIR MISSILE (Primative)

The light air to air missile is less effective against BAR 6+ armor. Attacks against BAR 6+ armor inflict 3 fewer damage and attacks against BAR 8+ armor inflicts 6 fewer damage. Attacks against aerospace fighters and units expending 6+ thrust points in a single turn are +3 to-hit. Attacks against units expending 9+ thrust points in a single turn are completely ineffective.

HEAVY AIR to AIR MISSILE (Primative)

The heavy air to air missile is less effective against BAR 6+ armor. Attacks against BAR 6+ armor inflict 3 fewer damage and attacks against BAR 8+ armor inflicts 6 fewer damage. Attacks against aerospace fighters and units expending 6+ thrust points in a single turn are +3 to-hit. Attacks against units expending 9+ thrust points in a single turn are completely ineffective.

Ballistic Missile (Primative)

The ballistic missile is an artillery system that grew out of 20th century ballistic missile systems. These primitive systems would later be replaced by Arrow IV systems and cannon artillery. While it appears ballistic missiles (and guided missiles) should offer great advantages to combatants over Arrow IV and Cannon artillery, there are a variety of reasons that these large, missile artillery systems were supplanted by the artillery systems that remain common today. One of the primary reasons for these systems to be abandoned over time was their high cost relative to their mediocre destructive power. Additionally, these systems are much larger than conventional artillery and are highly succeptible to anti-missile defenses. Still, even during the Succession Wars, combatants found advantages to using these weapons systems (namely, their relative ease of production by lower tech societies).

Tactical Ballistic Missile (Primative)

Tactical ballistic missiles are the most common of the missile artillery. Evantually supplanted by Arrow IV and by Long Ranged Missile Systems, Tactical Ballistic Missiles were prized because of their simplicity, cost-effectiveness, and lethal power. Over the course of time, however, the tactical ballistic missile became ineffective becuase they were succeptible to anti-missile systems.

Short Range Ballistic Missile (Primative)

Short Range Ballistic Missiles are very similar to tactical ballistic missiles. In reality, these missiles are simply a larger, more lethal, extended range tactical ballistic missile. It suffers the same drawbacks as the tactical ballistic missiles.

Medium Range Ballistic Missile (Primative)

The Medium Range Ballistic Missile (Primative) was less succeptible to anti-missile systems compared to the Tactical and Short Ranged versions because the durability of the missile itself protected it to some degree from anti-missile defenses. However, with the advent of advanced targeting systems in the 2400s, these missiles could be targeted like a dive-bombing fighters. Because the missile has no flight adjustment systems, targeting systems are +3 to hit these missiles and, generally, very few of these missiles are successful in engaging modern forces.

Long Range Ballistic Missile (Primative)

Long Range Ballistic Missiles experience the same advantages and disadvantages as Medium Range Ballistic Missiles.

Guided Missile (Primative)

Guided Missile Artillery suffers many of the same weaknesses as Ballistic Missile Artillery, but these artillery systems were one of the primary artillery systems for the various colonies established throughout the Inner Sphere through the 2400's. By the 2400's, though, even guided missiles had been supplanted by the artillery systems we recognize today. Guided missiles suffer greater disadvantages on the modern battle field compared to their ballistic missile counterparts. First, they are much more expensive than ballistic missiles and have generally inflict less damage on the battlefield. Additionally, since they do not arc in a similar manner to ballistic missiles, the largest of these missiles could be attacked like an aerospace fighter. Finally, the designation systems used by these missiles (while highly portable and long ranged compared to modern TAG), were highly succeptible to interference by advanced electronic systems and were completely subverted by advanced electronic countermeasures.

Tactical Guided Missile (Primative)

Tactical guided missiles were very effective in providing additional firepower to light forces, but they were eventually countered with effective anti-missile systems.

Short Range Guided Missile (Primative)

Short range guided missiles were very effective in providing additional firepower to light forces, but they were eventually countered with effective anti-missile systems.

Medium Range Guided Missile (Primative)

Medium range guided missiles tend to travel at slightly slower speeds than tactical and short-ranged guided missiles. Because of this, and because of their trajectory, they can be engaged by modern combat systems using advanced fire control. A medium range guided missile so engaged must sustain 2 points of damage to destroy it.

