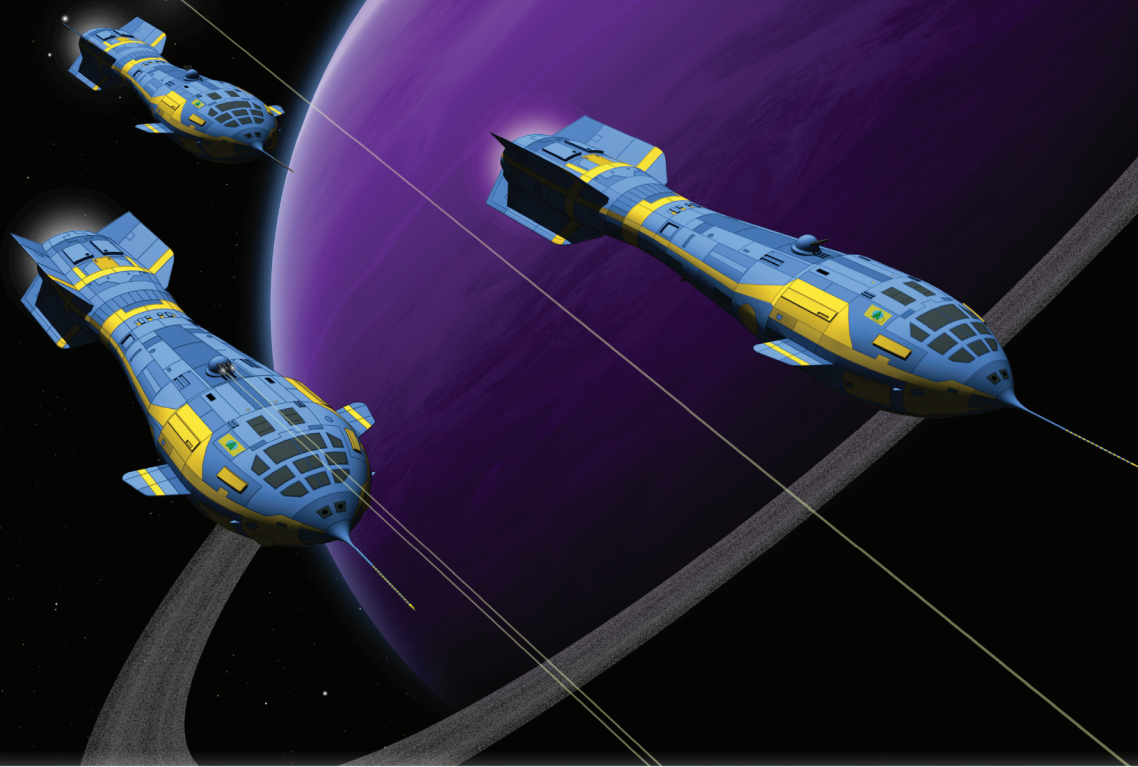


SHIPS OF
CLEMENT SECTOR 9:



SYSTEM DEFENSE BOATS

TRAVELLER

*Requires the use of the Traveller Main Rulebook,
available from Mongoose Publishing.*

Ships of Clement Sector 9: System Defense Boats

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The System Defense Boat

Defined as a non Zimm capable vessel, a boat can be a ship's boat, a gunboat or a system defense boat. This nomenclature hails back to the age of sail where in the Royal Navy, an ocean going vessel must have three masts capable of being square rigged to be defined as a ship otherwise it was classified as a boat. Further, a boat (long boat or jolly boat) was also carried on a ship.

A system defense boat (SDB) is a bigger, heavily armored and well-armed naval vessel with a displacement range of one hundred tonnes to about one thousand tonnes. Bigger vessels up to and including a displacement of ten thousand tonnes are called monitors.

Being a non-starship and not needing to allocate tonnage to a Zimm drive and its fuel, a system defense boat can thus allocate this unused tonnage to heavier armor, faster drives, more powerful armament and bigger power plants. Because of this they are quite capable of engaging and destroying enemy starships that are often larger than they are.

System defense boats are used by system defense forces as the primary means

of defense within those systems. Sortieing from bases in orbit, they can defend the primary world, from ambush positions deep within the local gas giant; they can attack enemy ships in the process of refueling. Because of their ability to hide in asteroid belts, inside the upper atmosphere of gas giants, on surfaces of airless worlds and deep within planetary oceans, they can emerge from hiding to ambush, hit the enemy from the rear or attack when it is least expected.

Finally, system defense boats can also be used for routine duties such as customs inspections, piracy suppression and search and rescue.

System defense boats are used in some form or another by every major pre-Collapse national navy and the larger defense forces in the post-Collapse Clement Sector.

This book covers a selection of system defense boat types seen in Clement Sector from a customs cutter to powerful system defense boats in service with the Hub Federation Navy.

Ships of Clement Sector 9: System Defense Boats

Dawn System (Dawn 0106)
November 5th, 2342
0225 Standard Time
Near Hausos

The sensor clutter made his task difficult, but not impossible. He'd spent enough years in the black patrolling asteroids, gas clouds and hiding on moons to build up his skills as a sensor-op on the boat. His eyes never remained fixed for long, drifting across the dim displays, toned down so the brightness didn't ruin his vision on the darkened bridge.

There it was again, a momentary blip with an accompanying spike on the thermal wavelengths. Biting his lip, he poised a finger over the controls. The ghost had been bugging him for the last two hours, appearing and then vanishing without trace. Luckily this time, he was certain he had its bearing and attitude locked in, enough to warrant alerting the skipper.

Drawing a tight circle around the blip, he pressed the comm button.

"Captain, Ops. I have a positive contact. It's not transmitting any transponder or IFF codes, and it looks like she's under emission control. I'm only able to make a sketchy estimate on the ship size and power plant but am putting her at about one hundred to one-fifty d-tons."

"Acknowledged... bring the boat to alert. I'm on my way."

Leaning back in the seat, he spared a glance for the engineering rating sharing the watch. She shook her head and pointed to the icon.

"I'm still betting it's just another Egata ship doing a survey out here on the sly. You've only been here for two weeks, but I've done almost six months in-system. They're like du-flies around a picnic in Baker, sniffing for more resources out this way to exploit. Keep watching them for another hour and they'll probably start beeping an alert about their life-support and expect us to tow them back to Anpao."

He snorted and studied the readouts. Casey had more than two dozen years in service with the CCA on him, and she was right about a lot of things, but the elusive ship didn't seem right to him. The drive spec he was beginning to build a picture of didn't seem like a mining survey vessel. Biting his lip, he focused on pulling more from the passive sensors before the L-T arrived on the flight deck.

As if to spite his wishes, the hatch opened and Lieutenant Briyal Montrose bounced in with a grin plastered across his youthful face. The man was hitting his early forties although he seemed to look more like one of the young college students at Trinity College back home on Cascadia.

"What have we got this time, Sparks, a pirate, smuggler, or a ship full of Kingston spies?"

"I dunno yet, sir, but she's trying to be real quiet like. It's smaller than us, and definitely trying to look like a piece of rock in the gas giant rings. My money's on a smuggler trying to top up the tanks before making a run in or out of the system."

Pausing with hands on his hips, the lieutenant considered his words and the display. Reaching a decision, the man's eyes lit up with rising anticipation.

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"Casey, let's bring up the drives and set an intercept course. Spark's, light 'em up and let's give them a quick lookover before opening a channel. Relay to Zorya control that we're intercepting an unlisted vessel transiting the system and plan to conduct an inspection on a possible smuggler." Grinning, he smiled at them with mirth. "Folks, time to earn our pay and go to work."

Giving Casey a side glance, he wondered if she was thinking the same thing. The lieutenant sometimes forgot that his Type-2 Cutter wasn't a fighter or frigate bristling with weapons. Armed with enough missiles to scare a wandering lifeboat, they would be hard pressed to stop the unknown ship if it decided to resist them. Holding back the sigh, he leaned forward and focussed on targeting the active sensor array. As the boss said, it was time to go to work.

* * *

"Aww, shoot!"

Captain Lindii Silk's exclamation was loud enough to cause Moneypenny to jump from the furry grasp of her companion on the bridge. Shaking his head with a questioning grunt, she turned to face the hunched over uplifted bear expressing his displeasure at her words.

"We're being lit up like a Christmas Tree on Independence Day!" Punching fingers through the holo-controls, she felt herself tensing up. "Ginny... git yourself awake. The CCA are pinging us with active sensors and know we're waltzing around these parts. How soon can you and Cuddles dump our 'extra' cargo? I'm figuring they'll be fit to search us before long and I sure don't want them finding that hooch or 'Castle Plains' cargo we're bringing in for the locals on Dawn."

Offering her companion a friendly smile, she knew the bear loved the nickname she'd given him from the first day he'd come aboard back on Nolan, all the way over in Franklin. They had done a lot of travelling together this last year, and if she knew one thing, she was glad that Cuddles' had joined the crew aboard her little Starlight trader. He might growl at her for using his nickname in public, but she knew he enjoyed being with her and Ginny on the ship, especially after the way his previous owners had mistreated him.

If it hadn't been for the burned and half-scarred bear, the Minervan customs and excise patrol that caught her red-handed six months ago might have been successful in taking away her ship and livelihood. Thankfully, the bear was as adept with his shotgun and claws, as he was in giving comfort to her cat, Moneypenny. But it also meant she had to leave the comfort of her regular route from Bastiat to Minerva for new worlds to make a profit and keep the creditors at bay. Out here, on the edges of the Clement Sector, she could relax for a while and plan her next scheme to make money.

The first thought through her mind as the CCA cutter opened a comm channel was whether she could run. They'd caught her fair and square trying to sneak in close to the gas giant to refuel, but were they fast enough to catch her ship if she chose to run? That was the question.

Starlight's weren't the slowest small traders on the market, but she doubted if the ship could outrun a customs cutter, especially when it needed to refuel before using the Zimm drive again. A quick review of the Wendy's guide stored in her mindcomp confirmed the reported thrust of the cutter was twice her own maximum thrust. There was no easy escape this time, at least not by trying to evade the rapidly approaching vessel. Maybe she could sweet talk the crew into letting them go?

Ships of Clement Sector 9: System Defense Boats

"Ginny, y'all awake yet?" She called on the internal comms. "We're about to get into some serious trouble if that special cargo ain't dumped out the cargo bay." Turning to the bear, she saw the worried look in his dark eyes. "I figure we ain't got long, sweetie. Y'all better get aft and see if that cargo can get dumped in the ice ring before the cutter git's close enough to give us a nudge and a wink."

His growl was comfort enough as he pushed out of his extra-sized chair on the bridge and disappeared through the hatch. With the cutter closing the distance and watching them closely, she wondered if it was even too late to dump the cargo without the action being spotted.

This entire trip had been flawed from the start. Her local contact had failed to mention that there might be an SDB or cutter in the system, and if it was a CCA boat, then they'd be even stricter than the Minervans with the special cargo she was trying to bring in to the system. Her one saving grace, she thought, was that it was CCA and not a pirate.

Seeing the cargo bay access open on her console display, she crossed her fingers it wouldn't be spotted, and any Cascadian inspectors coming aboard would be satisfied with her genuine cargo and an offer of fresh Wellington tea.

"Ginny... Cuddles... they're telling us to heave to and await an inspection. Y'all better finish up there and get ready for them. They'll be here in an hour."

Clenching her metal fist, she took a deep breath.

"Maybe it's time to put on a party dress and throw on some war paint... although, I think lipstick on a bear might actually scare them than distract them."



Ships of Clement Sector 9: System Defense Boats

Customs and Excise Cutter

"Hey! Y'all wanna pull that ship around? Our inspection team's fixin' to board and we sure would appreciate some cooperation."

