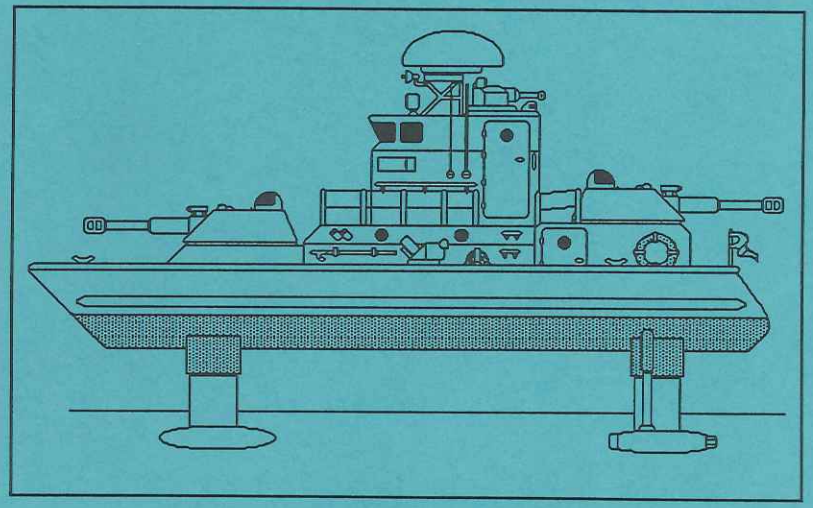
The ADJUTANT

RM-90-06

Imperial Armed Forces Vehicle Guide, Altair Sub-Sector

Set Number Six, *Waterborne*



Introduction

Thank you for your purchase of this vehicle guide. It contains waterborne vessels designed for use with the Traveller® and the Striker® science fiction role playing game systems. However, the specifications are comprehensive enough that conversion to other systems should cause no problems.

For many years, most Naval ships used large, cumbersome fission power plants. Small, coastal patrol craft and medium sized ships used internal combustion or gas turbine jet engines for primary power. The early fusion drives that naturaly replaced the fission plants were just as large and troublesome and were still unusable in smaller craft. The advent of small, functional fusion drives had a decisive effect on ship design. The low maintenance, long range, and small size proved perfect for all size ships. Becuase the old vessels were approximately 50% power plant, the new ships could be much smaller and still perform the same tasks as their larger predecessors. As with the large Nuclear ships of earlier times, the limit on endurance of these vessels became a matter of supplies for the crew.

The vehicles in this guide are used in the "Brown Water" or "Shallow Water" Navy. These are terms used to describe Riverine and Coastal Patrol Units. Also included are some Amphibious assault ships. While it is possible to design large Naval Combatants, because of the availability of large, orbit capable vessels, these have become all but obsolete. Instead, the emphasis has turned to small, fast ships used to support ground forces, and patrol inland waterways as well as harbors and coastlines. Once in a combat environment, crews often personalize their vessels. Because of this and the fact that spare parts can be scarce, it is not uncommon to find extras of everything that can be strapped on, buckled in or shoved under any usable space in the crew compartment or on the outside of the vessel.

The ships ins this guide move by virture of a one or more pumps that draw in water from the front or sides of the hull and propel it out nozzels in the rear. Often called "Jacuzzi" drives, these propulsion systems afford maximum manuverability. Because the jet nozzles are stearable, often with 360° roation, no rudder is needed which give these vessels the ability of operating in shallow water.

The use of Surface Naval Units or a "Wet Navy" is questioned by some, given the advent of Grav vehicles. The argument in favor of these vessels is simple; First, can a grav vehicle float or stay on station if the power plant fails or runs out of fuel? Most float like wet rocks. Second, why not use space capable ships? This can be summed up in one word. Money! The craft in this guide are inexpensive when compared to even a small scout ship. It is a huge waste of re-

sources to use orbit capable ships for coastal or river patrols or as combat ships. All these ships are still in the current military inventory and are exported to several client worlds for use in medium tech level conflicts. While it is possible to find them in use with Army units, Most Military Forces on worlds with sizable bodies of water have a long history and tradition of Naval Forces. Thus, anything to do with water is jealously defended as the sole realm of the Navy. While this can be inefficient and at times costly, it has proven to be a constant on many worlds and cultures across history.

The final point to address is the use of chemically propelled munitions vs. high energy weapons. The decision to use CPR guns was based on expense, maintenance, versatility, and technology levels available. Water vehicles are subjected to moderate jarring and constant pitching and rolling. High precision energy weapons in these vehicles would need to be constantly calibrated and adjusted and repair parts are expensive and time consuming to install. CPR guns, on the other hand, are a cost effective alternative and have the advantage of firing a wide variety of ammunition, in large volumes with minimal energy requirements. And while lasers may be defeated in several ways, the only protection agains CPR rounds is armor and lots of it. Plus, when was the last time you saw a fusion gun fire smoke, or offer indirect fire support? And yes, you could use missiles or rockets (and some of these vessels do), but again look at the expense. For these reasons, no high energy weapons are included for use in this guide.

I hope this brief explanation helps in the use of these vehicles in your campaigns. I will be happy to answer any questions or clarify an unclear point, simply enclose an S.A.S.E. with your questions and I will return an answer to you. Look for future sets outlining other vehicle families.

Also write for a sample issue of The ADJUTANT, a newsletter written for Traveller Army, Marine and Mercenary characters. Published six times a year, each issue is full of rules variants, suggestions, personal weapons, etc. At only $9.00 per year, it's one of the best deals in the Imperium.

Mark
Schmidt

Acknowledgments

Anyone who has ever tried to design new and innovative vehicles for a science fiction game realizes the complexities involved. Great amounts of time are spent in calculating and designing all the components that make up futuristic combat vehicles. Staying up until the wee hours of the morning before the gaming session vainly trying to get the last little details worked out for detail greedy players. As GMs, we have all been placed in this unenviable position.

It is my intent to save you the time and aggravation required to put vehicles into your campaign. I hope you find this and future guides useful. My thanks and deepfelt gratitude go to the following individual for his help in working as many of the "bugs" out of this package as is possible;

Ferdinand Metzger for his valuable technical assistance and experience as a Sailor before he went "airdale".

Thanks to this friend and the rest of the Marina Gaming Club without whose help this project would never have been.

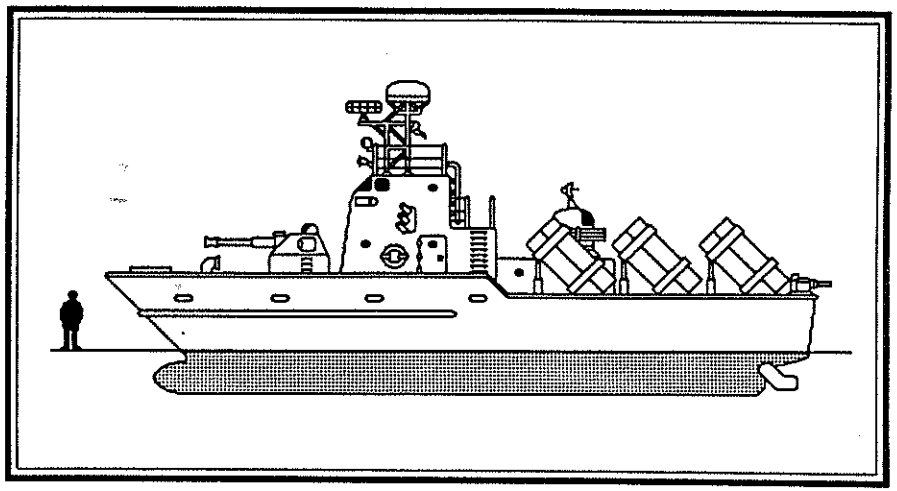
Mark Schmidt

M-800

The M-800 "Barracuda" is a Patrol Boat used for deep water coastal patrol. It can patrol against both surface and subsurface vessels. The hull is lightly armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value against penetration. A fusion power plant drives a pair of Jet Propulsion nozzles capable of driving the ship at up to 67 kph. Stearing is accomplished by rotating these nozzles. It is armed with an automated 76 mm high velocity CPM gun, a remote mounted HMG on the stern, and a point defense Gatling Gun mounted amidship. Mounted along either side are 6 canisters for missiles. These can be loaded with a variety of missile types: SSM, SLAM, Anti-Sub, etc. The canisters can depress to 10°, elevate up to 60° and can slew outboard up to 20°. This vessel is capable of staying on station for 45 days standard and 90 days under emergency conditions.