Long Range Guided Missile (Primative)

Long range guided missiles tend to travel at slightly slower speeds than tactical and short-ranged guided missiles. Because of this, and because of their trajectory, they can be engaged by modern combat systems using advanced fire control. A long ranged missile so engaged must sustain at least 4 points of damage to destroy it.

Tigerfish Unguided Torpedo (Primative)

Unlike modern torpedos that launch multiple, small water-borne missiles from an enclosed system with a standardized ammunition feed, the Tigerfish and Spearfish Torpedos are large, singular, water-borne missiles launched from a tube or similar launcher. These missiles are very large and relatively slow moving. Unguided torpedos have relatively short ranges due to the slow speeds at which the missles move.

Spearfish Guided Torpedo (Primative)

The major advantage of the spearfish over the Tigerfish is that it is effective over greater distance as it can continue to track a target throughout its trajectory. Unfortunately, as more powerful electronic countermeasures were introduced in the 2500's, tracking and tele-operated torpedoes became less effective due to interference. By the 2600's, the Spearfish was relegated almost entirely to planetary garrison forces.

LARGE NAVAL GUNS (Primative)

These large gun systems were developed by the large naval cannon originally produced in the 20th century on Terra. They are very similar to modern artillery cannon, but fire much larger shells. In the 2500's modern composites, alloys, and explosive chemicals resulted in the development of artillery systems that were just as effective at a fraction of the weight. While these artillery pieces could have been redesigned to take advantage of this technological improvement, there wasn't a large market for large gun systesm at the height of the Star League. Today, economics and logistics continue to prevent the development of the modern equivilent of these systems. Defense forces that might be interested in these systems do not have the budget to invest in system upgrades, and these systems and the units that use them are not easily transported by dropship. Still, even today there are blue-water planetary militias (as well as land vehicles) that rely on this ancient system to defend their planets.

"TRIPLE" Three Inch Gun

The "Triple" (Like all of the common Naval Guns) gets its nickname from the size of the round it fires…a 3 inch shell. The triple fires this shell in a rapid, 5 round burst. While the individual explosive power of these shells is not great, the burst is highly accurate and capable of saturating a 30 meter diameter area with high-energy fragments.

"Fiver" Five Inch Gun (Primative)

The "Fiver" is essentially a larger "Triple" and fires a round that is 150% heavier than the triple's round and also contains a higher amount of propellant.

"Eighter" Eight Inch Gun (Primative)

The "Eighter" reduced the number of rounds fired to 3 per burst because the gun hardware would have to be reinforced to over 100 tons for a full 5-round burst. Additionally, a 5 round burst would almost consume a full ton of ammuntion. Modern explosives and alloys would allow for an "Eighter" that could fire faster and be more effective, but organizations interested in a better "Eighter" are better served with simply purchasing a Long Tom Artillery Peice. The advantage that an "Eighter" holds over a Long Tom today, though, is that the "Eighter" is readily produced on virtually any industrialized planet, including many bandit-controlled planets.

Light Hardpoint

The light hardpoint offers some advantages and some serious disadvantages over the standard external hardpoint. The two primary advantages of the light hard point are that a single light hardpoint can be added to a fixrd wing or VTOL support vehicle for every 2500 kg of vehicle weight. Additionally, in medium and large support vehicles, these hard points are integrated at no extra weight cost. For small support vehicles, these hard points weight 50 kg each. Weapons and equipment requiring 2 light hardpoints require a vehicle that mounts at least 2 light hardpoints in the same location.