Captain Twyla Fay Fuller, Cutter 451, Harrison Customs Service 2341 CE

A standardized design produced by Anderson and Felix, Cascadia Orbital and a number of other shipyards, the customs and excise cutter can be seen and interacted with in almost every colonized system throughout Clement Sector.

The cutter is operated by a small crew and uses a fast launch for boarding and inspection duties. On-board facilities include a one bed medical bay and a two cell brig. The customs and excise cutter is armed with a triple beam laser turret and is capable of a thrust of 6G.

Internally, the system defense boat is separated into a single main deck. The deck is internally compartmented to ensure full security and to allow for damage control if the cutter's hull is compromised.

The bridge is right at the bow of the ship and includes the ship's locker and computer access. Aft of the bridge is the crew compartment, with staterooms and a comfortable common room and galley. Each stateroom contains a single bunk, fresher/washer unit, a desk with a workstation and a secure locker. There are extra storage

compartments under the bed and along the wall.

Further aft is the airlock, ship's brig and medical bay and right aft is the launch access hatch, engineering and the small 3dT cargo hold.

Ship's Launch (utility craft)

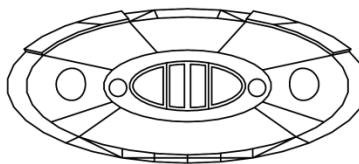
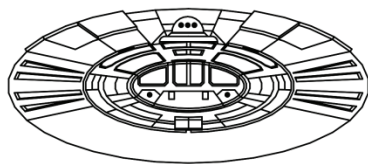
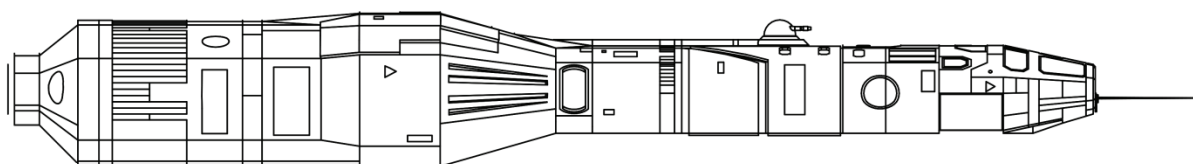
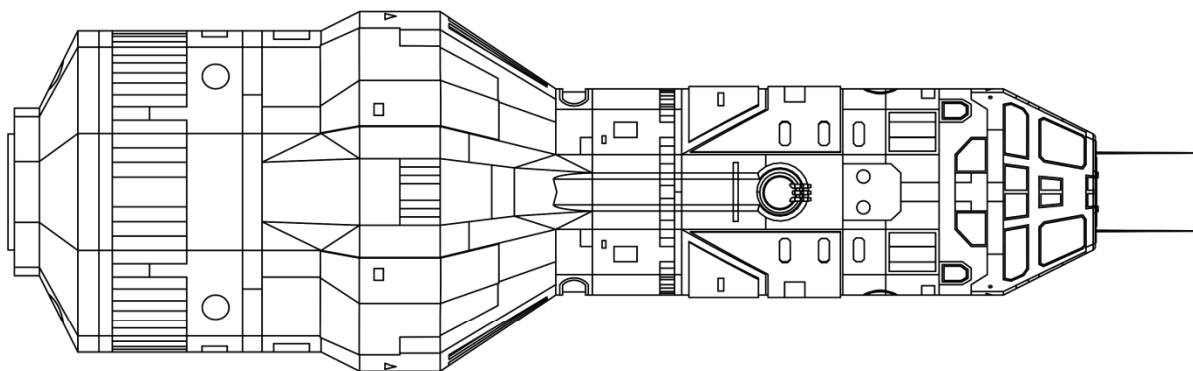
The 20dT fast ship's launch is configured primarily for the utility role, customs inspections, cargo checks, transferring personnel and cargo, rescuing crew personnel from crippled or damaged ships or moving prize crews to captured ships. Interior cabin space has been configured to allow transport of up to ten passengers and space for 3dT of cargo, externally accessible via a large cargo door.

Unlike the standard ship's launch the customs cutter's launch has an overhead access hatch allowing entry and exit while docked in its hangar bay on the cutter. The launch is not armed and is protected by crystaliron hull armor.

Ships of Clement Sector 9: System Defense Boats



Ships of Clement Sector 9: System Defense Boats

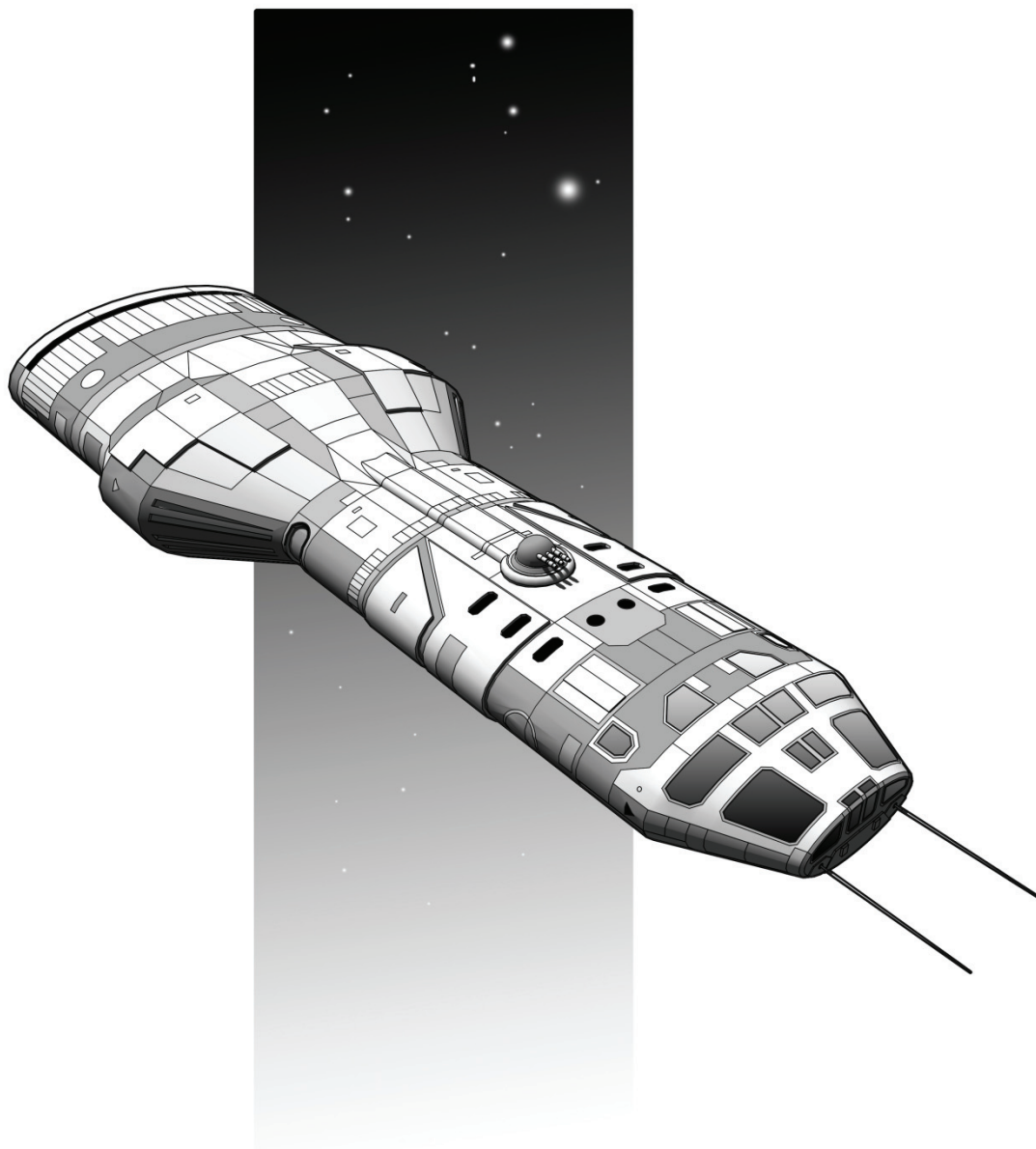


Ships of Clement Sector 9: System Defense Boats

Customs and Excise Cutter

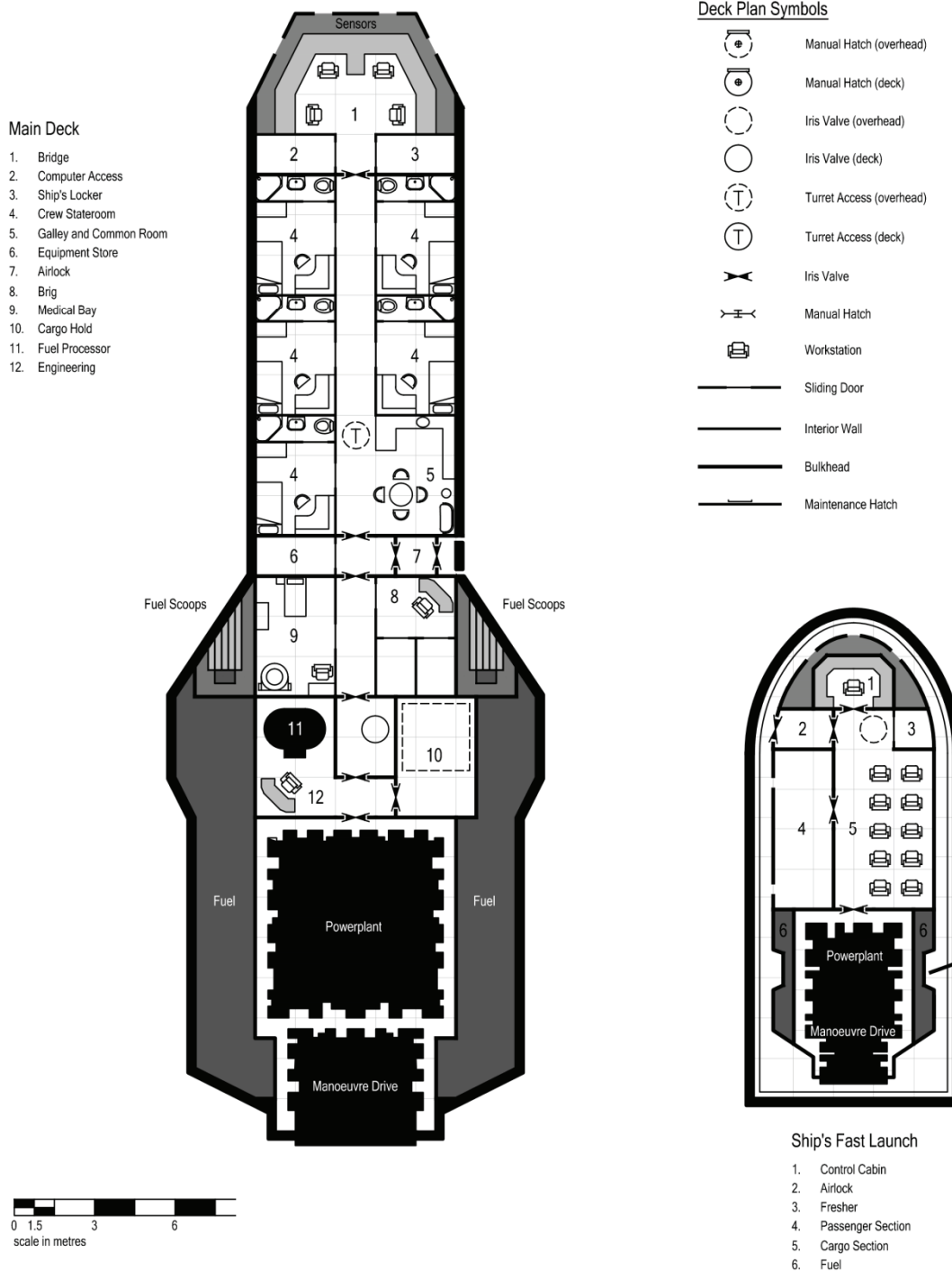
Type			Tonnes	Price (MCr)
Hull	100 dT	Hull 4	100	2.2
	Streamlined	Structure 4		
Armor	Crystaliron x1	4 points	5	0.4
Maneuver Drive	Type C	Thrust 6	5	12.0
Power Plant	Type C	Rating 6	10	24.0
Bridge	Standard		10	0.5
Computer	Model 2	Rating 10		0.2
Electronics	Basic Military	DM+0	2	1.0
Weapons	Hardpoint 1	Triple turret 3x beam laser	1	4.0
Fuel		4 weeks operation	12	
Cargo	3 tonnes		3	
Crew	8 (2 officers, 6 enlisted)	5 staterooms (double occupancy)	20	3
Extras	Ship's Locker			
	Fuel Scoops	Included		
	Fuel Processor	1x 20 tonnes per day	1	0.1
	Medical Bay	One Bed	2	0.5
	Low Berths	4x	2	0.2
	Brig	2x Cells	3	0.5
	Hangar		22	4.0
		Fast Launch		14.0
	Emergency Low Berths	1	1	0.1
Software	Intellect			1.0
	Evade/2			2.0
	Fire Control/1			2.0
	Library			
	Maneuver			
Maintenance Cost (Monthly)				0.006
Life Support Cost (Monthly)				0.015
Total Tonnage and Cost			99	71.2