SPECIFICATIONS:

Dimensions:	L: 25 m, Beam: 6 m, H: 8 m (from waterline), Draft: 1.5 m			
Combat Weight:	278 metric Tons			
Displacement:	112.5 tons (225 m3)			
Power Plant:	Fusion, 12 megawatt output, (1 mw emergency generator)			
Fuel Req.:	18 liters/hour, 20,000 liters carried			
Propulsion:	2 Twin Variable-Direction Jet Inlet/Exhaust nozzles			
Armor: Hull	Hull Sides	Rear	Deck	
Actual/Rated mm	2/42	2/28	1/14	
	Front	Sides	Rear	Deck
Superstructure:	4/56	3/42	2/28	1/14
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	43:1			
Max.Speed:	67 kph (36 knots)			
Max. Eff. Rng:	74,400 km (divide by 2 for round trip)			
Weapons:	One 76 mm main gun; One HMG; One six barrel RFC			
Range,	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
Penetration:	By type, see opposite			
HMG:	500 m, +3	1000 m, +2	1.5 km, +1	
Penetration:	60 mm	50 mm	30 mm	
RFC:	4.5 km +6	9 km, +5	18.5 km, +2	
Penetration:	80 mm (92 mm w/ DPU warheads)			
Fire Rate:	1 round per turn (main), 10 rounds / turn, HMG (2 targets), 750 rounds / turn, RFC (16 targets), 2 missiles / turn			
Feed Device:	25 round autoloader, 75 round reserve, main gun; 250 round linked belts in boxes, 3,000 rounds carried, HMG; 10,000 round linked belt from bin , RFC; Sealed Canisters, missiles			
Crew:	21 - Helmsman, Navigator, 3 Engineers, 5 Seamen, Radar Operator, Radio Operator, Sonar Operator, Captain			
Defense:	Extensive ECM/EW, NBC, 4 shot Chaff Cans, Point Defense			
Electronics:	5k Pwr Radio, 5k Pwr Rad., 1.5k Pwr Sonar, L3TV/IR, Map Box			
Passengers:	n/a			
Cargo:	20 tons (provision, spares)			
Price:	17.50 million cr			



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / Radius / fragmentation penetration

Medusa SSM

See M-825

SLAM (Stand-Off Land Attack Missile)

Warhead	Guidance	Fuse	Range	Effect	Cr
HE	Target Mem.	Impact	175 km	150mm / 40m / 20mm*	2500
CBM	STAFF	Proximity	175 km	200 m2 / 90 mm pent.	3500
Nuclear	same	same	250 km	by size	**
Chemical	same	same	300 km	bv type	**

* Contact Penetration / Radius / Fragmentation Penetration
** To be determined by GM, cost based on size and type

Kingfisher TORPEDO (Anti-Submarine or anti-ship)

Warhead	Guidance	Fuse	Range	Effect	Cr
HEAP	STAFF*	Delayed	60 km	1500 mm pent	5000

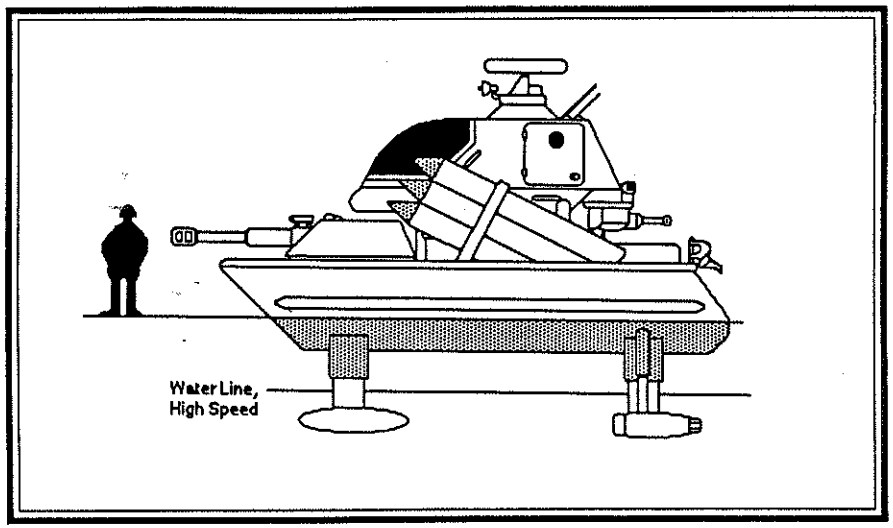
*Ships sensors guide Kingfisher via fiber optic link out to 25 km. The torpedo verifies ship infomation by use of passive or active sensors. When fiber optic link separates, sensors go to active mode and munition homes in on target. Underwater speed 75 kph (40 knots). Note: This weapon may be fitted with Nuclear warheads, GM will determine effectivness.

M-825

The M-825 FAST (Fast Attack/Scout, Tactical) is a small, 2 man platform used for deep water patrol or interdiction.. The hull is costructed of layers of carbon / graphite composites with lighweight metal alloy mesh. This provides extreamly light weight, while maintaining a high armor value against penetration. A fusion power plant drives a set of retractable Jet Propulsion nozzles. These are installed in the rear Hydroplanes which raise the ship out of the water and allow it to reach speeds of 140 kph. Stearing is accomplished in the hydrofoil mode by an interface to an Avionics package and operates much like an aircraft with rudders and ailerons. When used for interdiction, it can be armed with up to 6 Medusa, multi-warhead anti-ship missiles or Kingfisher torpedos. For close-in work, a 76 mm autocannon is installed. Full defensive packages are available, both electronic and physical. When not using the hydroplanes, they retract up next to the hull. This ship is deployed from a "mother" when far from port and crew typically stay deployed for up to 24 hours before returning to the mother ship.

SPECIFICATIONS:

Dimensions:	Length: 8.75 m; Beam: 3.5 m; Height 5.5 (for transport)		
	Draft: 1m (stationary/aux. propulsion), 35 cm (hydrofoil)		
Combat Weight:	23.25 metric Tons		
Displacement:	15 tons, (30 m3) ; .5 tons (1.12 m3 Hydrofoil mode)		
Power Plant:	Fusion, 3 megawatt output		
Fuel Req.:	1.5 liters/hour, 250 liters carried		
Propulsion:	2 Duel Variable-Direction Jet Inlet/Exhaust Nozzles		
Armor: Hull	Hull Sides	Rear	Deck
Actual/Rated mm	5/105	.5/70	.5/70
	Front / Sides	Rear	Deck
Superstructure:	1/21	1/21	.5/70
Turret	10/210 all sides; 1/14 top		
Pwr. to Wt. Ratio:	129:1		
Max.Speed:	75 kph (40 knots) or 140 kph (75 knots)		
Max. Eff. Rng:	7700 km (divide by two for round trip)		
Weapons:	One 76 mm cannon; One LMG; Six SSM Medusa missiles		
Range:	Effective	Long	Extreme
Main:	3 km	4 km	5.5
Penetration :	By type, see opposite		
LMG:	350 m, +4	700 m, +3	1 km, +2
Penetration:	30 mm	20 mm	20 mm
Missiles:	By type, see opposite		
Fire Rate:	2 rounds / turn, Main; 10 rnds / turn Aux.		
	2 missiles / turn (each at sepparate targets)		
Feed Device:	50 round autoloader, Main; 500 round linked belt in box , LMG		
	6 self-contained launch canisters		
Crew:	2 - Pilot, EW / Launch Officer		
Defense:	Extensive ECM / EW, NBC, 4 shot Chaff Can		
Electronics:	5 k Pwr Radio, 5 k Pwr Surface Radar, L3TV/IR, Map Box		
Passengers:	none		
Cargo:	none		
Price:	850,400 cr (includes 6 missiles)		



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / radius / fragmentation penetration

Kingfisher Torpedo, (see M-800 Barracuda)

Medusa SSM

Warhead:	10 Independent 210mm HEAP Rounds w/ 205 mm pent ea.
Fuse:	Delayed
Guidance:	STAFF, Radar-IR homing
Range:	1 to 150 km (warheads have 1 km range)
Weight:	425 kg
Price:	12,000

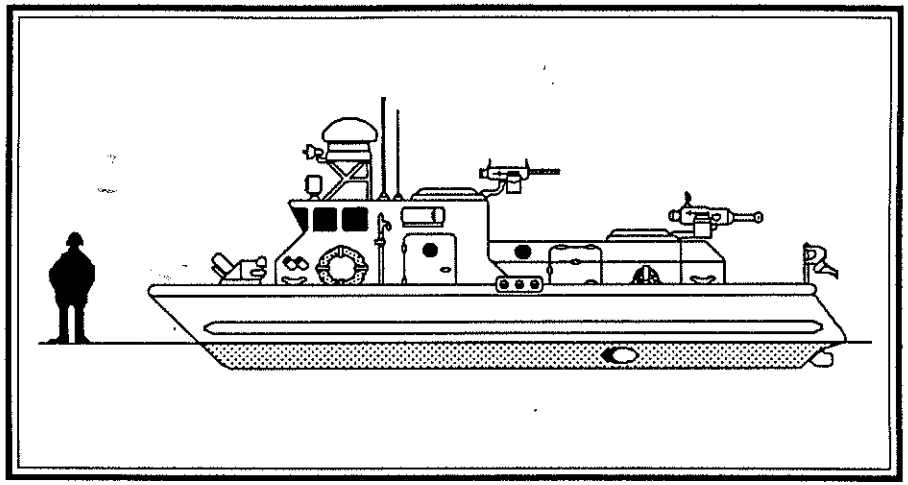
The Medusa warhead is designed to overcome point defense weapons. After launch, the missile flies at 1 to 2 meters from the water, depending on sea conditions. When the missile reaches approximately 1.5 km from its target, the missile executes a pop-up while the nose cone sepparates and 10 independent warheads launch at the target. Each warhead moves on its own vector targeting either Infra-Red signatures or Radar Emissions. For small target vessels, it is not uncommon for some of the warheads to impact on the far side of the ship. Larger ships are hit in the bridge / superstructure area. This missile system is desingned for render a ship blind and deaf by destroying its sensors. Then a larger ship or aircraft can move in for the kill, or the FAST can move within gun range. Each warhead carries a small bt powerful explosive charge with a 15 meter radius and can penetrate up to 205 mm of armor before detonating.