Weapon/Item	Type	Heat Std. (Aero)	Damage Std (Aero)	Range Min/Sht/Med/Lng (Aero)	Ammo (per Ton)	To-Hit Modifier	TC Comp	Rules Lvl	Tech Base	Tech Rating	Latest Intro Date (IS/Clan)	Item/Ammo Cost (C-Bills)	Weight (Tons)	Space M	P	CV	SV	F	SC	DS	JS	WS
Chain Gun	Light	1	4*	0/2/4/6 (Short)	100	0	Y	Exp	IS	B/C-F-X	2110	20,000/2,000	1	1	1	1	1	1	1	1	1	1
Chain Gun	Heavy	2	5*	0/3/6/9 (Med)	50	0	Y	Exp	IS	B/C-F-X	2013	40,000/4,000	1.5	1	1	1	1	1	1	1	1	1
Revolver Cannon		4	6*	0/4/8/12 (Med)	25	0	Y	Exp	IS	B/C-F-X	2125	80,000/6,000	2		2	1	2	1	1	1	1	1
Rifle	Ultra Heavy	7	14*	3/7/12/15 (Medium)	3	0	Y	Exp	IS	C/C-F-X	2217	120,000/5,000	12	6	NA	1	6	1	1	1	NA	NA
Anti-Tank Missile		3	10*	0/4/8/12 (Med)	NA	0	N	Exp	IS	B/C-F-X	2118	10,000/10,000	0.25	1	1	1	1	1	1	1	1	1
A2A Missile	Light	2	6**	NA (Short)	NA	3*	N	Exp	IS	C/C-F-X	2190	18,000/18,000	0.1	1	1	1	1	1	1	1	1	1
A2A Missile	Heavy	4	8**	NA (Medium)	NA	3*	N	Exp	IS	C/C-F-X	2190	30,000/30,000	0.5	1	1	1	1	1	1	1	1	1
S2A Missile	Manpack	0	3**	NA (Surface to Air) Single Shot: 50 kg/ reload	NA	3*	N	Exp	IS	C/C-F-X	2165	15,000/15,000	0.1	1	1	1	1	1	1	1	1	1
S2A Missile	Light	5	8**	NA (Surface to Air) Single Shot: 250 kg per missile	NA	3*	N	Exp	IS	C/C-F-X	2165	20,000/20,000	1	3	3	1	3	1	1	1	1	1
S2A Missile	Heavy	10	16**	NA (Surface to Air) Single Shot: 1 ton per missile	NA	3*	N	Exp	IS	C/C-F-X	2165	45,000/45,000	3	6	NA	3	10	1	1	1	1	1

Weapon/Item	Type	Heat Std. (Aero)	Damage Std (Aero)	Range Min/Sht/Med/Lng (Aero)	Ammo (per Ton)	To-Hit Modifier	TC Comp	Rules Lvl	Tech Base	Tech Rating	Latest Intro Date (IS/Clan)	Item/Ammo Cost (C-Bills)	Weight (Tons)	Space M	P	CV	SV	F	SC	DS	JS	WS
Ballistic Missile, Tactical	AEX	6	20/10	5 Maps	1	NA	N	Exp	IS	B/C-F-X			1	4	NA	2	7	1	1	1	1	1
Ballistic Missile, Short Range	AEX	11	20/10/5	20 Maps	1/4	NA	N	Exp	IS	C/C-F-X			2	6	NA	3	10	1	1	1	1	1
Ballistic Missile, Medium Range	AEX	15	30/20/10	75 Maps	1/10	NA	N	Exp	IS	C/C-F-X			4	8	NA	4	11	1	1	1	1	1
Ballistic Missile Long Rang	AEX	19	30/20/10	200 Maps	1/24	NA	N	Exp	IS	C/C-F-X			8	NA	NA	3	12	NZ	1	1	1	1
Guided Missile, Tactical	AEX	6	10	5 Maps	1	NA	N	Exp	IS	C/C-F-X			1	4	NA	2	7	1	1	1	1	1
Guided Missile, Short Range	AEX	11	10	20 Maps	1/4	NA	N	Exp	IS	C/C-F-X			2	6	NA	3	10	1	1	1	1	1
Guided Missile, Medium Range	AEX	15	10	75 Maps	1/10	NA	N	Exp	IS	C/C-F-X			2	8	NA	4	11	1	1	1	1	1
Guided Missile Long Rang	AEX	19	10	200 Maps	1/20	NA	N	Exp	IS	C/C-F-X			2	NA	NA	3	12	NZ	1	1	1	1
Tigerfish Torpedo Unguided	AEX	3	22**	1/3/5/6 (NA)	1/2	NA	N	Exp	IS	B/C-F-X			1	NA	NA	2	5	NA	NA	NA	NA	NA
Spearfish Torpedo Guided	AEX	3	22**	1/4/8/12 (NA)	1/2	NA	N	Exp	IS	C/C-F-X			1	NA	NA	2	5	NA	NA	NA	NA	NA