Ships of Clement Sector 9: System Defense Boats



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Customs and Excise Cutter



Ships of Clement Sector 9: System Defense Boats

Type 2 System Security Cutter

"Well skipper, these type two's are really well armored but lightly armed, so if we decide to get all serious like, I can assure you we can definitely buzz about like a trifle and sting them to death..."

Ensign Jack Jensen, cutter C-110, Cascadia Defense Force, 2337 CE

Background and Development

A newer design introduced into the Cascadian Defense Force in 2330, the Type 2 has been widely criticized as being undergunned by the popular press, opposition members of the government and both active and retired members of the defense forces. Critics point out that other navies; most notably the Hub Federation Navy and Monroe's Defense Force, have similar vessels carrying much heavier armament.

The Office of the Navy, when pressed makes the firm point that the Cascadian Defense Force is not in the game of vaporizing recalcitrant merchant captains or pirates that deserve to have their day in court (then executed). After all, the CDF has bigger, more capable warships to defend the Cascadian system if it came to that.

There are ten Type 2 system security cutters in service as of 2342, all serving within the Cascadian star system.

Specifications

The Type 2 is a 200dT streamlined hull configuration design, heavily armored with crystaliron armor.

Fuel tankage allows for an operational length of nine weeks without the requirement to refuel.

The boat has a dorsal turret mounting twin missile launchers and a single sandcaster launcher. The other triple turret, located ventrally, mounts beam lasers and can retract when the Zimm module is docked. Total magazine capacity is eighty four missiles and forty sandcaster canisters in a magazine below the dorsal turret. A point defense node laser array provides additional defense against missiles.

Internally, the system defense boat is separated into two distinct decks:

Deck 1	Upper Deck
Deck 2	Main Deck

Both decks are accessed from one main location and are internally compartmented to ensure full security and to allow for damage control if the cutter's hull is compromised.

Deck 1 – Upper deck

The upper deck contains the bridge which is hardened against radiation and has holographic controls, main airlock and officer's accommodation. Both staterooms contain a single bunk, fresher/washer unit, a desk with a workstation and a secure locker. There are extra storage compartments under the bed and along the wall.

Right aft is the access to the main deck and the upper turret magazine.

Deck 2 – Main Deck

The main deck forward section holds the advanced military sensors fuel tank and ship's launch hangar. The hangar access passage on the port side provides direct access to the docked launch, while a short passage to starboard of the hangar leads to a ventrally opening airlock. Aft of the hangar area is the enlisted compartment which consists of two enlisted berths and four heads while a comfortable enlisted mess and galley allows off watch personnel to relax and enjoy galley cooked meals. Further aft are the brig and the cutters repair drone bay. Engineering and the ships drives can be found at the

Ships of Clement Sector 9: System Defense Boats

stern. Access to a docked Zimm module can be made via the deck iris hatch within engineering.

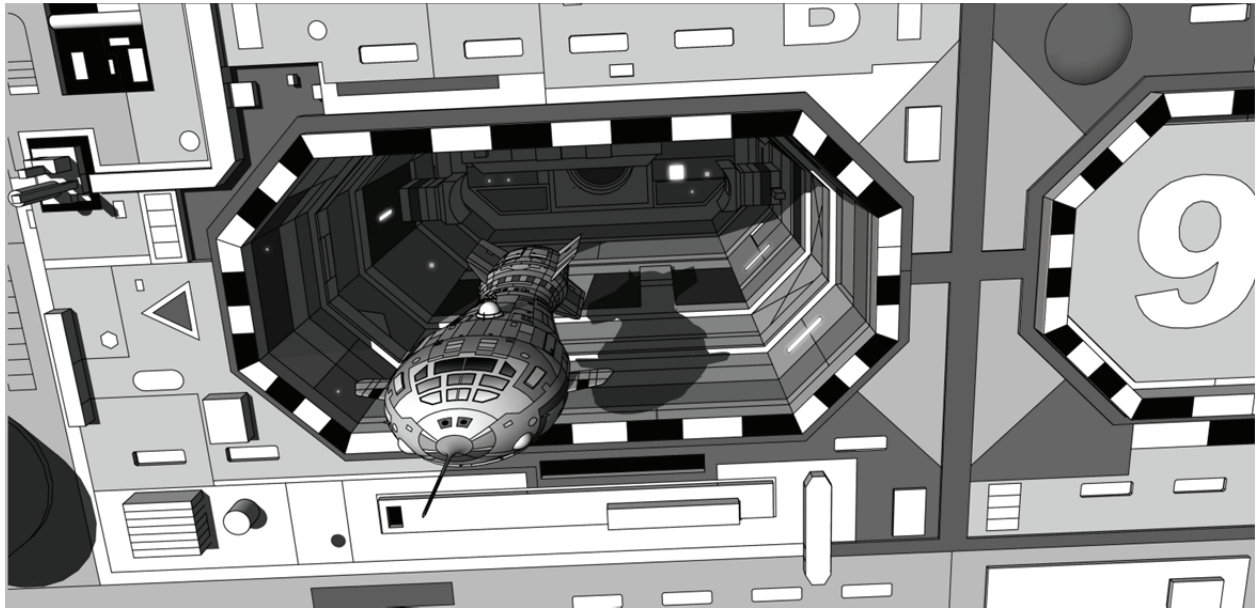
Operational Duties

The Type 2 Security Cutter's primary role is to form part of the Cascadian system defense forces.

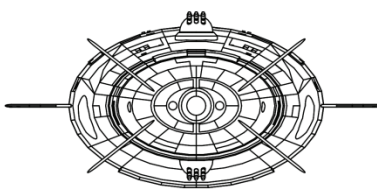
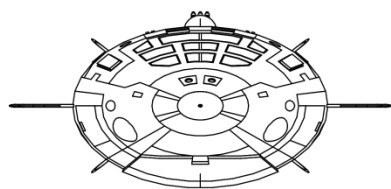
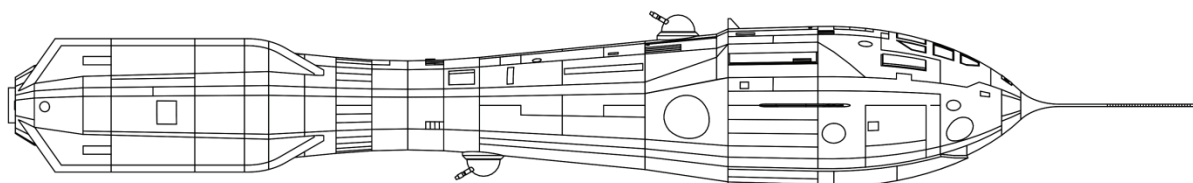
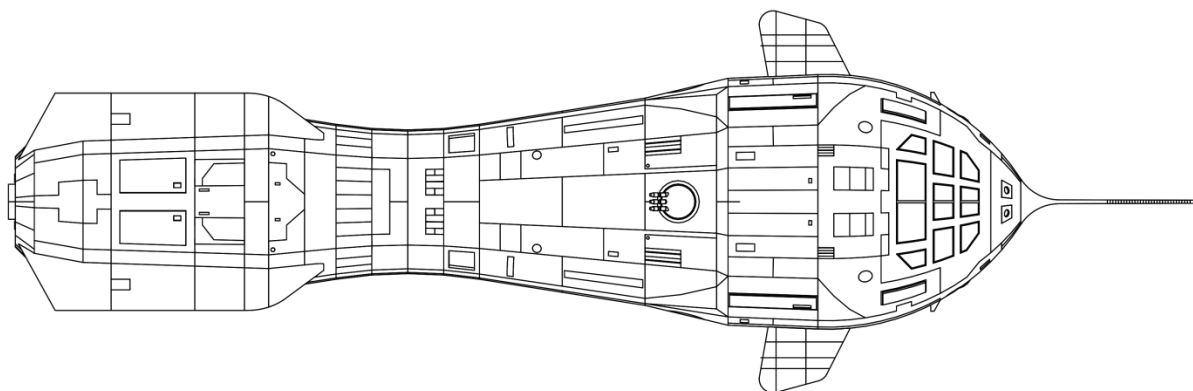
Typically deployed to the Cascadia's outer system, the Type 2's undertake patrol and security duties, replacing the system custom and excise vessels in the outer system undertaking inspections of incoming and outgoing civilian starships.

Like almost all system defense boat type vessels the Type 2 can be transferred to other systems using a Zimm module. However the need for Cascadia to undertake this is not readily apparent. It is believed that two extra cutters have been constructed and sent to one of Cascadia's "associate" worlds but at this stage and without further evidence such talk is simply conjecture. However the addition of the Zimm module does allow the Cascadian government great flexibility to deploy security cutters where needed.

A Type 2 Security Cutter is typically commanded by a Lieutenant.