M-827

The M-827 "Gator" is a small PBR used for riverene and harbor patrol. The hull is costructed of layers of carbon / graphite composites with lighweight metal alloy mesh. This provides extreamly light weight, while maintaining a high armor value. A fusion power plant drives a set of Jet Propulsion nozzles capable of propelling the craft at speeds of 75 kph. Stearing is accomplished by rotating these nozzles, which eliminates the need for a rudder and provides much quicker response. It is moderaley armed for a craft in it's size classification and can ferry a small number of passengers, although interdiction is the craft's primary role. Due to its shallow draft, it can operate in only 25 cm of water. It can be carried in medium lift transport aircraft, though it takes several hours to disassemble or set up for operation. Due to the small number of crew on board, several jobs are done by each member, with cross training in critical areas. This craft can stay deployed up to 7 days under normal conditions, 20 days in emergencies.

SPECIFICATIONS:

Dimensions:	Length: 12.5 m, Beam: 4.5 m, Height 2.0 (for transport)			
	Draft: 45 cm (stationary), 25 cm (underway)			
Combat Weight:	34 metric Tons			
Displacement:	12.5 tons, (25 m3)			
Power Plant:	Fusion, 6 megawatt output			
Fuel Req.:	9 liters/hour, 500 liters carried			
Propulsion:	Duel Variable-Direction Jet Inlet/Exhaust			
Armor: Hull	Hull Sides	Rear	Deck	Belly
Actual/Rated mm	5/105	5/1050	1/14	3/31.5
	Front / Sides	Rear	Deck	
Superstructure:	6/63	5/52.5	5/52.5	
Pwr. to Wt. Ratio:	170:1			
Max.Speed:	75 kph (40 knots)			
Max. Eff. Rng:	4125 km (divide by 2 for round trip)			
Weapons:	One 7.62 LMG; One 12.7 HMG; One 82 mm Mortar; small arms			
Range:	Effective	Long	Extreme	
LMG:	350 m, +4	700 m, +3	1 km, +2	
Penetration:	30 mm	20 mm	20 mm	
HMG:	500 m, +3	1000 m, +2	1.5 km, +1	
Penetration:	60 mm	50 mm	30 mm	
Mortar:	By type, see opposite			
Fire Rate:	10 rounds / turn / per gun (2 targets ea.)			
	2 rounds / turn, Mortar			
Feed Device:	100 round linked belts in boxes, 3,000 rounds carried , ea. MG			
	50 round linked belt from bin			
Crew:	5 - Helmsman, Engineer, 2 Seamen, Captain			
Defense:	Basic ECM / EW, NBC, 4 shot Chaff Can, two 3-shot APERS			
	dispensers (side mounted)			
Electronics:	5 k Pwr Radio, 5 k Pwr Air Radar, 5 k Pwr Surface Radar,			
	.5 k sonar, Thermal Image, Map Box			
Passengers:	up to 10			
Cargo:	2 tons			
Price:	800,250 cr			



82 mm Grenades

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170 mm/20 m/30 mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

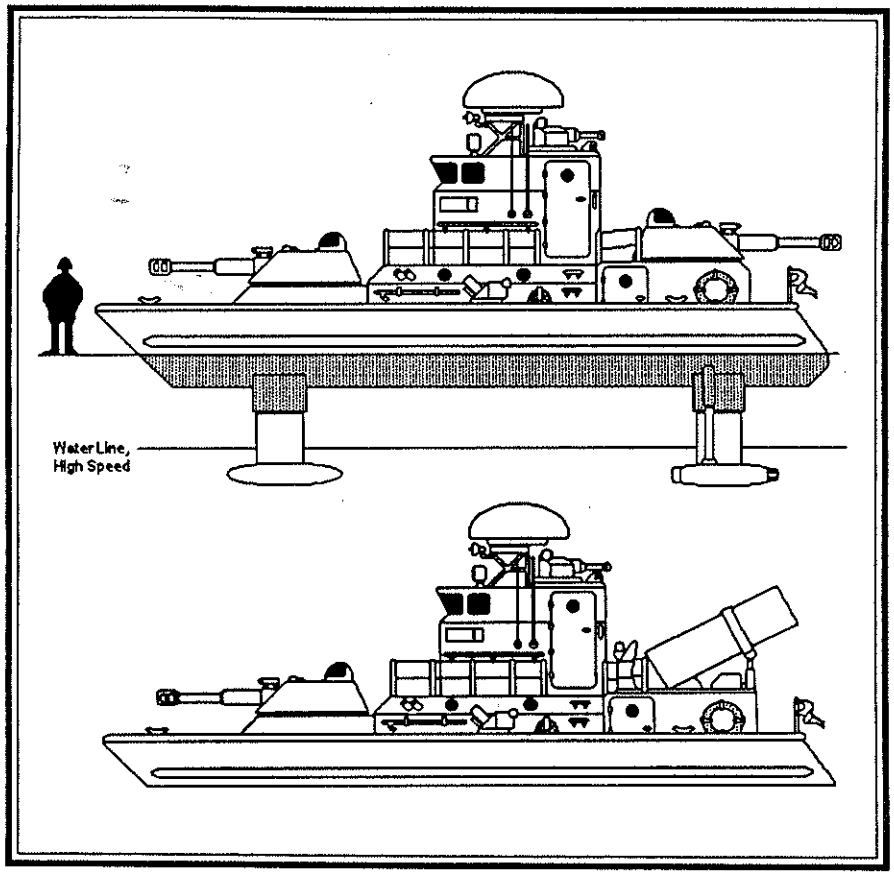
*contact penetration / radius / fragmentation pentration

M-828

The M-828 "Skipjack" is a medium Hydrofoil used for deep water and coastal patrol. The hull is armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value. A fusion power plant drives a set of Jet Propulsion nozzles capable of propelling the craft a up to 140 kph. Stearing is accomplished by rotating these nozzles, which eliminates the need for a rudder. In the 'foil mode, an avionics package is used and manouvering is similar to that of an aircraft. It is armed with two 76 mm high velocity CPM guns, two 82 mm mortars, and a one remote mounted LMG . When not using the hydroplanes, they retract partially into the hull. The ship's crew is cross trained to perform all of the ship's duties. This vessel is capable of staying on station for 15 days, 30 days under emergency conditions.

SPECIFICATIONS:

Dimensions:	Length: 16 m, Beam: 6 m, Height: 5.5 m (from waterline)			
	Draft: 2 m, 40 cm w/hydrofoil			
Combat Weight:	82.56 metric Tons			
Displacement:	91 tons (182 m3)			
Power Plant:	Fusion, 6 megawatt output			
Fuel Req.:	9 liters/hour, 1500 liters carried			
Propulsion:	2 Twin Variable-Direction Jet Inlet/Exhaust nozzles			
Armor: Hull	Hull Sides	Rear	Deck	
Actual/Rated mm	25/525	20/420	10/140	
	Front	Sides	Rear	Deck
Superstructure:	20/280	20/280	20/280	10/140
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	72.67:1			
Max.Speed:	140 kph (75 knots)			
Max. Eff. Rng:	23,330 km (divide by 2 for round trip)			
Weapons:	Two 76 mm main gun; One 7.62 LMG; Two 82 mm Mortars			
Range,	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
Penetration:	By type, see opposite			
LMG:	350 m, +4	700 m, +3	1 km, +2	
Penetration:	60 mm	50 mm	30 mm	
Mortar:	By type, see opposite			
Fire Rate:	1 round per turn (main), 10 rounds / turn, LMG (2 targets), 2 rounds / turn, Mortar			
Feed Device:	25 round autoloader, 50 round reserve, main guns 100 round linked belts in boxes, 3,000 rounds carried, LMG 50 round linked belt from bin , mortars			
Crew:	8 - Helmsman, 2 Engineers, 3 Seamen, Captain			
Defense:	NBC, 4 shot Chaff Cans			
Electronics:	1 k Pwr Radio, 5 k Pwr Surface Radar, 1 k sonar, Thermal Image, Map Box			
Passengers:	5			
Cargo:	6 tons			
Price:	12.5 million cr			



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / radius / fragmentation penetration

82 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170mm / 20m / 30mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