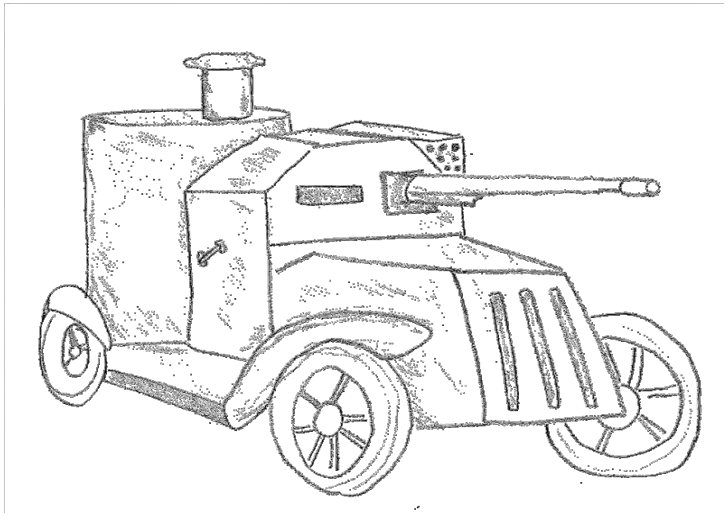
Weapon/Item	Type	Heat Std. (Aero)	Damage Std (Aero)	Range Min/Sht/Med/Lng (Aero)	Ammo (per Ton)	To-Hit Modifier	TC Comp	Rules Lvl	Tech Base	Tech Rating	Latest Intro Date (IS/Clan)	Item/Ammo Cost (C-Bills)	Weight (Tons)	Space M	P	CV	SV	F	SC	DS	JS	WS
Naval Gun "Triple" Three Inch	AE X	10	10/2	7 Map s	12	NA	N	Exp	IS	B/C-F-X		150,000/4000	10	8	NA	1	8	NA	1	1	1	1
Naval Gun "Fiver" Five Inch	AE X	20	20/10	21 Maps	4	NA	N	Exp	IS	B/C-F-X		280,000/5,000	40	NA	NA	1	10	NA	1	1	1	1
Naval Gun "Eighter" Eight Inch	AE X	30	20/10/5	28 Maps	2	NA	N	Exp	IS	B/C-F-X		550,000/12,000	60	NA	NA	1	12	NA	1	1	1	1
External Hardpoint Light										B/C-F-X			.05*									

	Damage	# of Light Hardpoints Required		TC Comp	Rules Lvl	Tech Base	Tech Rating	Latest Intro	Item/Ammo Cost (C-Bills)	Notes
HE Bomb Light	3	1	NA	N	Exp	IS	B/C-F-X			Inflices 3 points of damage to every unit in the cell.
Cluster Bomb Light	2	2	NA	N	Exp	IS	B/C-F-X			Inflicts 2 points of damage to the impact hex and 2 points of damage to each of the 6 surrounding hexes.
Anti Tank Missile Light Hardpoint	10*	1	NA	N	Exp	IS	B/C-F-X			Damage is reduced by 5 against armor rated at BAR 8 and above
Rocket Launcher Light Hardpoint	1* (use LRM-5 table)	1	NA	N	Exp	IS	B/C-F-X			Effectively allows a special RL-5 to be used as an external weapon system.
Drop Pod Light		1	NA	N	Exp	IS	B/C-F-X			Allows an additional 250 kg of fuel to be carried
A2A Missile Light		1	NA	N	Exp	IS	B/C-F-X			See S2A Missile, Light
A2A Missile Heavy		2	NA	N	Exp	IS	B/C-F-X			See S2A Missile, Heavy
Napalm Light Hardpoint	*	2	NA	N	Exp	IS	B/C-F-X			Treat as though all units in the target hex have been hit by 3 Inferno SRM

Type:	Steam Car
Tech Rating:	B
Chassis Type:	Wheeled
Mass:	15 tons
Chassis Modifications:	
Crew:	4
Cargo:	

Engine Type:	Steam
Cruise MP/Safe Thrust:	3
Flank MP/Maximum Thrust:	5
Range (km)/Thrust Points	303 km
Heat Sinks:	0
Armor Type	BAR 5
Armor Points	15

Location	Internal Structure	Armor Value
Front	2	6
Right/Left Side	2	3
Rear	2	3



Controls: Basic

Weapons and Equipment:

1 x Light Rifle (Front)

1 ton Light Rifle ammo

1 x RL-10 (Primative) (Front)