Ships of Clement Sector 9: System Defense Boats

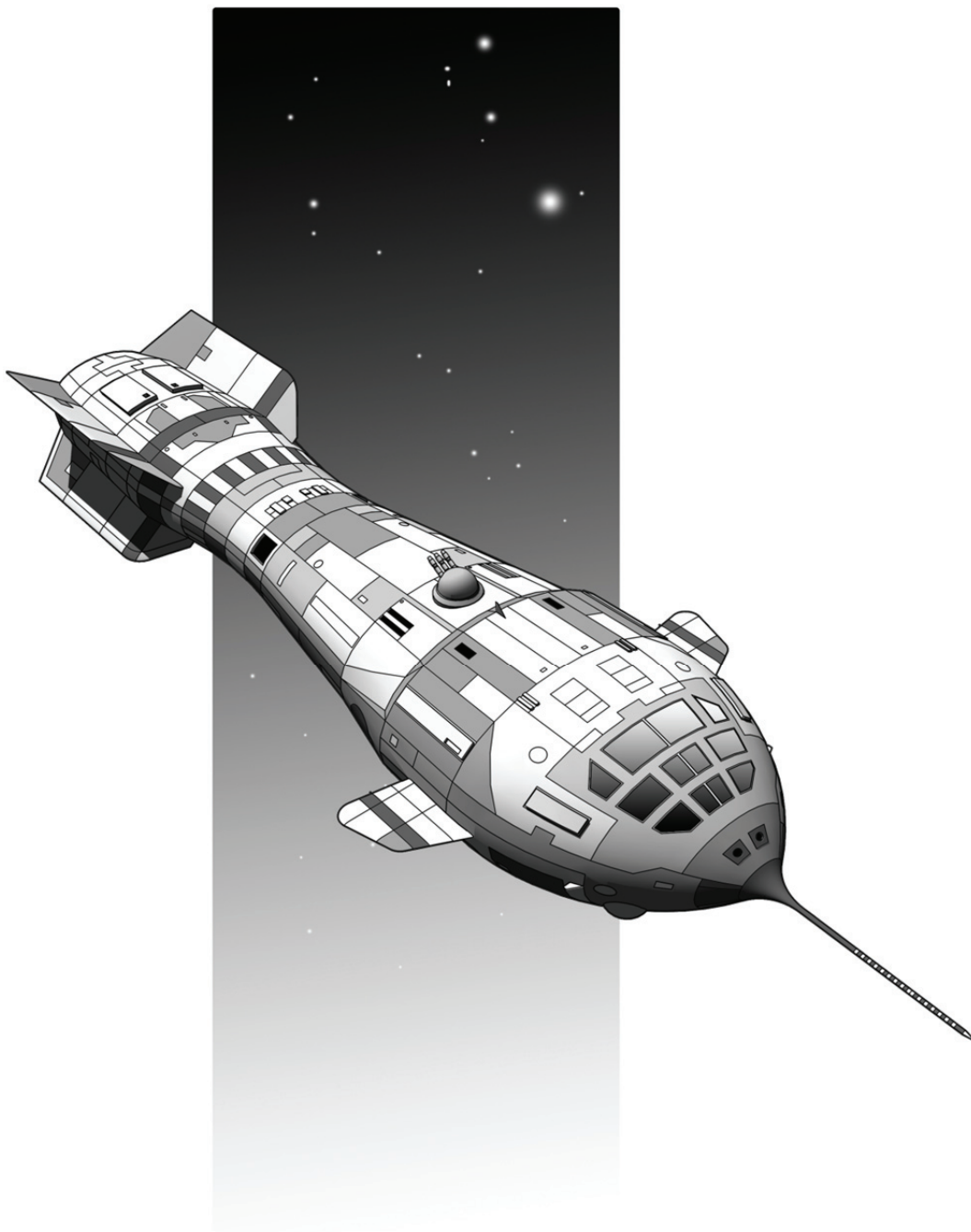


Ships of Clement Sector 9: System Defense Boats

Type 2 System Security Cutter

Type			Tonnes	Price (MCr)
Hull	200 dT	Hull 4	200	8.8
	Streamlined	Structure 4		
Armor	Crystaliron x3	12 points	30	5.3
Maneuver Drive	Type F	Thrust 6	11	24.0
Power Plant	Type F	Rating 6	19	48.0
Bridge	Standard (Hardened, Holographic Controls)		10	1.5
Computer	Model 3fib	Rating 15		3.0
Electronics	Advanced Sensors	DM+1	3	2.0
Weapons	Hardpoint 1	Triple turret 3x beam laser	1	4.0
		Triple turret 2x missile, 1x sandcaster (retractable)		
	Hardpoint 2		2	3.8
	Point Defense Node Array	3x PD Laser		4.5
Fuel		9 weeks operation	54	
Cargo	2 tonnes		2	
Crew	8 (2 officers, 6 enlisted)			
	5x ship's troops			
	Enlisted Berths	1x Berth	6	0.5
		2x Heads	3	0.2
	Ship's Troops Berths	1x Berth	6	0.5
		2x Heads	3	0.2
	Officer's Quarters	2x	8	1.0
	Galley	2x	2	0.5
Extras	Ship's Locker			
	Fuel Scoops	Included		
	Fuel Processor x2	40 tonnes per day	2	0.1
	Repair Drones		2	0.4
	Brig	2x Cells	3	0.5
	Hangar		22	4.0
		Fast Launch		14.0
	Emergency Low Berths	1	1	0.1
Ammunition	Ammunition (magazines)			
	Missiles	84	7	
		36x Basic		
		48x Smart		
	Sandcaster Canisters	40	2	
Software	Intellect			1.0
	Evade/2			2.0
	Fire Control/2			4.0
	Point Defense/2			15.0
	Library			
	Maneuver			
Maintenance Cost (Monthly)				0.023
Life Support Cost (Monthly)				0.010
Total Tonnage and Cost			199	146.2

Ships of Clement Sector 9: System Defense Boats

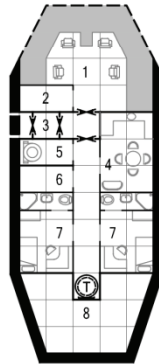


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Type 2 System Security Cutter

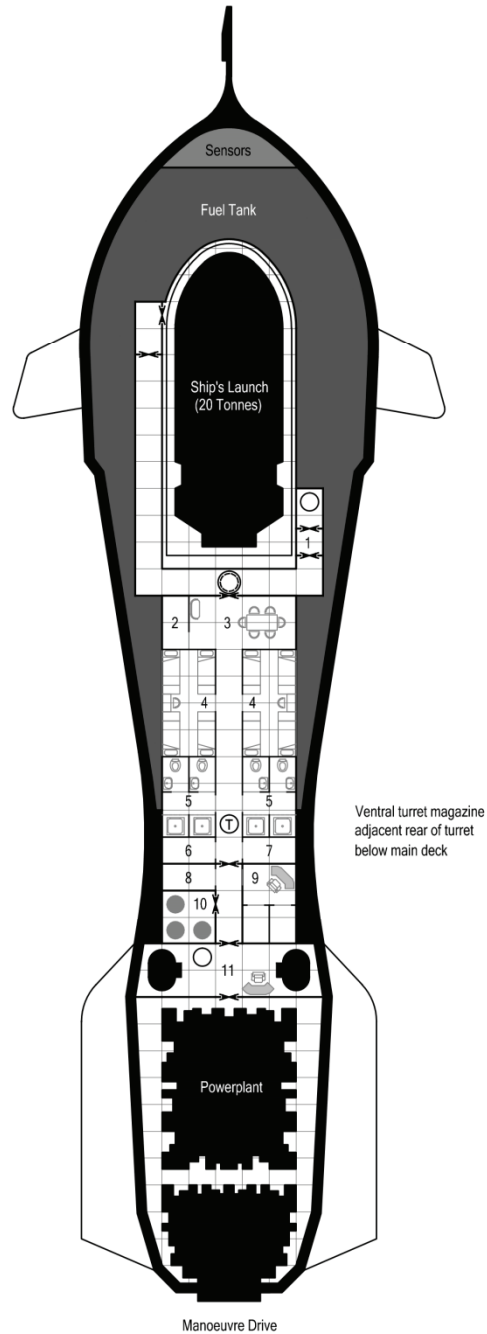
Deck 1 - Upper Deck

1. Bridge
2. Computer Access
3. Airlock
4. Wardroom
5. Emergency Low Berth
6. Ship's Locker
7. Officer's Quarters
8. Upper Turret Magazine



Deck 2 - Main Deck

1. Airlock
2. Enlisted Galley
3. Enlisted Mess
4. Enlisted Berths
5. Enlisted Heads
6. Galley Stores
7. Equipment Stores
8. Engineering Stores
9. Brig
10. Repair Drone Bay
11. Engineering



Deck Plan Symbols

0 1.5 6
scale in metres

Ships of Clement Sector 9: System Defense Boats

Rattlesnake-class Attack Craft

"Can't say I like off worlders really. I mean we trade with them 'cause we have too, but we generally don't like 'em. Woe betide any who come to Monroe looking for trouble because we will smash 'em back into the black."

Lieutenant JG Luc Smith, flight commander, 3rd wing Monroe Defense Force, 2341 CE

Background and Development

Until recently not much was known about the attack craft deployed by the Monroe Defense Force. For several years all the information provided to Hub Federation Naval Intelligence, Cascadian Colonization Authority and the intelligence branch of the Cascadian System Defense Forces were sensor logs and reports about fast "hammerhead" shaped defense boats from Merchant crews trading in and out of the Monroe system.

In its annual review of 2338, the pre-eminent defense journal Wendy's featured a full article about the secretive Monroe Defense Force including the *Rattlesnake*-class attack craft. When both the Cascadian Defense force and the Hub Federation Navy were contacted for comment by local news media about the accuracy of the article, they refused to comment, both stating that Wendy's was free to publish what information it wanted to and its readers could decide how accurate that information actually was for themselves.

This issue bubbled on and off for several months until a Cascadian senate committee ordered the Cascadian Defense Force to release what information it had regarding the disposition of the Monroe military. This was to ensure Cascadian merchant shipping was fully informed regarding what was within the Monroe system.

It turned out that Wendy's was right.

Specifications

The *Rattlesnake*-class is a 300dT standard hull hammerhead shaped vessel

with a heavily armored and reinforced crystaliron hull.

The *Rattlesnake* has not been designed for long duration operations and provided fuel tankage allows for an operational length of only two weeks. However if the need arises the attack craft can process fuel gathered from gas giant dives.

What makes this vessel unique is the spinal mounted meson gun bay. The 100dT bay occupies a full third of the attack craft's total displacement providing massive firepower for a vessel the size of the attack craft. Secondary armament consists of a dorsal mounted particle beam barbette and mixed triple turret mounting twin beam lasers and a sandcaster launcher.

Total magazine capacity is forty sandcaster canisters within a single 2dT magazine adjacent to the forward turret.

Internally, the attack craft is separated into two distinct decks:

Deck 1	Upper Deck
Deck 2	Engineering/Gun Deck

Both decks are accessed from only one location and each deck is internally compartmented to ensure full security and to allow for damage control if the attack craft's hull is compromised.

Deck 1 – Upper Deck

The main deck forward section holds the basic military sensors, relatively small bridge and computer access. The bridge is also hardened against radiation. Aft of the bridge is a small wardroom, two small officer's staterooms and heads. The captain's office contains a desk with a workstation and

Ships of Clement Sector 9: System Defense Boats

bridge repeater. Each officer's staterooms contain a single bunk, a desk with a workstation and a secure locker. There are extra storage compartments under the bed and along the wall.

Aft of "officer's country", the enlisted compartment consists of an enlisted mess, enlisted berth and heads.

Aft of the enlisted compartment are the main airlock and a small cargo hold while further aft is the main weapons control and particle beam barbette machinery.

Deck 2 – Engineering and Gun Deck

This deck is dominated by the massive 100dT meson gun bay. Aft of the bay machinery is engineering along with the ships maneuver drives and power plant.