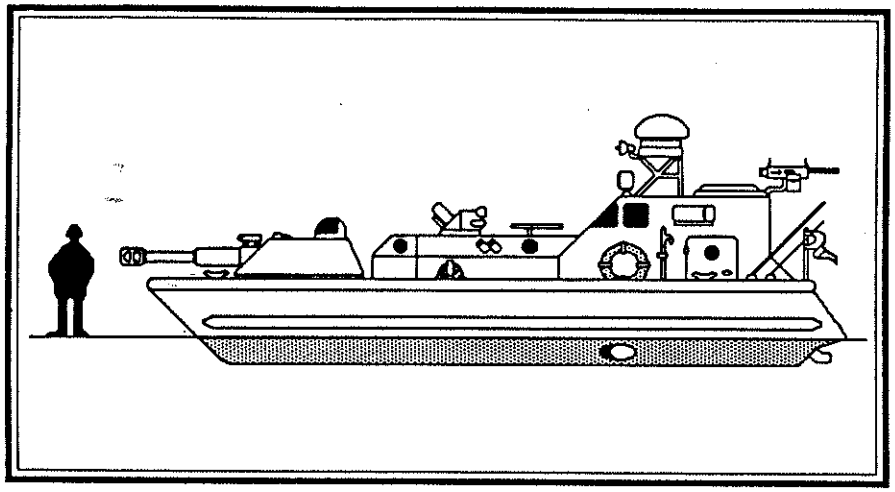
Note: The rear 76 mm mount may be replaced with a three-tube laucher capable of firing several types of missiles (see the M-800 & M-825)

M-830

The M-830 "Piranha" is an AFB used for riverene and shallow water fire support or as an escort to unarmored transport vessels. The hull is armored, above the water line, with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value. A fusion power plant drives a pair of Jet Propulsion nozzles capable of propelling the craft at speeds of over 60 kph. Stearing is accomplished by rotating these nozzles, which eliminates the need for a rudder. It is armed with a 76 mm high velocity CPM gun, an 82 mm mortar, and a 5 mm LMG . It can be carried in heavy lift transport aircraft, though it takes several hours to disassemble and set up for operation. This vehicle can be compared to landbased Armorec Fighting Vehicles in terms of its capabilities and roles. With a full load of munitions and supplies it can remain on station for up to 5 days after which fuel becomes the critical factor.

SPECIFICATIONS:

Dimensions:	Length: 12.5 m, Beam: 4.5 m, Height: 2 m (for transport)			
	Draft: 45 cm			
Combat Weight:	47.75 metric Tons			
Displacement:	12.5 tons (25 m3)			
Power Plant:	Fusion, 3 megawatt output			
Fuel Req.:	4.5 liters/hour, 500 liters carried			
Propulsion:	Twin Variable-Direction Jet Inlet/Exhaust nozzles			
Armor: Hull	Hull Sides	Rear	Deck	Belly
Actual/Rated mm	20/420	15/315	10/140	10/140
	Front	Sides	Rear	Deck
Superstructure:	30/390	20/260	20/260	10/140
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	83:1			
Max.Speed:	66 kph (36 knots)			
Max. Eff. Rng:	7326 km (divide by 2 for round trip)			
Weapons:	76 mm main gun; One 7.62 LMG; One 82 mm Mortar, various small arms			
Range,	Effective	Long		Extreme
Main Gun	3 km	4 km		5.5 km
Penetration:	By type, see opposite			
LMG:	350 m, +4	700 m, +3		1 km, +2
Penetration:	30 mm	20 mm		20 mm
Mortar:	By type, see opposite			
Fire Rate:	1 rnd/turn (main); 10 rnds/turn LMG (2 targets); 2 rnds/turn, Mtr			
Feed Device:	25 round autoloader, 50 round reserve, main			
	100 round linked belts in boxes, 3,000 rounds carried, LMG			
	50 round linked belt from bin , mortar			
Crew:	4 - Helmsman/Navigator, 2 Gunners, Captain			
Defense:	NBC, 4 shot Chaff Cans			
Electronics:	1 k Pwr Radio, 500 Pwr Surface Radar, .5 k sonar,			
	Thermal Image, Map Box			
Passengers:	0			
Cargo:	2 tons			
Price:	610,000 cr			



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / radius / fragmentation penetration

82 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170mm / 20m / 30mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

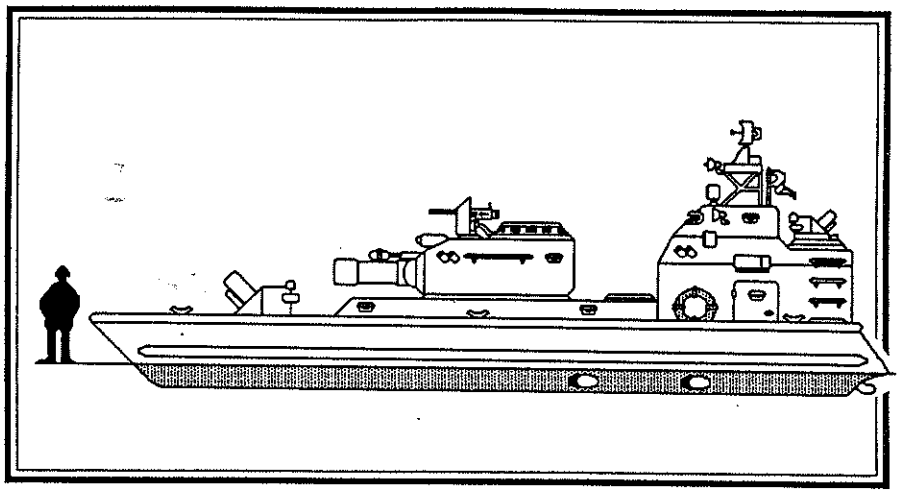
* Contact penetration / radius / fragmentation penetration

M-835

The M-835 "Orca" is a Moniter used in riverene and shallow water artillery batteries for on-shore fire support or as a static harbor defense. The hull is armored above the water line with replaceable sections of armor plate over a lighweight metal alloy frame. This provides maximum crew protection against penetration. A fusion power plant drives four Jet Propulsion nozzles capable of propelling the craft at speeds of 18 kph. Stearing is accomplished by rotating these nozzles, up to 360°, which eliminates the need for a rudder. It is heavily armed with a 250 mm Low Velocity Howizter, a 120 mm mortar, an 82 mm mortar, and a 5 mm LMG. It can be carried in Amphibious Assault Ships. This vehicle can bring considerable fire support to land units within range. The main gun can direct-fire flechette rounds which devestate enemy forces positioned on the banks of a river or near the shoreline. In a static mode, this vessel can deny access to waterborne craft of harbors or rivermouths. It can also act a fixed artillery battery. This ship can stay on station for 5 days before needing fuel, munitions, and provisions.

SPECIFICATIONS:

Dimensions:	Length: 16 m, Beam: 6.5 m, Height: 6 (for transport); Draft: 45 cm			
Combat Weight:	113.75 metric Tons			
Displacement:	24 tons (48 m3)			
Power Plant:	Fusion, 6 megawatt output			
Fuel Req.:	9 liters/hour, 1,000 liters carried			
Propulsion:	Quad Variable-Direction Jet Inlet/Exhaust nozzles			
Armor:	Hull Sides	Rear	Deck	Belly
Actual/Rated mm	30/630	10/140	10/140	10/140
Superstructure:	Front	Sides	Rear	Deck
	30/420	30/420	30/420	10/140
Turret:	10/210 on all sides, 10/140 on top			
Pwr. to Wt. Ratio:	52.7:1			
Max.Speed:	18.5 kph (10 knots)			
Max. Eff. Rng:	2053 km (divide by 2 for round trip)			
Weapons:	240 mm Howitzer; One 120 mm Mortar; One 82 mm mortar, One LMG, misc. small arms			
Range	By type, see opposite			
Fire Rate:	1 round every 2 turns (main), 2 rounds per turn (secondary) 10 rounds / turn, LMG (2 targets)			
Feed Device:	12 round autoloader with12 round reload, main 50 rnd autoldr ,Hvy mortar; 50 rnd autoldr. w/1 reload 50 round autoldr with 50 rnd reload, med. mortar 100 round linked belts in boxes, 3,000 rounds carried, LMG			
Crew:	8 - Helmsman / Captain, Engineer, 3 Gunners, 1 Fire control Officer, 2 loaders/seamen			
Defense:	NBC, 4 Smoke dischargers			
Electronics:	1k Pwr Radio, 1k ground radar, Thermal Image, Map Box , 500 pwr sonar			
Passengers:	0			
Cargo:	2 tons			
Price:	1.98 million cr			



82 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170mm/20m/30mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

120 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	210mm/30m/30mm*	105
Smoke	Proximity	9.5 km	120 m3	210
Flechette	n/a	50 m	+6 to hit, 20 mm pent.	525
CBM	proximity	9.75 k	20 m2 w/20 mm frag pent.	315