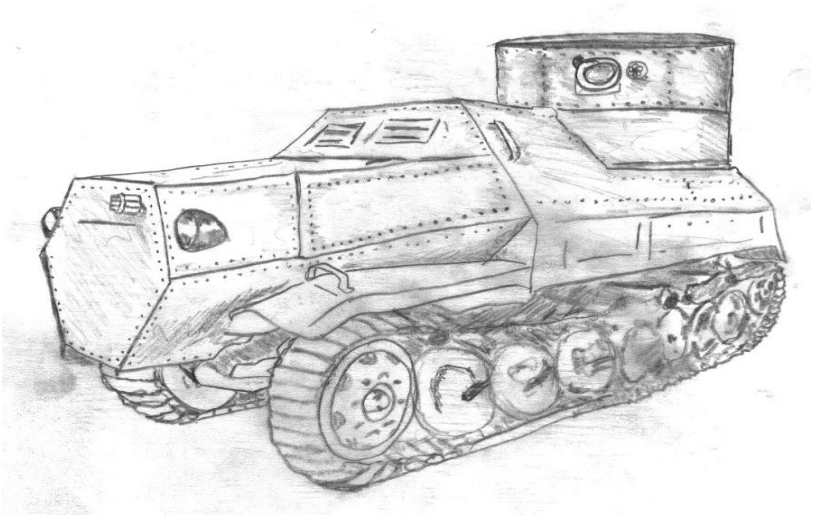
Cost: 82,717 C-Bills

Type:	Steam Tank
Engine Type:	Steam

Tech Rating:	B
Chassis Type:	Tracked
Mass:	35
Chassis Modifications:	
	Tractor
	Armored
Crew:	6
Cargo:	

Cruise MP/Safe Thrust:	2
Flank MP/Maximum Thrust:	3
Range (km)/Thrust Points	1025 km
Heat Sinks:	0
Armor Type	BAR 8
Armor Points	33

Location	Internal Structure	Armor Value
Front	4	7
Right/Left Side	4	5
Rear	4	5
Turret	4	11



Controls: Basic

Weapons and Equipment:

1 x Medium Rifle (Turret)

1 x Machinegun (Turret)

2 tons Medium Rifle ammo

.5 tons Machinegun ammo

Cost: 215, 022 C-Bills

Type:	Armored Trailer
Tech Rating:	B
Chassis Type:	Tracked
Mass:	10 tons
Chassis Modifications:	
	Armored
	Trailer
Crew:	4
Cargo:	

Engine Type:	None
Cruise MP/Safe Thrust:	NA
Flank MP/Maximum Thrust:	NA
Range (km)/Thrust Points	NA
Heat Sinks:	0
Armor Type	BAR 8
Armor Points	33

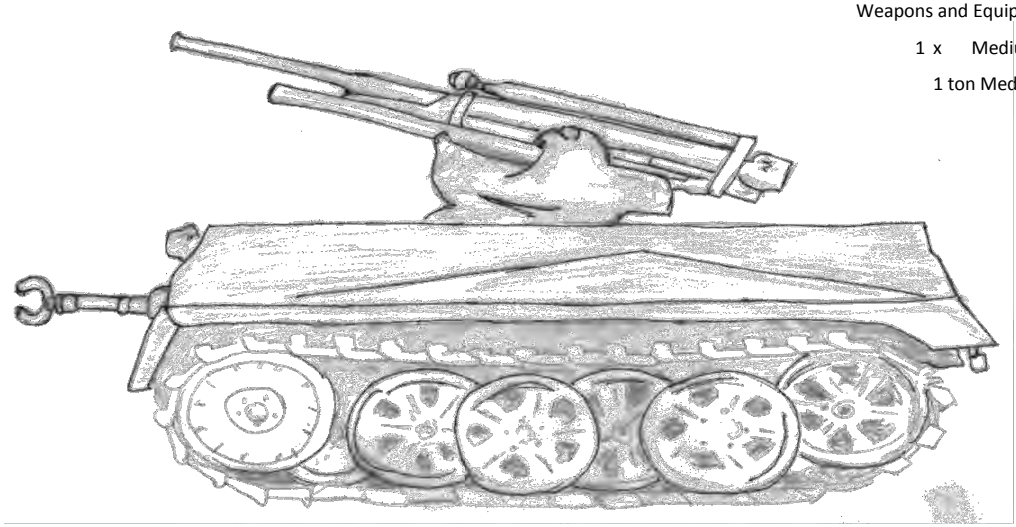
Location	Internal Structure	Armor Value
Front	1	6
Right/Left Side	1	6
Rear	1	5
Turret	1	10