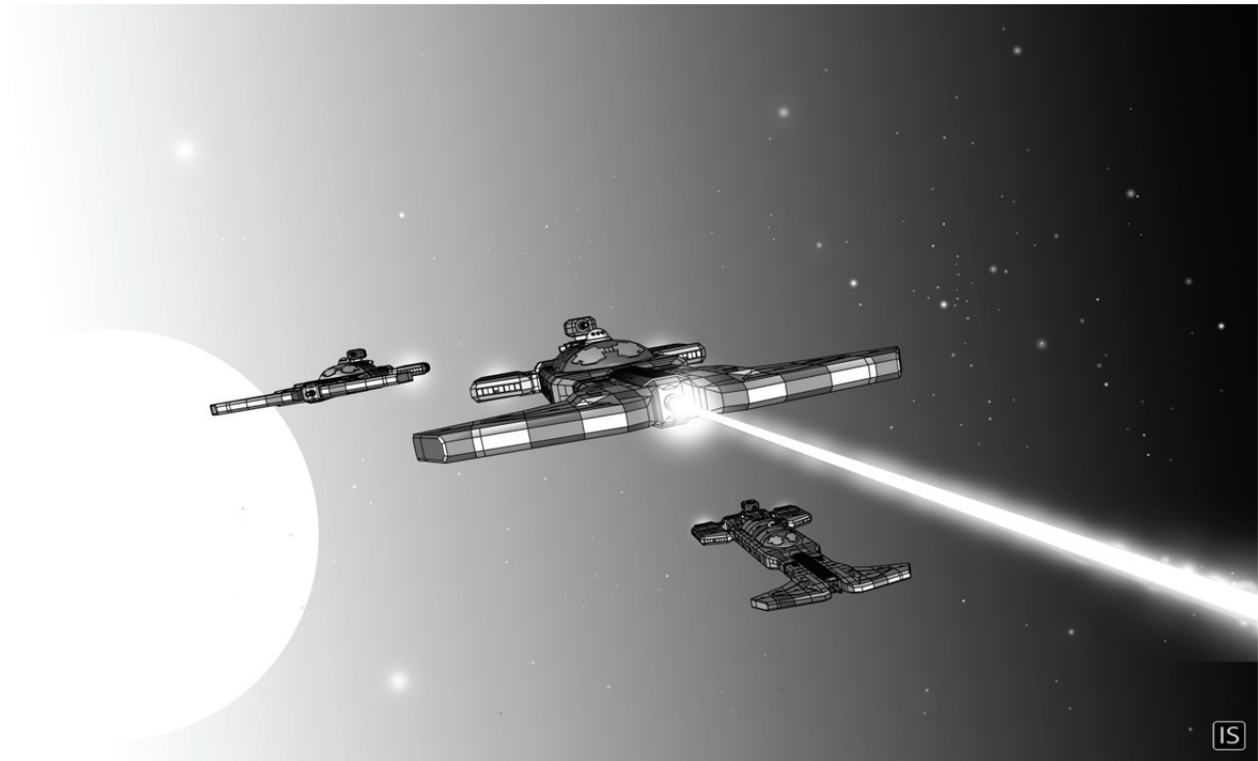
Operational Duties

The *Rattlesnake*-class attack craft is a unique design deployed in a unique way that has no counterpart in any other navy or system defense force.

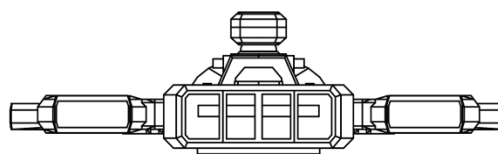
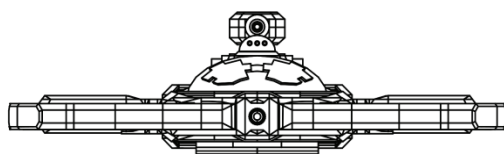
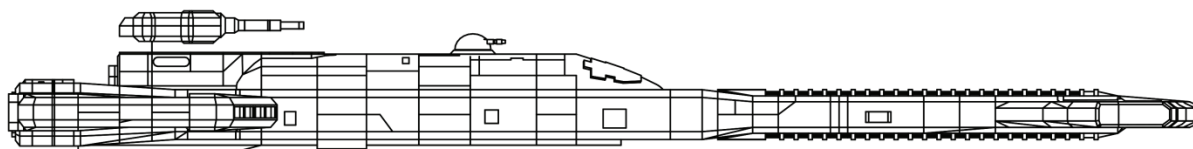
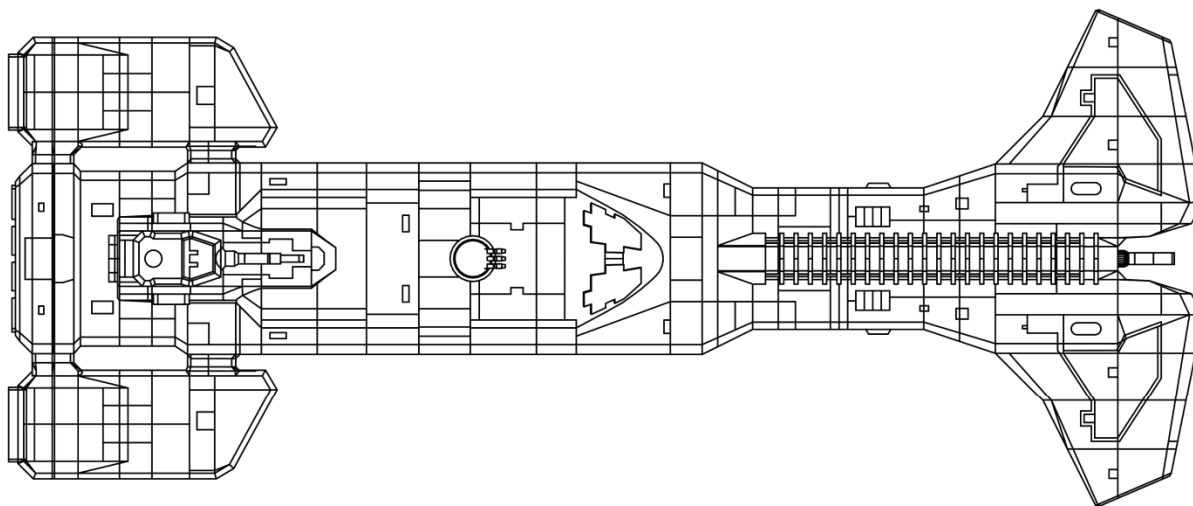
From the onset, the *Rattlesnake* is deployed as a parasite craft on the five massive monitors central to the Monroe Defense Force's naval doctrine. There are six deployed per monitor carried on outside cradles. These flights are designed to engage enemy forces in a similar but less effective fashion to the fast attack boats of the Hub Federation Navy. Defense analysts are unsure to how effective they would be tactically or if the vessel's power plant could even power the meson gun bay, but two things stand out; firstly the firepower of one or two flights of the attack craft would match or exceed the main offensive armament of any attacking fleet. Secondly, the attack craft's delaying tactics would enable the monitors to move up and engage an enemy fleet at range with their spinal mount particle beam weapons.

Either scenario is something that makes any invasion, regardless of how completely unlikely that would be, a very costly operation to any invading force foolish enough to attempt it.

A *Rattlesnake*-class attack craft is typically commanded by a Lieutenant.



Ships of Clement Sector 9: System Defense Boats

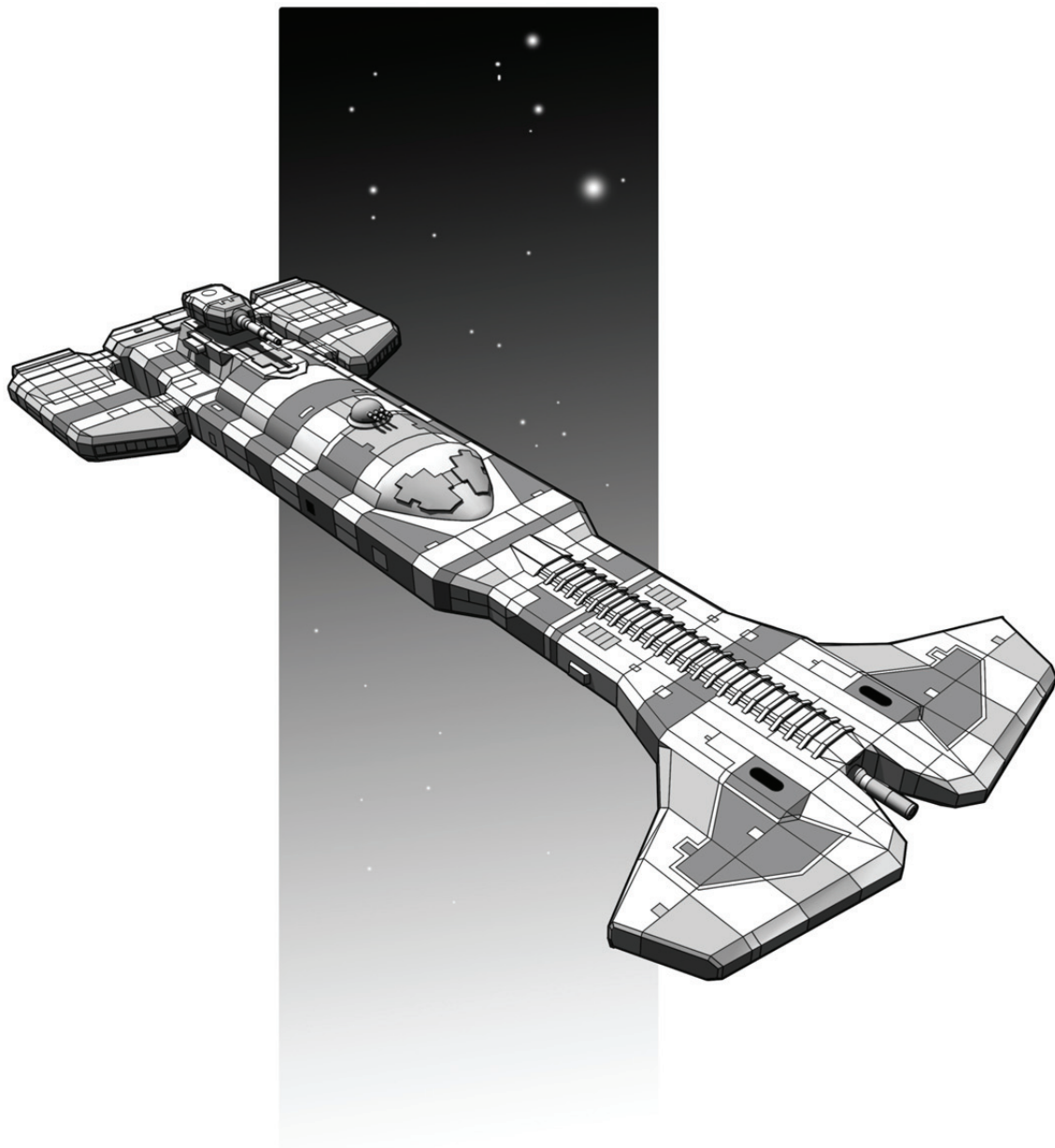


Ships of Clement Sector 9: System Defense Boats

Rattlesnake-class Attack Craft

Type			Tonnes	Price (MCr)
Hull	300 dT	Hull 6	300	12.0
	Standard	Structure 6		
	Reinforced Hull	5 points	30	3.0
Armor	Crystaliron x3	12 points	45	7.2
Maneuver Drive	Type H	Thrust 5	15	32.0
Power Plant	Type J	Rating 6	28	72.0
Bridge	Standard (Hardened)		20	1.9
Computer	Model 3fib	Rating 15		3.0
Electronics	Basic Military Sensors	DM+0	2	1.0
Weapons	Hardpoint 1 (fixed mount)	Spine Mounted Meson Bay (100 tonnes)	100	100.0
	Hardpoint 2	Particle Beam Barbette	5	8.0
	Hardpoint 3	Triple turret 2x beam laser, 1x sandcaster	1	3.8
Fuel		2 weeks operation	18	
Cargo	2 tonnes		2	
Crew	8 (2 officers, 6 enlisted)			
	Enlisted Berths	1x Berths	6	0.5
		2x Heads	3	0.2
	Officer's Quarters	2x	8	1.0
	Galley	2x	2	0.5
Extras	Fuel Scoops			1.0
	Fuel Processor	1x (20 tonnes per day)	1	0.1
	Repair Drones		3	0.6
	Emergency Low Berths	1x	1	0.1
	Escape Pods	4x Double Capacity	4	0.8
Ammunition	Ammunition (magazine)			
	Sandcaster Canisters	40	2	
Software	Intellect			1.0
	Evade/2			2.0
	Fire Control/3			6.0
	Library			
	Maneuver			
Maintenance Cost (Monthly)				0.024
Life Support Cost (Monthly)				0.005
Total Tonnage and Cost			296	257.7