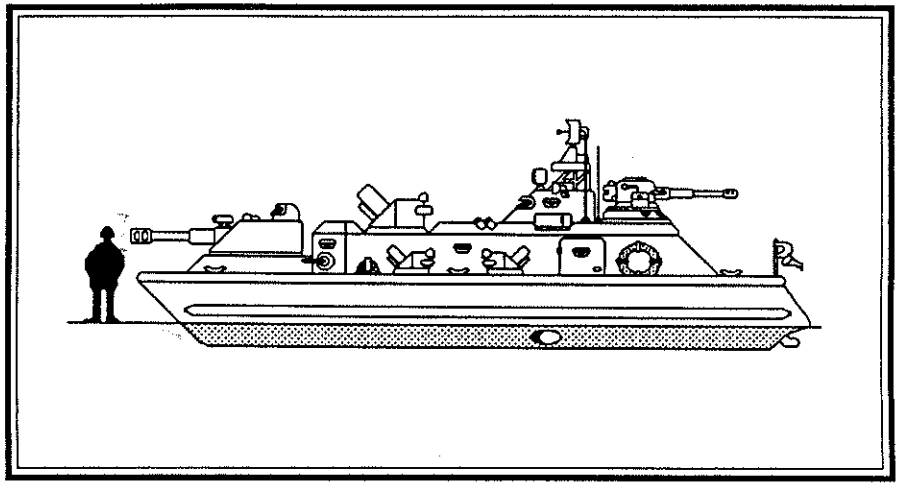
240 mm Howitzer Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	11.5 km	260mm/40m/40mm*	360
Smoke	Proximity	11.5 km	160 m3	720
Flechette	n/a	50 m	+6 to hit, 20 mm pent.	1800
CBM	proximity	11.5 k	40 m2 w/20 mm frag pent.	1080

* Contact Penetration / Area of effect / fragmentation penetration

M-840

The M-840 "Crocodile" is an FSBR used in riverene artillery batteries for on shore fire support. The hull is fully enclosed and armored above the water line with replacable sections of armor plate over a lighweight metal alloy frame. This provides maximum crew protection. A fusion power plant drives three Jet Propulsion nozzles capable of propelling the craft at speeds of 37 kph. Stearing is accomplished by rotating these nozzles, up to 360°, which eliminates the need for a rudder. It is heavily armed with a 76 mm High Velocity CPM gun, a 120 mm mortar, four 82 mm mortars, a Flamethrower and two 5 mm LMGs. It can be carried in Amphibious Assault Ships. This vehicle can bring considerable fire support to units within range and is also used to provide direct fire support. The mortars can direct fire flechette rounds which devestate enemy forces positioned on the banks of a river or near the shoreline. The flamethrower can be fired at a range of up to 100 meters. This vessel can only stay on station for 2 days before needing fuel and provisions.



SPECIFICATIONS:

Dimensions:	Length: 14 m, Beam: 7 m, Height: 4 (for transport); Draft: 45 cm			
Combat Weight:	36.5 metric Tons			
Displacement:	22 tons (44 m3)			
Power Plant:	Fusion, 6 megawatt output			
Fuel Req.:	9 liters/hour, 500 liters carried			
Propulsion:	Triple Variable-Direction Jet Inlet/Exhaust nozzles			
Armor:	Hull Sides	Rear	Deck	Belly
Actual/Rated mm	50 / 1050	30/630	20/280	30/630
Superstructure:	Front	Sides	Rear	Deck
	10/140	10/140	5/70	2/28
Turret:	10/210 on all sides, 10/140 on top			
Pwr. to Wt. Ratio:	160:1			
Max.Speed:	37 kph (20 knots)			
Max. Eff. Rng:	2035 km (divide by 2 for round trip)			
Weapons:	76 mm main gun; Two 7.62 LMG; One 120 mm Mortar, Four 82 mm mortars, One flamethrower, various small arms			
Range	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
LMG:	350 m, +4	700 m, +3	1 km, +2	
Penetration:	30 mm	20 mm	20 mm	
Mortars:	By type, see opposite			
Fire Rate:	1 round per turn (main), 10 rounds / turn, LMG (2 targets), 2 rounds / turn, Mortars			
Feed Device:	25 round autoloader with 25 round reload, main 100 round linked belts in boxes, 3,000 rounds carried, LMG 50 rnd autoldr ,Hvy mortar; 50 rnd autoldr. w/1 reload med. mtr			
Crew:	10 - Helmsman / Captain, Engineer, 7 Gunners, 3 Loaders			
Defense:	NBC, 4 Smoke dischargers			
Electronics:	1k Pwr Radio, 1k ground radar, Thermal Image, Map Box			
Passengers:	0			
Cargo:	2 tons			
Price:	1.16 cr			

82 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170mm/20m/30mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

120 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	210mm/30m/30mm*	105
Smoke	Proximity	9.5 km	120 m3	210
Flechette	n/a	50 m	+6 to hit, 20 mm pent.	525
CBM	proximity	9.75 k	20 m2 w/20 mm frag pent.	315

Flamethrower

Range:	100 meters
Area of Effect:	20m2 per shot
Damage:	per incindiary

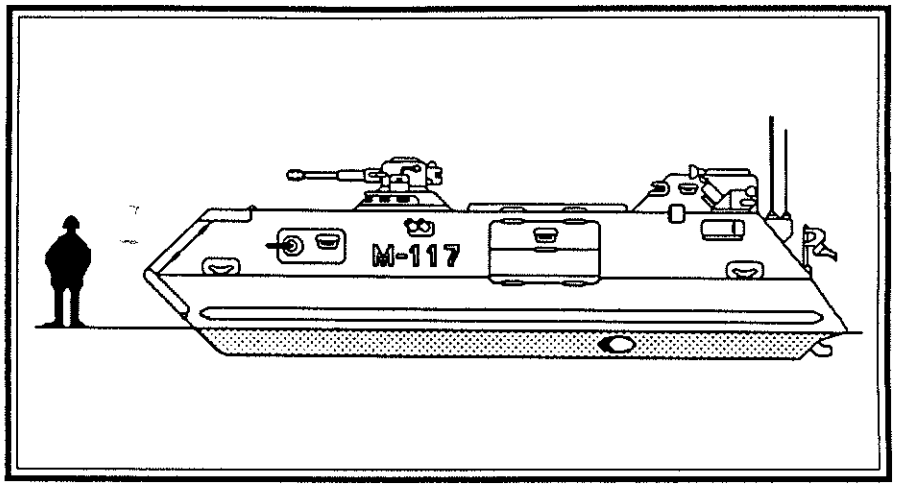
* Contact Penetration / Area of effect / fragmentation penetration

M-876

The M-876 "Pelican" is an LCP used for amphibious assaults or transport beyond FLOT positions. The hull is fully enclosed and armored above the water line with replacable sections of armor plate over a lighweight metal alloy frame. This provides maximum crew and passenger protection. A fusion power plant drives a pair of Jet Propulsion nozzles capable of propelling the craft at speeds up to 37 kph. Stearing is accomplished by rotating these nozzles, which eliminates the need for a rudder. It is armed with a 20 mm high velocity RFC, an 82 mm mortar, and a 5 mm LMG on either side. It can be carried in heavy lift transport aircraft or Amphibious Assault Ships. This vehicle can be compared to land-based armored personel carriers in terms of its capabilities and roles. Exit from the vehicle is thorugh a front hatch, side hatches or through the roof hatch. This craft is designed for use in conjunction with a "mother" ship, so it may only be deployed for 2 days.

SPECIFICATIONS:

Dimensions:	Length: 12 m, Beam: 5 m, Height: 2.75 (for transport) Draft: 45 cm				
Combat Weight:	31.25 metric Tons				
Displacement:	14 tons (27 m3)				
Power Plant:	Fusion, 3 megawatt output				
Fuel Req.:	4.5 liters/hour, 250 liters carried				
Propulsion:	Twin Variable-Direction Jet Inlet/Exhaust nozzles				
Armor:	Front	Sides	Rear	Deck	Belly
Actual/Rated mm	15/315	10/210	5/105	5/70	3/42
Superstructure:	10/140	10/140	5/70	5/70	
Pwr. to Wt. Ratio:	96:1				
Max.Speed:	37 kph (20 knots)				
Max. Eff. Rng:	7326 km (divide by 2 for round trip)				
Weapons:	20 mm main gun; Two 5 mm LMG; One 82 mm Mortar, various small arms				
Range,	Effective	Long	Extreme		
Main Gun	2.5 km, +6	3.5 km, +5	5 km, +2		
Penetration:	140 mm	130 mm	120 mm		
LMG:	350 m, +4	700 m, +3	1 km, +2		
Penetration:	30 mm	20 mm	20 mm		
Mortar:	By type, see opposite				
Fire Rate:	20 round per turn (main), 10 rounds / turn, LMG (2 targets), 2 rounds / turn, Mortar				
Feed Device:	500 round linked belt from bin, main 100 round linked belts in boxes, 3,000 rounds carried, LMG 50 round linked belt from bin , mortar				
Crew:	4 - Helmsman / Captain, 3 Gunners				
Defense:	NBC, 4 Smoke dischargers				
Electronics:	500 Pwr Radio, Thermal Image, Map Box				
Passengers:	20				
Cargo:	40 m3 with no passengers or up to 5 tons				
Price:	530,000 cr				



82 mm Mortar Rounds

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170mm/20m/30mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