Controls: Basic

Weapons and Equipment:

1 x Medium Rifle

1 ton Medium Rifle ammo



Type:	Steam Rail Engine
Tech Rating:	B
Chassis Type:	Rail
Mass:	60 tons
Chassis Modifications:	
	Tractor
Crew:	6
Cargo:	
	21. 5 tons

Engine Type:	Steam
Cruise MP/Safe Thrust:	4
Flank MP/Maximum Thrust:	6
Range (km)/Thrust Points	2857 km
Heat Sinks:	0
Armor Type	BAR 5
Armor Points	55

Location	Internal Structure	Armor Value
Front	6	12
Right/Left Side	6	12
Rear	6	12
Turret	6	7

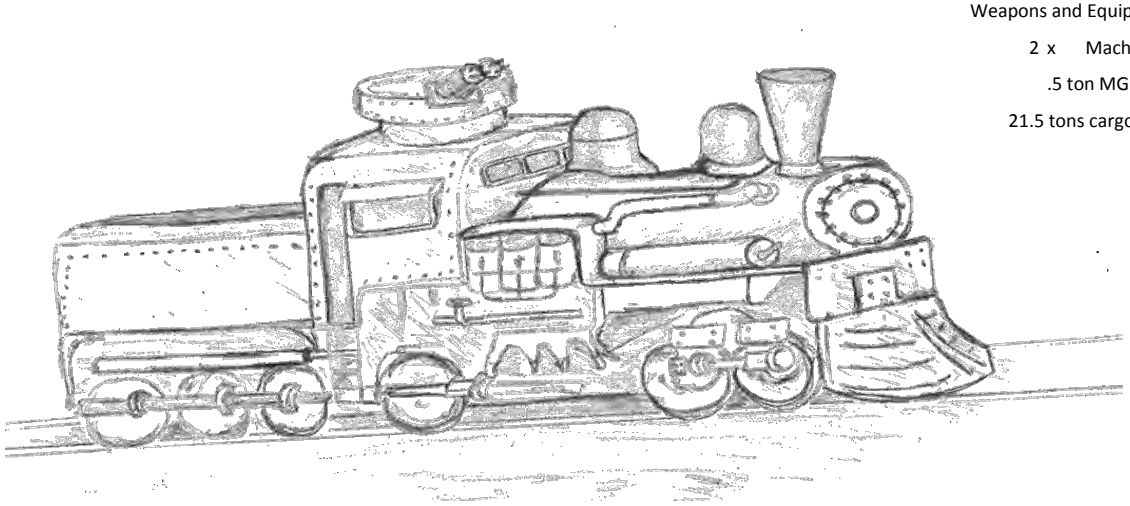
Controls: Basic

Weapons and Equipment:

2 x Machinegun (Turret)