Ships of Clement Sector 9: System Defense Boats



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Rattlesnake Class Attack Craft

Deck Plan Symbols

Deck 1 - Upper Deck

1. Bridge
2. Computer Access
3. Officer's Quarters
4. Officer's Heads
5. Officers Galley
6. Wardroom Ship's Locker
7. Enlisted Berth
8. Enlisted Galley
9. Enlisted Mess
10. Ships Locker
11. Enlisted Heads
12. Emergency Low Berth
13. Airlock
14. Equipment Locker
15. Cargo Hold
16. Weapons Control
17. Particle Beam Barbette

Deck 2 - Engineering and Gun Deck

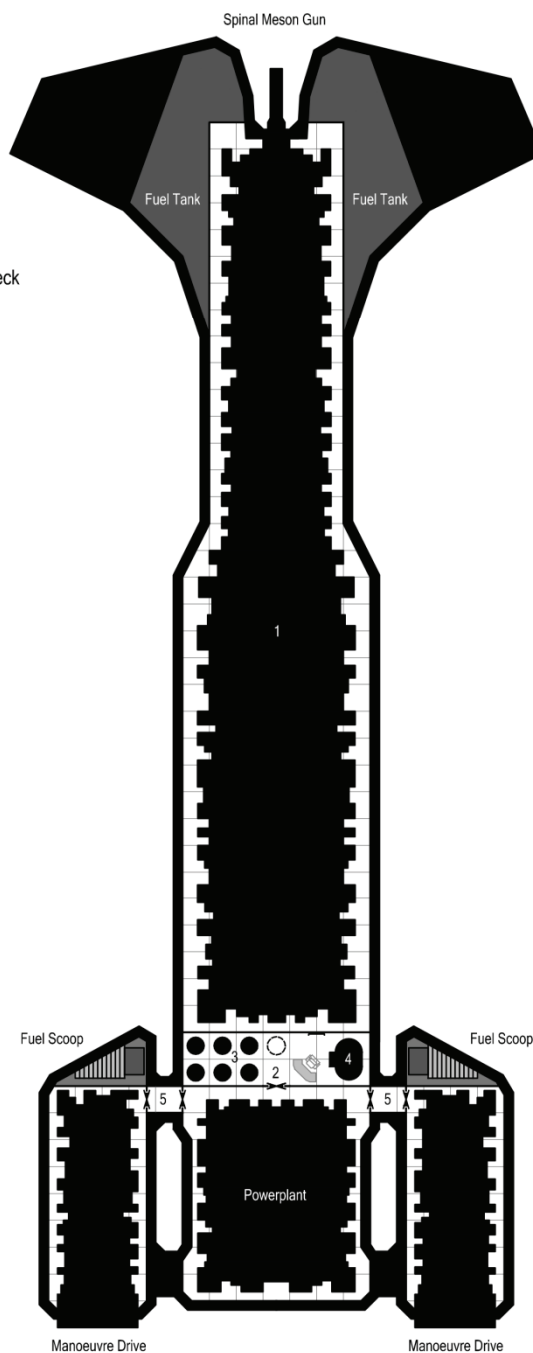
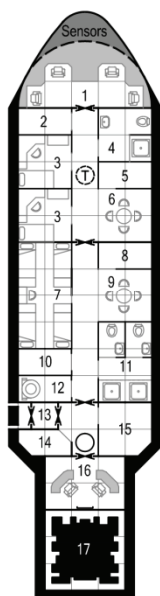
1. Meson Gun Bay
2. Engineering
3. Repair Drone Bay
4. Fuel Processors
5. Manoeuvre Drive Access



Particle Beam



scale in metres



Ships of Clement Sector 9: System Defense Boats

London Belt
Harrison (Sequoyah 0805)
August 8, 2343

"There we were, less than a thousand meters from the peak of Mt Trew and Pastor Bran's filter mask began failing... he had maybe an hour or two before it died completely. Being the Sabbath and all, we knew our options were limited and we might not even be able to get Nathan Emergency Services out there at all, but do y'all know what he said to me? He said Carson, we knew we'd be climbing on the Sabbath, and if it's God's will that our path take us this way through adversity, then so be it. If his plan is for me to join him today, then I'm alright with that because the scarlet thread of the covenant runs through me and I'll be blessed either way because his spirit is in me... but...."

Carson paused and allowed his eyes to roam across the bridge, drawing out the moment.

"He then looked up toward the peak and said... bless my stupid head and righteous heart, I ain't gonna join the heavenly host today. There's an aid shelter up ahead another hundred meters. I'm saved!"

Listening to the murmured amens and blessings from the bridge crew, she gave her own smile and turned back to the daily log files. Out here in the London Belt, more than 250 million kilometers from Hamilton, the second watch was only halfway through, and daily duty couldn't be ignored with tales from the last shore leave back home. She'd seen the peak of Mt Trew herself, fighting the steep ledges and treacherous cliffs to ascend to what must be one of the most majestic views in the subsector across the edge of the Blythe desert. Carson and his church friends would have a memory to last a lifetime from that journey, especially the close call the pastor had with his failing equipment.

Allowing a sigh louder than desired to pass from her lips, she turned her attention back to the log files. Commanding one of the newest vessels, and an imported one at that in the Harrison Customs Service, demanded her full attention. She wasn't commanding her old cutter anymore, and this big 300 dton SDB needed more than the 22 hours in a day than she could easily find, even with her dependable Exec and crew.

In front of her command chair the holodisplay showed the local area out to 500,000 clicks, their current patrol sector with several orange icons on diverse bearings. They'd tracked several contacts moving to and from some of the civilian settlements in the belt, identifying most as belters or inner-system freight. There were two others, larger in mass and freshly arrived during the first watch from out-system. One of which, was the current interception target.

She had to admit, the 'Viperina' was the best vessel she had served aboard. Fast, agile, and with a meson and missile armament that would stop any but the most heavily armed Kingston intruder, it made her proud that her service record had been recognized to give her command of the SDB. One of only two in service, although local yards were adapting the design for their own purposes, it had already proved its worth in battle against pirates that had brazenly been caught raiding the outer system. The Hubbians knew how to build a boat, she'd give them that.

Carson's reverie of his shore leave ended as they made the final approach to the lumbering merchant, and matched course. The merchant had declared itself as a recent arrival from Totaro and Kingston, making it an instant high-priority for an intensive search. Any vessel from Kingston was treated as a threat, and even merchants were treated with suspicion until

Ships of Clement Sector 9: System Defense Boats

searched and cleared to a degree that frustrated their crews. You could never be too careful, not with their treatment of anyone not following their blasphemous religion as a heretic.

"Mister Hagen, bring the boarding team to readiness. Just so y'all know, I'm figuring on moseying along on this one to keep in practice. I'll meet y'all in the hangar in five minutes. And, Hagen, make sure if Kitty is on this one that she don't start lecturing them from Leviticus about anyone with cyber-limbs or implants... we'll treat them all civil and friendly like."

"Aye, ma'am." Came the reply from the Ensign aft in the hangar.

She could imagine his face turning red in recollection at the last merchant ship he'd surveyed. Half that crew had combat implants, mind-comps, or artificial limbs and they'd been given a hard time by one of her zealous petty officers. To be honest, it was the norm these days on Harrison for anyone with a cybernetic enhancement or replacement to be denigrated to second-class status. Most visitors from outsystem weren't prepared for the hostility, and this was why she was going aboard for the inspection this time.

Closing down the log files, she looked over to the Exec. "Martin, the boat is yours. If the merchie gets all bowed up, don't be shy to show 'em who's the boss out here. But I figure they'll be fixin' to be real good with Viperina's guns aiming at their bow and lil old me on board telling them that Twyla Fay Fuller ain't one to rile."

Pausing to look quickly around the bridge, she grinned with pride. It was a good crew and a great boat, but as she made her way aft, she found herself wondering just why in the tarnation the Hubbians called it an Antelope class SDB instead of something more apt and deadly. Maybe it was true what they said and the Hubbians were all uppity varmints with no common sense at all.

But now, it was time to do some work for a change, and with that she allowed the smile to light up her face as she glided through the corridors.

Ships of Clement Sector 9: System Defense Boats

Antelope-class System Defence Boat

"Why in hell do they call these stealthy killers the Antelope class? BuShips must have forgot to have coffee that morning or something"

Leutnant Lena Tait, HFS Kudu 2339 CE

Background and Development

Part of the design and procurement program as outlined in the Hub Federation Defence Forces second white paper in 2338, the *Antelope*-class was designed to replace the aging ex German Navy Type S system defense boats. As the new and bigger *Antelope*-class boats commissioned, the Type S boats were placed into naval reserve squadrons. Two were even sold to Harrison to bolster their system defense force.

Naming the new system defense boats the *Antelope*-class was questioned almost from the start, with many officers wondering what BuShip's naming committee was thinking when they assigned the class name.

Construction of the new system defense boat class commenced in February 2339. By 2342, six of the class had been constructed while two more, *HFS Impala* and *HFS Bushbuck*, commenced commissioning trials. There are to be twenty four ships in the class to be constructed.

With powerful armament, excellent protection and stealth capability, the *Antelope*-class is a powerful addition to the security and defense of the Hub Federation's member worlds.

Specifications

The *Antelope*-class is a 300dT streamlined hull configuration. The hull is heavily armored with crystaliron armor with further hull reinforcement to improve survivability. Hull stealth coating and associated systems allow the *Antelope* to be very hard to detect, allowing the boat to be used very effectively to ambush opponents.

Fuel tankage allows for an operational duration of six weeks without the requirement to refuel.

The boat has dorsal mounted main armament consisting of a single 50dT meson gun bay. Secondary armament consists of two ventral mixed armament triple turrets mounting twin beam lasers and sandcaster to port and twin missile and one sandcaster launcher to starboard.

Total magazine capacity is seventy two missiles and sixty sandcaster canisters in two magazines above both ventral turrets. Both magazines are interlinked allowing for turret autoloaders to use both magazines stored munitions.

A point defense node laser array provides additional defense against missiles.

The boat maintains the current Hub Federation Navy arrangement of two linked model3fib computers in order to provide adequate processing power and redundancy to all the boat's core systems.

Internally, the system defense boat is separated into two distinct decks;

Deck 1	Meson Gun Bay
Deck 2	Main Deck

Both decks are accessed from one main location. The main deck is internally compartmented to ensure full security and to allow for damage control if the boat's hull is compromised.

Deck 1 – Meson Gun Bay

This deck is essentially all meson gun bay and fire control.

Ships of Clement Sector 9: System Defense Boats

Antelope-class System Defense Boats constructed as of 2342.

Boat	HFN Pennant Number	HFN Status
<i>HFS Antelope</i>	DB-100	In commission
<i>HFS Gazelle</i>	DB-101	In commission
<i>HFS Kudu</i>	DB-102	In commission
<i>HFS Klipspringer</i>	DB-103	In commission
<i>HFS Sable</i>	DB-104	In commission
<i>HFS Nyala</i>	DB-105	In commission
<i>HFS Impala</i>	DB-106	Commissioning Trials
<i>HFS Bushbuck</i>	DB-107	Commissioning Trials
<i>HFS Oryx</i>	DB-108	Under Construction
<i>HFS Gerenuk</i>	DB-109	Under Construction

Deck 2 – Main Deck

The main deck forward section holds the advanced military sensors, bridge, computer access and a small equipment store. The bridge is also hardened against radiation. Aft of the bridge is the captain's office, a small wardroom, captain's stateroom and an officer's stateroom. The captain's office contains a desk with a workstation and bridge repeater. Both the captain's and other officer's stateroom contain a single bunk, fresher/washer unit, a desk with a workstation and a secure locker. There are extra storage compartments under the bed and along the wall.