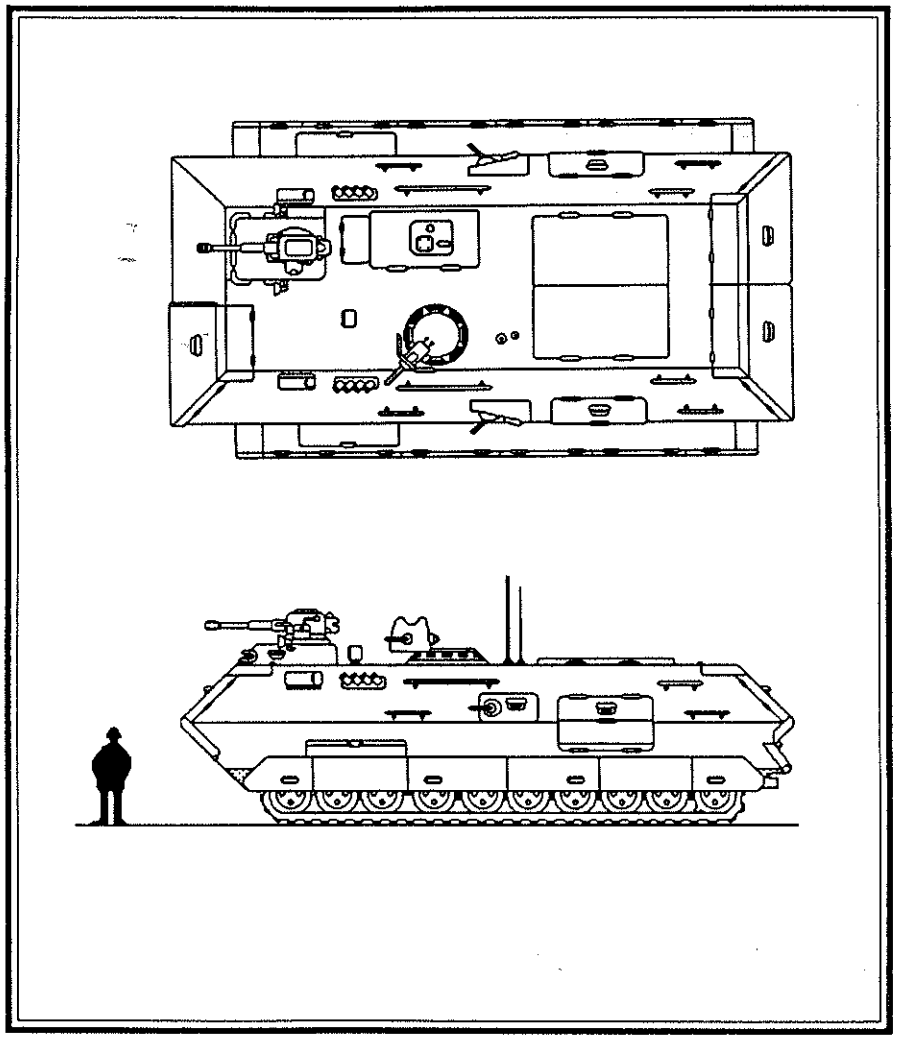
* Contact Penetration / Area of effect / fragmentation penetration

M-877

The M-877 "Turtle" is an tracked LCP used for amphibious assaults or transport beyond FLOT positions. The hull is fully enclosed and armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides maximum crew and passenger protection. A fusion power plant drives a pair of Jet Propulsion nozzles capable of propelling the craft at speeds up to 37 kph. Stearing is accomplished by rotating these nozzles, which eliminates the need for a rudder. When landing, a set of trackes then moves the vehicle out of the water at moves it overland at speeds up to 60 kph. It is armed with a 20 mm high velocity RFC, and three 5 mm LMG. It can be carried in heavy lift transport aircraft or Amphibious Assault Ships. This vehicle offers the advantage of carrying combat troops beyond the initial landing point and inland before they disembark. Exit from the vehicle is thorugh a front or rear hatch, side hatches or through a roof hatch. This craft is launched from a "mother" ship. After landing it can be attached to mechinized infantry units as an Armored Personnel Carrier.

SPECIFICATIONS:

Dimensions:	Length: 12 m, Beam: 6 m, Height: 4 Draft: 1m				
Combat Weight:	34.50 metric Tons				
Displacement:	30 tons (60 m3)				
Power Plant:	Fusion, 3 megawatt output				
Fuel Req.:	4.5 liters/hour, 250 liters carried				
Propulsion:	Twin Variable-Direction Jet Inlet/Exhaust nozzles; Aux .Tracks				
Armor:	Front	Sides	Rear	Deck	Belly
Actual/Rated mm	15/315	10/210	5/105	5/70	3/42
Superstructure:	10/140	10/140	5/70	5/70	
Pwr. to Wt. Ratio:	96:1				
Max.Speed:	37 kph (20 knots) water; 60 kph land				
Max. Eff. Rng:	7326 km (divide by 2 for round trip)				
Weapons:	20 mm main gun; Three 5 mm LMG; various small arms				
Range,	Effective	Long	Extreme		
Main Gun	2.5 km, +6	3.5 km, +5	5 km, +2		
Penetration:	140 mm	130 mm	120 mm		
LMG:	350 m, +4	700 m, +3	1 km, +2		
Penetration:	30 mm	20 mm	20 mm		
Fire Rate:	20 round per turn (main); 10 rounds / turn, LMG (2 targets)				
Feed Device:	500 round linked belt from bin, main				
	100 round linked belts in boxes, 3,000 rounds carried, LMG				
Crew:	4 - Helmsman / Captain, 3 Gunners				
Defense:	NBC, 4 Smoke dischargers				
Electronics:	500 Pwr Radio, Thermal Image, Map Box				
Passengers:	20				
Cargo:	36 m3 with no passengers or up to 4 tons				
Price:	630,000 cr				

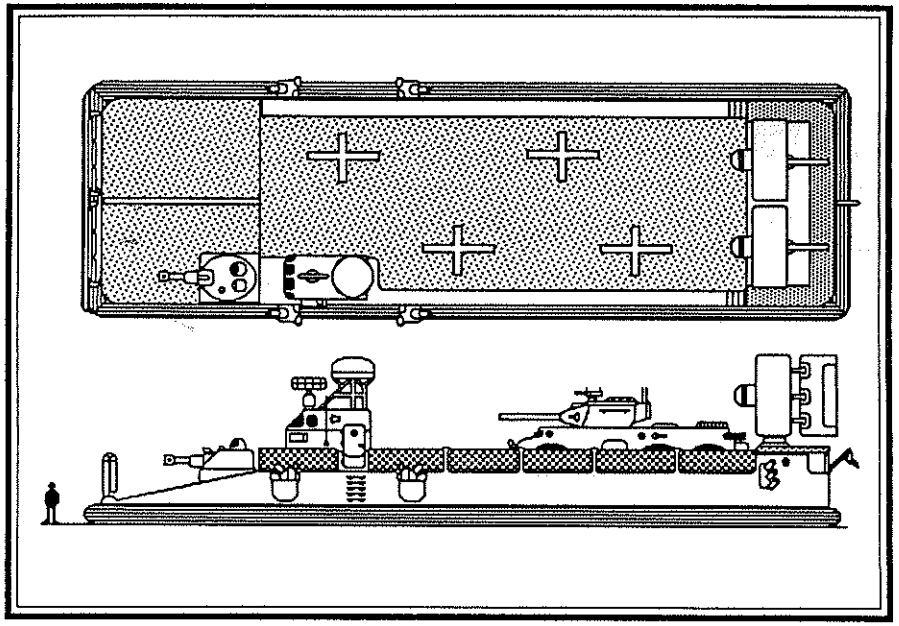


M-880

The M-880 "Skimmer" is an LCAC used for amphibious assaults or water transport of mechanized vehicles, personnel, or cargo. It is able to land on almost any beach and can cross obsticals up to 2 meters high. The hull is moderately armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value against penetration. A fusion power plant drives two, large 12 bladed fans for propulsions as well as 8 sets vectored thrust units to lift the craft. It is capable of speeds of 130 kph even in rough seas. Stearing is accomplished by rotating these fans and nozzles, which eliminates the need for a rudder and allows no draft. These fans may also operate in reverse allowing the vessel to "back off" a shoreline after landing or it may simply "pivot" in place. This craft can cross obsticals up to 2 meters high. It is armed with one 76 mm high velocity CPM gun and four 82 mm Mortars. These ships are often assigned to larger "Assault" ships and provide ship to shore transportaion. The craft is lightly armed. It may stay on station for 370 hours before refueling is needed.