.5 ton MG Ammo

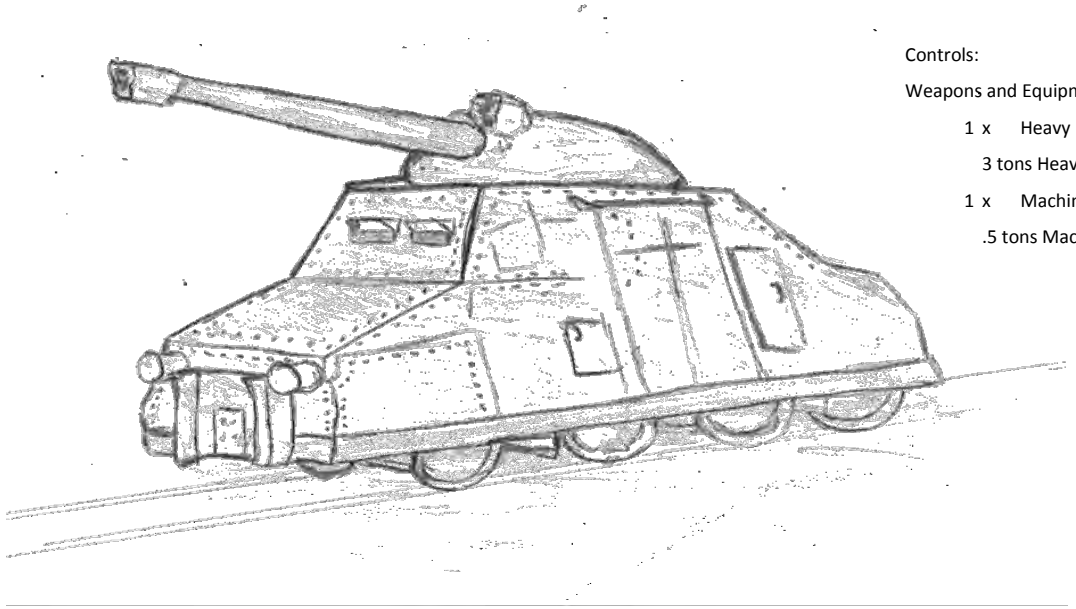
21.5 tons cargo



Type:	Armored Rail Car
Tech Rating:	B
Chassis Type:	Rail
Mass:	30 tons
Chassis Modifications:	
	Trailer
	Armored
Crew:	5
Cargo:	
	NA

Engine Type:	None
Cruise MP/Safe Thrust:	NA
Flank MP/Maximum Thrust:	NA
Range (km)/Thrust Points	NA
Heat Sinks:	0
Armor Type	BAR 8
Armor Points	58

Location	Internal Structure	Armor Value
Front	3	9
Right/Left Side	3	9
Rear	3	9
Turret	3	22



Controls: Basic

Weapons and Equipment:

1 x Heavy Rifle (Turret)

3 tons Heavy Rifle ammo

1 x Machinegun (Turret)

.5 tons Machinegun Ammo

Type:	Steam Airship
Tech Rating:	B
Chassis Type:	Airship
Mass:	300 tons
Chassis Modifications:	
	None

Crew:	20

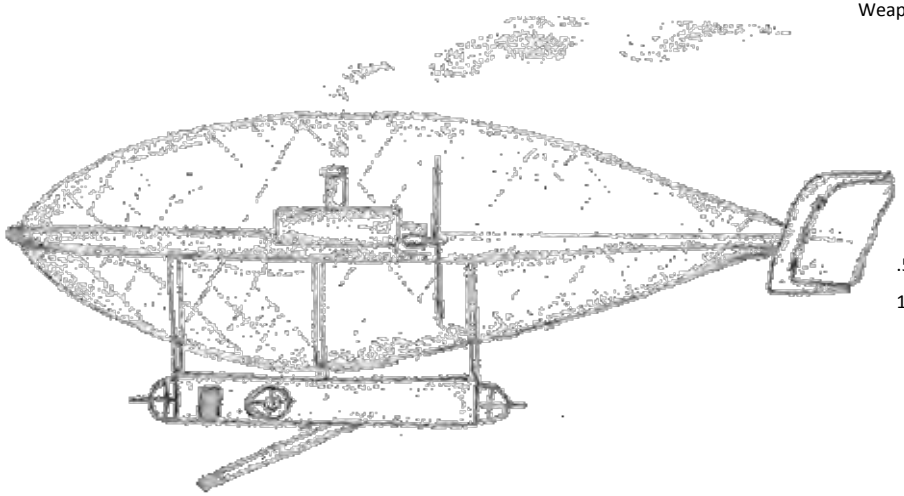
Cargo:

139 tons*

Occassionally carries jump infantry in a large bay or vehicles with drop chutes

Engine Type:	Steam
Cruise MP/Safe Thrust:	0.25
Flank MP/Maximum Thrust:	NA
Range (km)/Thrust Points	350 pts
Heat Sinks:	0
Armor Type	BAR4
Armor Points	20

Location	Internal Structure	Armor Value
Front		5
Right/Left Side		5
Rear		5
Body	1	



Controls: Basic

Weapons and Equipment:

1 x "Triple" Three Inch Naval Gun (Front)

5 tons "Triple" ammo

1 x Machinegun (Front)

1 x Machinegun (R. Side)

1 x Machinegun (L. Side)

1 x Machinegun (Rear)

.5 tons Machinegun Ammo

139 tons cargo

Type:	Steamboat
Tech Rating:	B
Chassis Type:	Naval
Mass:	300 tons
Chassis Modifications:	
Crew:	30
Cargo:	
	123.5 tons Cargo

Engine Type:	Steam
Cruise MP/Safe Thrust:	3
Flank MP/Maximum Thrust:	5
Range (km)/Thrust Points	1000 km
Heat Sinks:	0
Armor Type	BAR 4
Armor Points	100