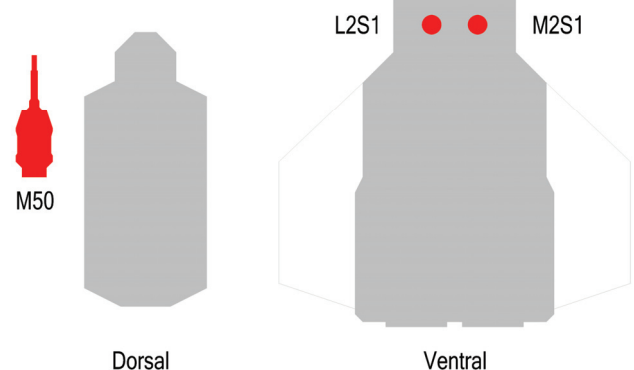
Aft of "officer's country" and separating the enlisted compartment is the single bed medical bay, emergency low berth and ship's armory.

The enlisted compartment consists of two enlisted berths and four heads while a comfortable enlisted mess and galley allows off watch personnel to relax and enjoy galley cooked meals.

Aft of the airlocks are the two small cargo holds, turret magazines, meson bay access and engineering. Right aft, accessed from engineering are the boats powerful maneuver drive and fusion power plant.

Legend

- L2S1 Double Beam Laser and Single Sandcaster Turret
- M2S1 Double Missile and Single Sandcaster Turret
- M50 Meson Gun 50dT Bay



**Antelope Class System Defence Boat
Primary and Secondary Armament Distribution**

Operational Duties

The *Antelope*-class system defense boat's primary role is to form part of the

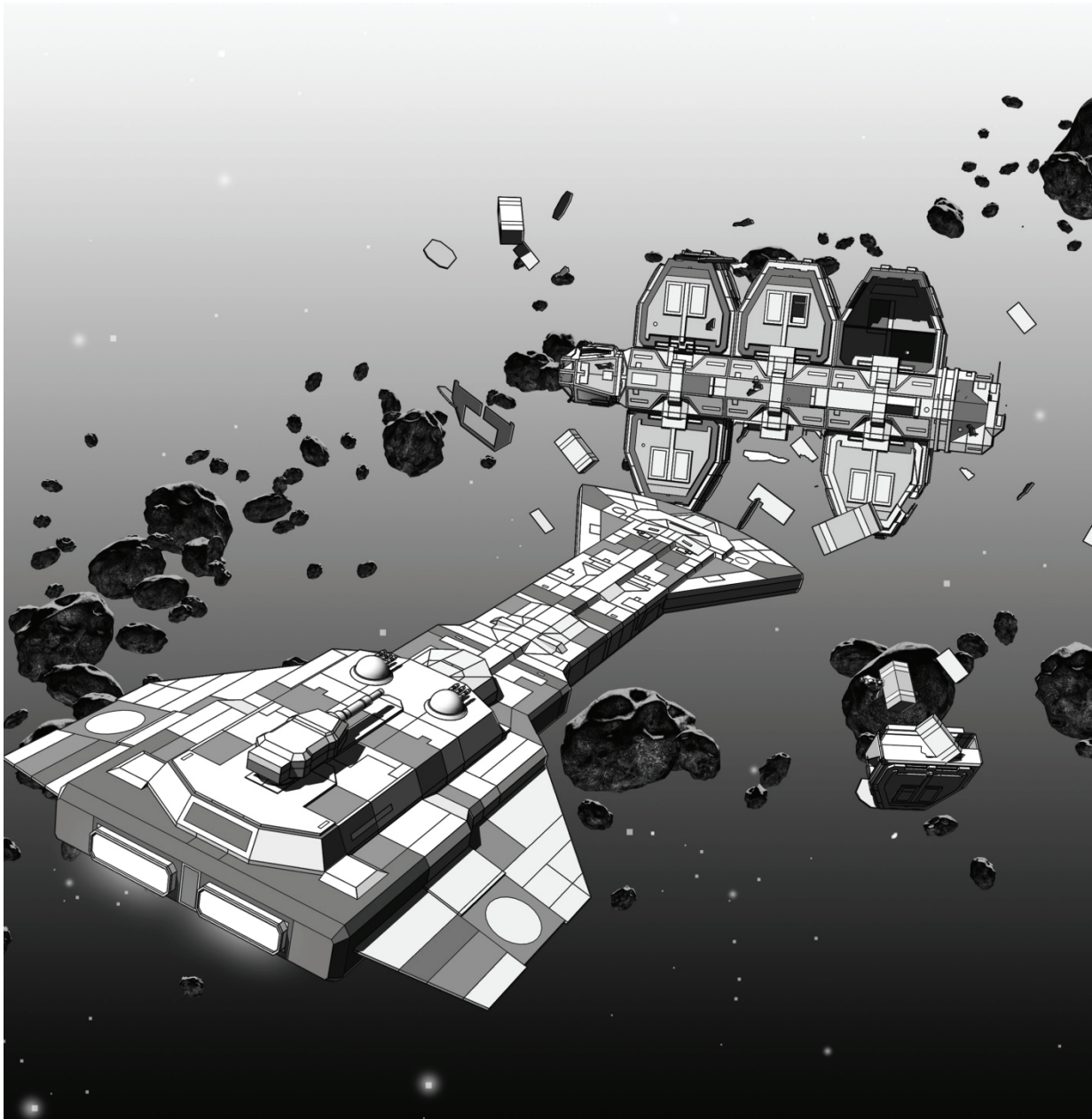
Ships of Clement Sector 9: System Defense Boats

system defense forces of the member worlds of the Hub Federation.

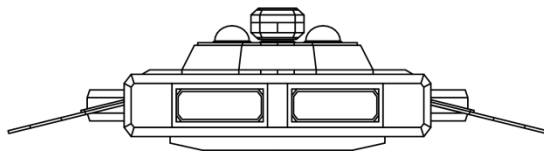
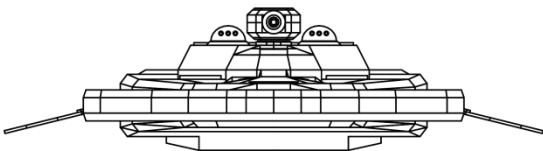
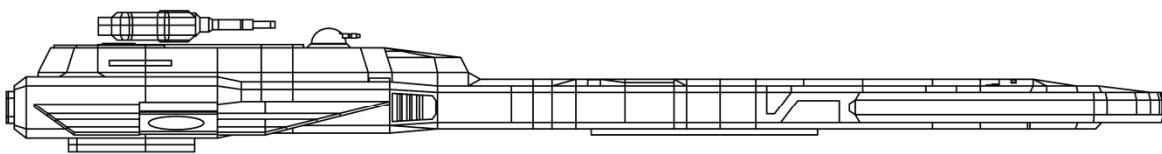
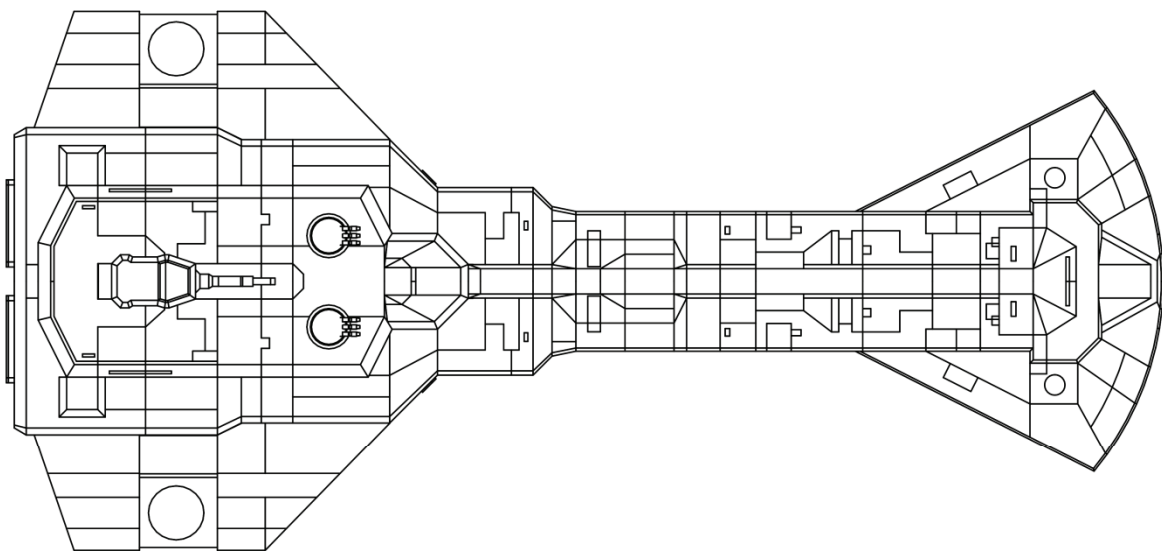
Typically deployed to the outer system, the Antelopes undertake patrol and security duties, augmenting the system custom and excise vessels in inspecting incoming and outgoing civilian starships. Often one of these vessels will be assigned to merchant convoys when the need for such measures arises. It is rare that any pirate would attack such a convoy knowing that an Antelope is part of the escort.

Like almost all system defense boats, the *Antelope*-class can be transferred to other systems using a Zimm module, which allows the Hub Federation greater flexibility to deploy boats where needed. However when the Zimm Module is docked the Antelope's maximum thrust is reduced to 3G.

An *Antelope*-class system defense boat is typically commanded by an Oberleutnant (Lieutenant).