SPECIFICATIONS:

Dimensions:	L: 35 m, Beam: 14 m, H: 9 m (from waterline), Draft: 0 m			
Combat Weight:	1390 metric Tons			
Displacement:	0			
Power Plant:	Fusion, 27 megawatt output			
Fuel Req.:	40.5 liters/hour, 15,000 liters carried			
Propulsion:	2 Twin Variable-Direction 8-Bladed Fans, 8 sets VTNs			
Armor: Hull	Hull Front	Sides	Rear	Deck
Actual/Rated mm	50/1400	50/1400	50/1400	30/420
	Front	Sides	Rear	Deck
Superstructure:	50/1400	50/700	30/420	25/350
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	19.42:1			
Max.Speed:	130 kph (70 knots)			
Max. Eff. Rng:	13,700 km (divide by 2 for round trip)			
Weapons:	One 76 mm main gun; Four 82 mm Mortars			
Range,	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
Penetration:	By type, see opposite			
Mortar:	By type, see opposite			
Fire Rate:	1 round per turn (main), 2 rounds / turn Mortars			
Feed Device:	25 round autoloader, 25 round reserve, main gun; 50 round linked belt, 100 rounds carried (ea. mortar)			
Crew:	10 - Helmsman, 2 Engineers, 2 Gunners, 4 Cargo Handlers, Captain			
Defense:	ECM/EW, NBC, 4 shot Chaff Cans			
Electronics:	5 k Pwr Radio, 5 k Pwr Surface Radar, 1.5 k Pwr sonar, L3TV/IR, Map Box			
Passengers:	175 with no cargo			
Cargo:	1,000 m3 or 800 tons (plus 1 ton internal ship's stores)			
Price:	15 million cr			



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / Radius / fragmentation penetration

82 mm Grenades

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170 mm/20 m/30 mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

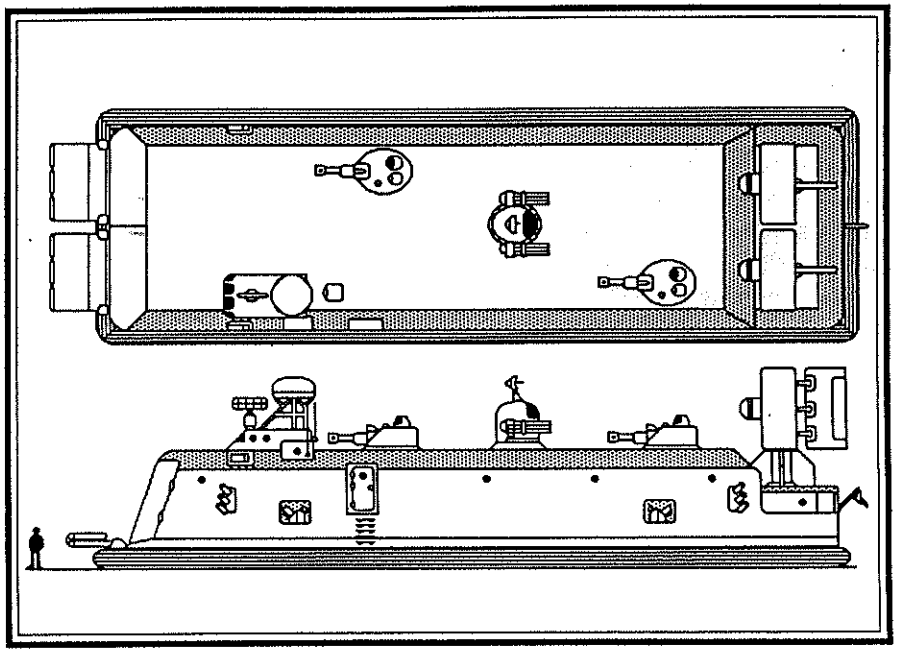
*contact penetration / radius / fragmentation pentration

M-882

The M-882 "Turtle" is an Armored LCAC used for amphibious assaults when hostile fire is expected. It is able to land on almost any beach and can cross obsticals up to 2 meters high. The hull is moderately armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value against penetration. This armor also extends over the cargo area. A fusion power plant drives two large 12 bladed fans for propulsions as well as 12 sets of vectored thrust units to lift the craft. It is capable of speeds of 92 kph even in rough seas. Stearing is accomplished by rotating these fans and nozzles, which eliminates the need for a rudder and allows no draft. These fans may also operate in reverse allowing the vessel to "back off" a shoreline after landing or it may simply "pivot" in place. It is armed with two 76 mm high velocity CPM guns, four 82 mm mortars, and a twin six-barral 20 mm RFC. These ships are often assigned to larger "Assault" ships and provide ship to shore transportaion from over the horizon. They may shuttle between ship and FEBA for up to 370 hours.

SPECIFICATIONS:

Dimensions:	L: 35 m, Beam: 14 m, H: 11 m (from waterline), Draft: 0 m			
Combat Weight:	1458 metric Tons			
Displacement:	0			
Power Plant:	Fusion, 27 megawatt output			
Fuel Req.:	40.5 liters/hour, 15,000 liters carried			
Propulsion:	2 Twin Variable-Direction 8-Bladed Fans, 12 sets VTNs			
Armor: Hull	Hull Front	Sides	Rear	Deck
Actual/Rated mm	50/1400	50/1400	50/1400	30/420
	Front	Sides	Rear	Deck
Superstructure:	10/140	10/140	10/140	5/70
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	20:1			
Max.Speed:	92 kph (50 knots)			
Max. Eff. Rng:	13,700 km (divide by 2 for round trip)			
Weapons:	Two 76 mm main gun; Four 82 mm Mortars, One 6-Barrel RFC			
Range,	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
Penetration:	By type, see opposite			
Mortar:	By type, see opposite			
20 mm RFC:	4.5 km, +6	9 km, +5	18.5 km, +2	
Penetration:	80 mm (92 mm with DPU warhead)			
Fire Rate:	1 round / turn (main); 2 rnds / turn Mortars; 750 rnds /turn RFC			
Feed Device:	25 round autoloader, 25 round reserve, main gun; 50 round linked belt, 100 rounds carried (ea. mortar); 10 k rnd belt, RFC			
Crew:	14 - Helmsman, 2 Engineers, 5 Gunners, 5 Cargo Handlers, Captain			
Defense:	ECM/EW, NBC, 4 shot Chaff Cans			
Electronics:	5 k Pwr Radio, 5 k Pwr Surface Radar, 1.5 k Pwr sonar, L3TV/IR, Map Box			
Passengers:	175 with no cargo			
Cargo:	1,000 m3 or 800 tons (plus 1 ton internal ship's stores)			
Price:	18.67 million cr			



76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / Radius / fragmentation penetration

82 mm Grenades

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170 mm/20 m/30 mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

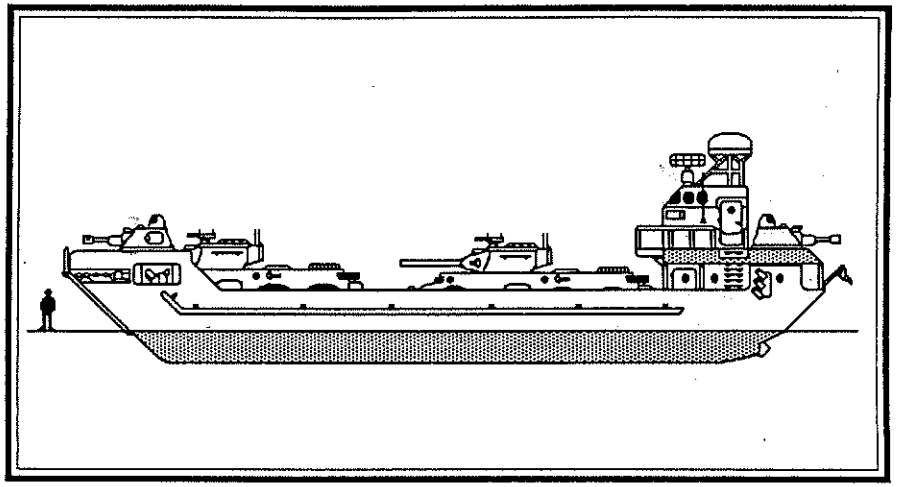
*contact penetration / radius / fragmentation pentration

M-885

The M-885 is an LCM used for conventional amphibious invasions or short distance water transport of mechanized units, personnel or cargo. Although it can only land on soft bottomed shores or sand, its cargo capacity and relatively low price make for a vaible platform even in high tech environments. The hull is moderately armored with replacable sections of armor plate over a lighweight metal alloy frame. This provides a high armor value against penetration. A fusion power plant drives 2 pairs of Jet Propulsion nozzles capable of propelling the craft at up to 37 kph. Stearing is accomplished by rotating these nozzle pairs, which eliminates the need for a rudder. These nozzles may be rotated 360° allowing the vessel to "back off" a shoreline after landing. It is armed with two 76 mm high velocity CPM guns and two bow mounted 82 mm mortars. The cargo bay holds up to 575 m3 of material. The ship's crew is cross trained to perform all of the ship's duties. This vessel is capable of operating on station for up to 15 days. These ships are often assigned to larger "mother" ships and provide ship to shore transportaion.