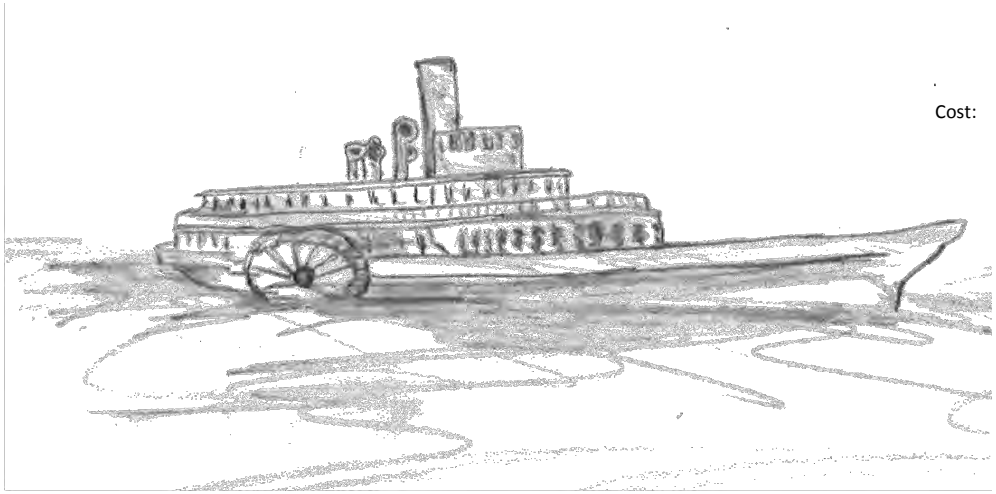
Location	Internal Structure	Armor Value
Front	20	
Right/Left Side	20	
Rear	20	

Controls: None

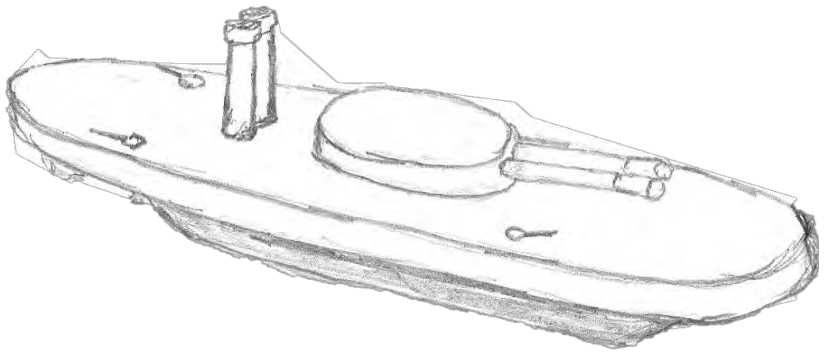
Weapons and Equipment:

123.5 tons cargo

Cost: 424,305 C-Bills



Type:	Iron Clad
Tech Rating:	B
Chassis Type:	Naval
Mass:	900 tons
Chassis Modifications:	
	Armored
Crew:	35
Cargo:	
	71.5 tons



Engine Type:	Steam
Cruise MP/Safe Thrust:	2
Flank MP/Maximum Thrust:	3
Range (km)/Thrust Points	587 km
Heat Sinks:	0
Armor Type	BAR 8
Armor Points	250

Location	Internal Structure	Armor Value
Front	31	32
Front R/L	31	32
Rear R/L	31	32
Rear	31	32
Turret	31	58

Controls: Basic

Weapons and Equipment:

1 x "Fiver" Five Inch Naval Gun (Turret)

5 tons "Fiver" Ammunition

2 x Machineguns (Front Right) in sponson turret

2 x Machineguns (Front Left) in sponson turret

2 x Machineguns (Rear Right) in sponson turret

2 x Machineguns (Rear Left) in sponson turret

1 ton Machinegun Ammo

35 steerage Quarters

73.5 tons Cargo

Variants: A common Variant for Riverine Warfare is to add a second, rear turret and replace the "Fiver" with 6 Heavy Rifles (3 in each turret), and increase total armor coverage. In these variants, the both turrets carry 50 points of armor and the ammunition magazines contain a total of 16 tons of Heavy Rifle ammunition. Total cargo capacity is reduced to 43.5 tons, but this variant rarely ventures far from its lines of logistical support.

Cost: 2661498 C-Bills