SPECIFICATIONS:

Dimensions:	L: 36 m, Beam: 14 m, H: 9 m (from waterline), Draft: 3 m (with load)			
Combat Weight:	1188 metric Tons			
Displacement:	756 tons (1512 m3)			
Power Plant:	Fusion, 27 megawatt output, (1 mw emergency generator)			
Fuel Req.:	40.5 liters/hour, 15,000 liters carried			
Propulsion:	2 Twin Variable-Direction Jet Inlet/Exhaust nozzles			
Armor: Hull	Hull Front	Sides	Rear	Deck
Actual/Rated mm	50/1050	20/280	15/210	50/700
	Front	Sides	Rear	Deck
Superstructure:	10/140	10/140	5/70	25/250
Turret:	10/210 mm all sides; 10/140 top			
Pwr. to Wt. Ratio:	20:1			
Max.Speed:	37 kph (20 knots)			
Max. Eff. Rng:	13,700 km (divide by 2 for round trip)			
Weapons:	Two 76 mm main guns; Two 82 mm Mortars			
Range,	Effective	Long	Extreme	
Main Gun	3 km	4 km	5.5 km	
Penetration:	By type, see opposite			
HMG:	500 m, +3	1000 m, +2	1.5 km, +1	
Penetration:	60 mm	50 mm	30 mm	
RFC:	4.5 km +6	9 km, +5	18.5 km, +2	
Penetration:	80 mm (92 mm w/ DPU warheads)			
Fire Rate:	1 round per turn (main), 2 rounds / turn Mortars			
Feed Device:	25 round autoloader, 75 round reserve, main gun; 50 round linked belt, 100 rounds carried (ea. mortar)			
Crew:	11 - Helmsman, 2 Engineers, 3 Gunners, 4 Cargo Handlers, Captain			
Defense:	ECM/EW, NBC, 4 shot Chaff Cans			



Electronics:	5 k Pwr Radio, 5 k Pwr Surface Radar, 1.5 k Pwr sonar, L3TV/IR, Map Box
Passengers:	150 with no cargo
Cargo:	576 m3 or 400 tons (2 tons internal ship's stores)
Price:	16.58 million cr

76 mm High Velocity CPM Rounds

Warhead	Fuse	Effect	Cr
HE	Impact	150mm / 20m / 20mm*	48
HEAP	Delayed	340 mm pent.	72
APFSDS	none	380 mm pent.	84
Flechette	n/a	150 m, +2 to hit, 20 mm pent.	240

* Contact penetration / Radius / fragmentation penetration

82 mm Grenades

Warhead	Fuse	Range	Effect	Cr
HE	Impact	9.5 km	170 mm/20 m/30 mm*	54
Smoke	Proximity	9.5 km	80 m3	108
Flechette	n/a	50 m	+2 to hit, 20 mm pent.	270

*contact penetration / radius / fragmentation pentration

Explanation of Terms

AGLS, FCS, MRLS, TOGS...?! Arggg! you say. What is all this *@#%?! I didn't buy this guide to learn government speak. Actually once you start to use these abbreviations, you'll be surprised how fast they stick. Let us explain how they work.

The Fire Control System (FCS) is the package of controls and sensors that allow the gunner to identify and engage targets. Within this system are Optical (L3TV), Infra-Red (TOGS) and Laser (LTFCS) sighting sub-systems.

Artillery systems have a similar package (EPAWS) but it also includes indirect fire components (AGLS, AIFS).

The weapons in this guide are also stabilized (FCE).This allows for "fire on the fly" or firing while moving with no penalty. Several references are made to "tank". This is because the guns and equipment used are the same as those used in tanks.

All Direct fire guns are equipped with a Mk. III FCS. It contains the following Sensor/Computer sub-systems:
ATTS, CSS, LTFCS w/LTD, MTI, TADS/TES, TGTS & TOGS.

All Indirect Fire guns are equipped with a MK V EPAWS. It contains the following Sensors/Computer sub-systems:
AGLS, AIFS, ARETS, CAWS, CSS, FCE & TOGS.

Should the main power fail, a manual system can be employed but the fire rate will be cut to 1/4 normal.

Opposite is a list of what these "techspeak" terms can do for you in games terms.

OFFENSIVE

AGLS +1 to hit coordinates fed by the BCC.

AIFS Computer Link to BCC or can function independently for fire support only.

ARETS Allow gun to fire based on laser designator from other craft and use their bonus. *(shipA spots and shipB fires)*

ATS Works with TADS to identify targets as hostile or friendly and then cues the Targeting computer.

CAWS Allows artillery to function in a direct fire mode.

CSS Coordinates L3TV, TOGS and Laser sighting subsystems to give gunner the best target solution.

LTFCS Interprets and integrates sighting from other laser. Works with ARETS.

MTI Allows fire at a moving target with no penalty

TGTS Allow stationary target bonus (+1/turn) against a moving target.

TOGS Sighting sub-system used when Optical system fails to obtain a target lock.

DEFENSIVE

APERS Flechette charge with 15 meter danger space (6D6)

Chaff -2 to break lock of incomming missile

ECM -1 to opponents attempt to target vehicle by radio or radar.

NBC no effect to crew inside vehicle from Nuclear fallout, biological or chemical contaminates, as long as vehicle remains sealed.

Prismatic
Aerosol anti Laser/Thermal/Optical screen, good for 2 turns (works both ways though, you can't see out either).

RDFSS gives +1 to crews survival roll in case of internal fire or explosion. (still damaged by fragmentation)

TLS Senses incoming targeting lasers and automatically deploys aerosol or chaff.

IR	Infra Red (detects variations in heat signitures)
k	1,000
km	kilometer, equal to 1,000 meters (.62 Statute miles)
kt	Knot; nautical mile, 1 nautical mile / hour (1.85 km / hour)
LADS	Light Air Defense System
LCAC	Landing Craft, Air Cushioned
LCM	Landing Craft, Mechanized (for heavy combat vehicles)
LCP	Landing Craft, Personnel (for infantry and small supplies)
LCV	Landing Craft, Vehicle (for light to medium vehicles and large volume supplies)
L3 TV	Low Light Level TeleVision
LMG	Light Machine Gun
LTFCS	Laser Tank Fire Control System, (allows gun to sight from laser)
LTD	Laser Target Designator (paints laser target for gun)
LVH	Low Velocity Howitzer
MEV	Medical Evacuation Vehicle
Monitor	Heavy Mortar or LVH platform
MRB	Mobile Riverene Base (mother ship for PRBs)
MRF	Mobile Riverene Force
MRLS	Multiple Rocket Launching System (includes missiles)
MTI	Moving Target Indicator (tracks moving targets, see also GTS)
NBC	Nuclear, Biological, Chemical (protective system includes overpressurization & shielding)
PBDW	Patrol Boat, Deep Water
PBR	Patrol Boat, Riverene
Port	Nautical term for "Left" (remember Left & Port both have 4 letters)
RAG	Riverene Assault Group
RAID	River Assault, Interdiction Detail
RAP	Rocket Assisted Projectile
RDF	Radio Direction Finder (locates radio transmission for artty. fire)
RFC	Rapid Fire Cannon
SAM	Surface to Air Missile
SAPI	Semi Armor Piercing, Incendiary (for lightly armored targets)
SLAM	Stand-off Land Attack Missile (a type of SLCM)
SLCM	Sea Launched, Cruise Missile
SSM	Surface to Surface Missile
STAFF	Smart Target Activated, Fire and Forget
Starbord	Nautical term for "Right" (see "port")
Stern	Nautical term for the "Back" of a ship" (see also aft)
TCV	Tactical Control Vehicle
TES	Target Engagement System (coordinates all targeting subsystems)
TIS	Thermal Imaging System (infra-red observation)
TOGS	Thermal Observation & Gunnery System (IR option for guns)
VDU	Video Display Unit (combined with L3TV)
VTU	Vectored Thrust Unit (variable lift fans)
VTN	Vectored Thrust Nozzles (jauzzi exhaust drivers)
WP	White Phospherous, also called "Willy Pete"

Glossary of Terms

AFSV	Armored Fire Support Vehicle
AFB	Armored Fighting Boat (floating tank)
AFSP	Armored Fire Support Platform (see "monitor")
Aft	Nautical term for the "back or rear"
AGLS	Automatic Gun Laying System (provides targeting from map box)
AIFS	Advanced Indirect Fire System
ALCAC	Armored Landing Craft, Air Cushioned
AP	Armored Piercing
APACS	Armor Plated, Air Containment Skirt
APDS	Armor Piercing, Discarding Sabot
APERS	Anti-Personnel
APFSDS	Armor Piercing, Fin Stabilized, Discarding Sabot
APHE	Armor Piercing, High Explosive
ARETS	Armor Remote Target System (provides target from extrnl source)
ARSV	Armored Recon/Scout Vehicle
ATC	Armored Troop Carrier
ATS	Automatic Targeting System
BCC	Battery Control Center (arty. command vehicle)
Beam	Nautical term for measurement of the widest part of a ship's hull
Bow	Nautical term for "Front" of the ship (see also fore)
CAWS	Cannon Artillery Weapons System (arty. FCS for direct fire mode)
CBM	Cluster Bomblet Munition
CBTSS	Counterbattery Targeting Solution System
CPM	Chemically Propelled Munition
CPR	Chemically Propelled Round
CSI	Computer Synthesized Image
CSS	Computer Sighting System
C3	Command, Control & Communications
Draft	Nautical term for the depth of water required to keep vessel afloat
Displacement	Nautical term for volume of water displaced by vessels hull
DPU	Depleted Uranium (used in warheads to increase penetration)
ECM	Electronic Counter Measures
EPAWS	Enhanced Self Propelled Artillery Weapons System (indirect fire control)
EW	Electronic Warfare
FAST	Fast Assaut Ship, Tactical
FCE	Fire Control Equipment (stabilization gear)
FCS	Fire Control System (Gunnery Computer)
FEBA	Forward Edge of Battle Area (the front lines!)
FLOT	Forward Line of Own Troops (See FEBA)
Fore	Nautical term for "front"
GTS	Gunnery Tracking System (works w/MTI)
HE	High Explosive
HEAP	High Explosive, Armor Peircing
HEI	High Explosive, Incindiary
HMG	Heavy Machine Gun, usually 12.7 mm
ICM	Improved Conventional Munitions (cannon launced, see CBM)
IFV	Infantry Fighting Vehicle