Ships of Clement Sector 9: System Defense Boats

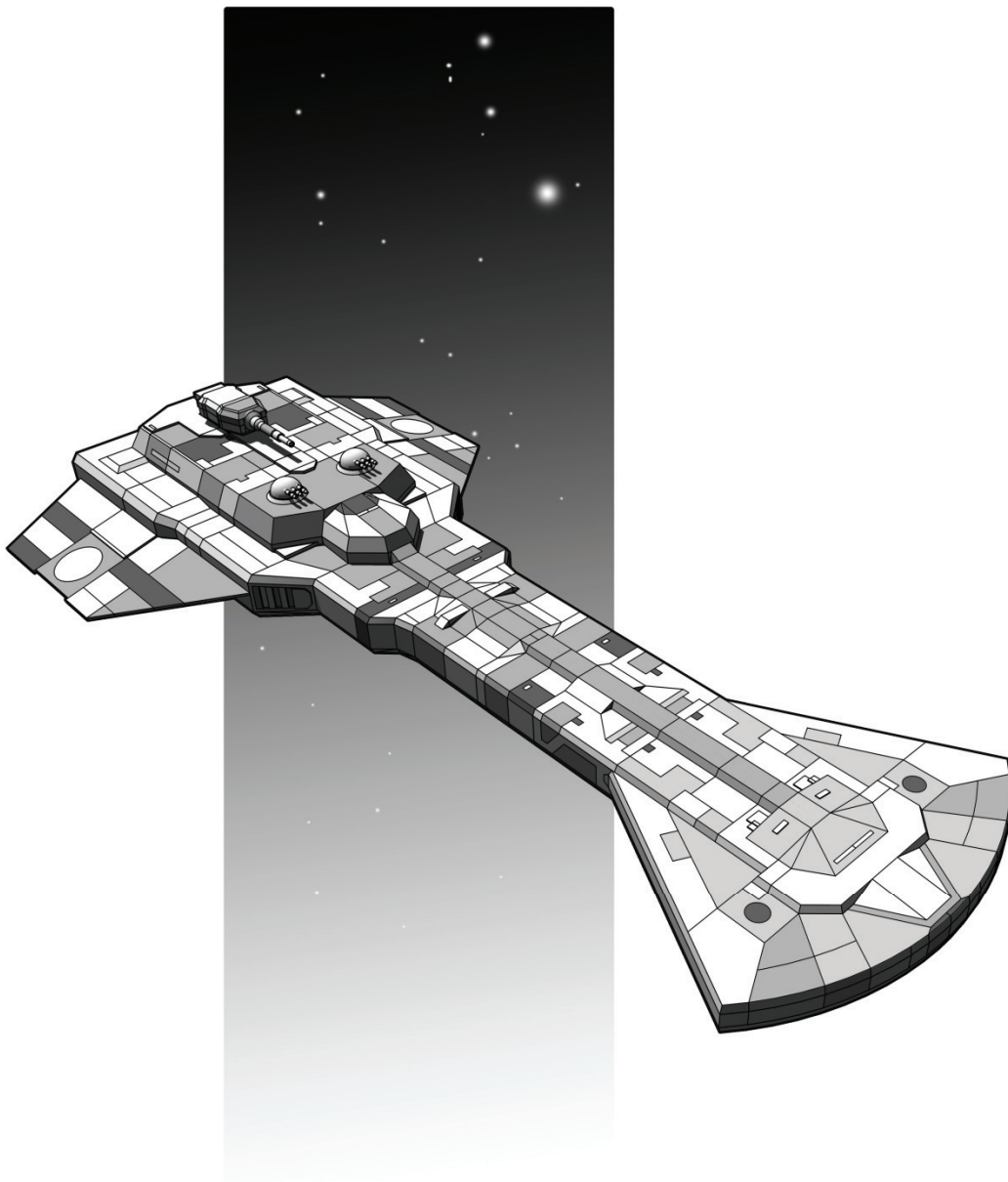


Ships of Clement Sector 9: System Defense Boats

Antelope-class System Defence Boat

Type			Tonnes	Price (MCr)
Hull	300 dT	Hull 6	300	13.2
	Streamlined	Structure 6		
	Reinforced Hull	5 points	30	3.0
	Stealth Coating	DM-4 to detect or lock on		55.0
Armor	Crystaliron x4	16 points	60	10.6
Maneuver Drive	Type J	Thrust 6	17	36.0
Power Plant	Type J	Rating 6	28	72.0
Bridge	Standard (Hardened, Holographic Controls)		20	2.3
Computer	Model 3fib x2	Rating 15 (30)		6.0
Electronics	Advanced Sensors	DM+1	3	2.0
Weapons	Hardpoint 1	Meson Bay (50 tonnes)	50	50.0
	Hardpoint 2	Triple turret 2x beam laser, 1x sandcaster	1	3.3
	Hardpoint 3	Triple turret 2x missile, 1x sandcaster	1	2.8
	Point Defense Node Array	3x PD Laser		1.5
Fuel		6 weeks operation	54	
Cargo	4 tonnes		4	
Crew	15 (3 officers, 12 enlisted)			
	Enlisted Berths	2x Berths	12	1.0
		3x Heads	5	0.3
	Officer's Quarters	2x	12	6.0
	Galley	2x	2	0.5
Extras	Armory		2	0.5
	Captain's Office		2	0.2
	Fuel Scoops	Included		
	Fuel Processor	2x (40 tonnes per day)	2	0.1
	Repair Drones		3	0.6
	Medical Bay	One Bed	2	0.5
	Emergency Low Berths	1	1	0.1
	Escape Pods	6x Double Capacity	6	1.2
	Ammunition	Ammunition (magazines)		
		Missiles	72	
			6	
		24x Basic		
		36x Smart		
		12x Nuclear		
	Sandcaster Canisters	60	3	
Software	Intellect			1.0
	Evade/2			2.0
	Fire Control/3			6.0
	Point Defense/2			15.0
	Library			
	Maneuver			
	Avatar (Advanced)			0.1
Maintenance Cost (Monthly)				0.023
Life Support Cost (Monthly)				0.010
Total Tonnage and Cost			296	240.7

Ships of Clement Sector 9: System Defense Boats



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Ships of Clement Sector 9: System Defense Boats

Antelope Class System Defence Boat

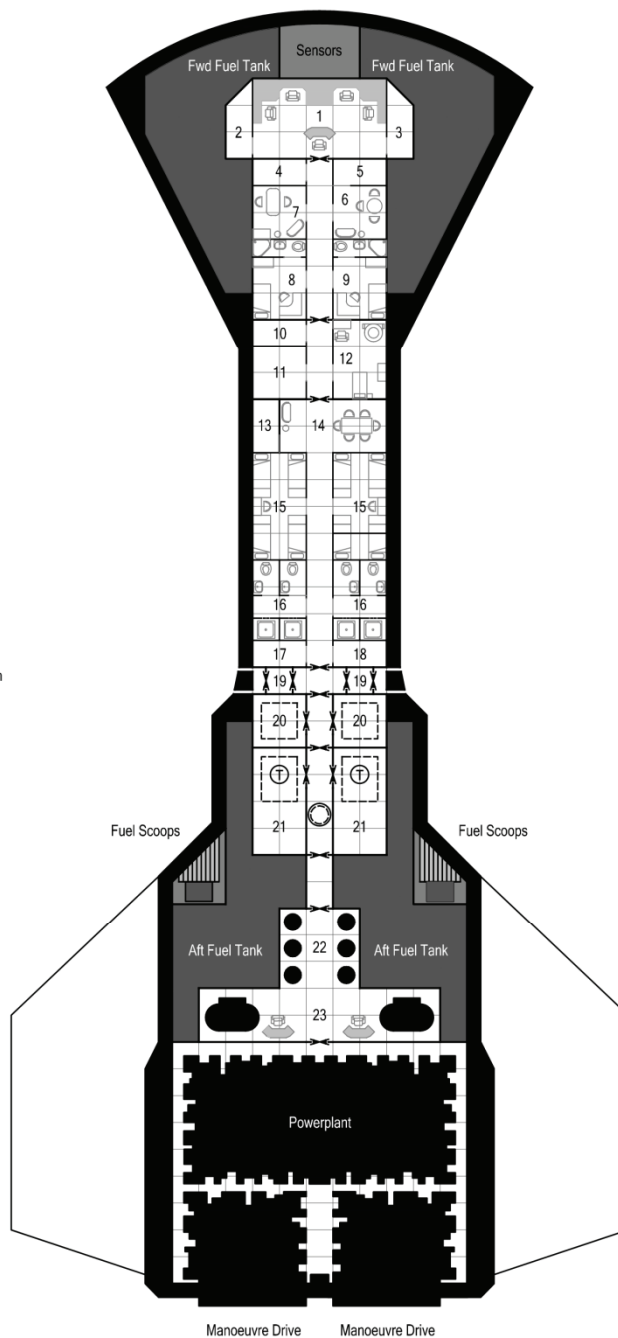
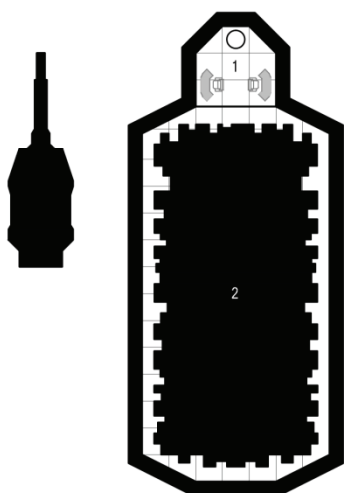
Deck 2 - Main Deck

1. Bridge
2. Computer Access
3. Equipment Locker
4. Galley Stores
5. Galley
6. Wardroom
7. Captain's Office
8. Captain's Quarters
9. Officer's Quarters
10. Stores
11. Armoury
12. Medical bay
13. Galley
14. Enlisted Mess
15. Enlisted Berth
16. Enlisted Heads
17. Galley Stores
18. Equipment Locker
19. Airlock
20. Cargo Hold
21. Magazine
22. Repair Drone Bay
23. Engineering

Deck Plan Symbols

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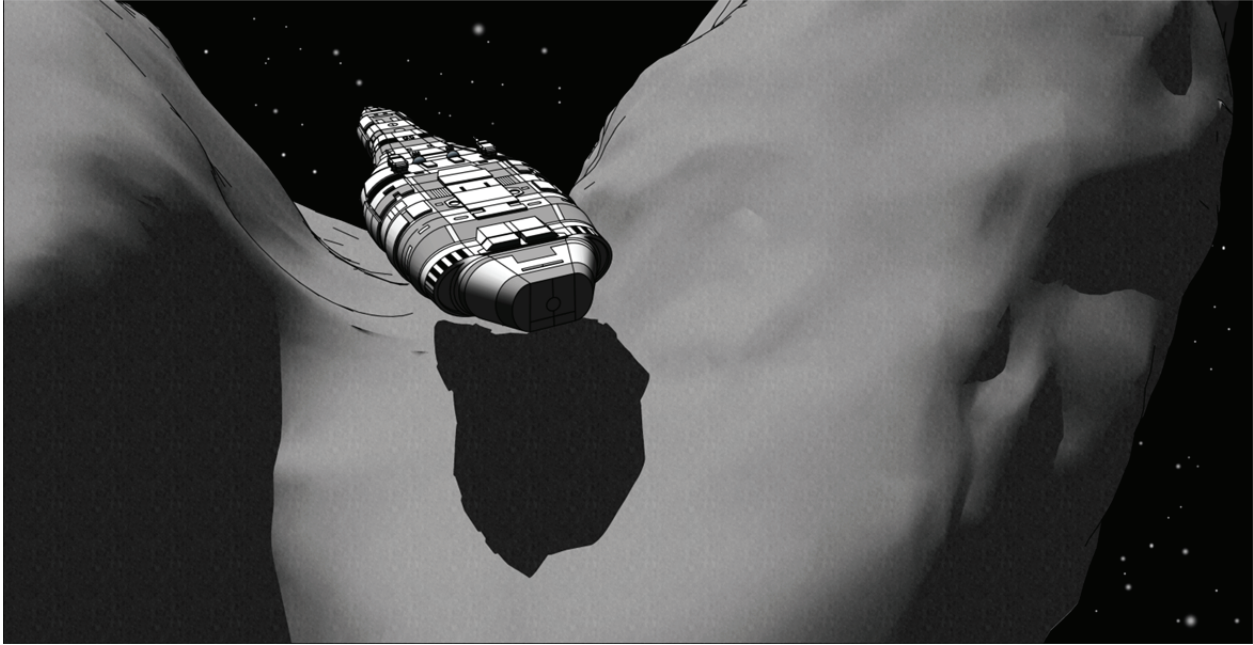
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Deck 1 - Meson Gun Bay

1. Meson Gun Fire Control
2. Meson Gun Bay

Ships of Clement Sector 9: System Defense Boats



River-class System Defence Boat

"The bloody galah kept on serving it up to the civvie ship and the skipper was getting madder than a cut snake, so he ordered us to fire for effect and you just don't damage a ship with twin meson fifties, you know what I mean? After the big bang made him soil his dacks, the other pirate made off like a bloody racehorse goanna. We got him too."

Chief Petty Officer (Gunnery) Mark Baker, RAS Southern River 2338 CE

Background and Development

Faced with a growing need to improve the security of their small number of extra solar colonial holdings including the new colony of Wellington in Clement Sector, the United Kingdom's Royal Navy elected not to design and produce a new system defense boat class, but to modify their well-balanced *Raptor*-class sloop design that had been in service for nearly fifteen years.

The Admiralty believed that undertaking a variant construction program would enable the boats to be produced quickly and at less expense. The design of the new *River*-class promised that would be exactly the case.

Construction of the new system defense boat class commenced during the

middle of 2295 and on May 3rd 2299 *HMS Severn* and *HMS Ganges* transited into Wellington System using their jump modules. By 2305, they had been joined by *HMS Medway* and *HMS Patters Stream* forming the light screen for the Royal Navy's 1st System Defence Squadron.

Australia is the only other nation operating the *River*-class, purchasing three boats in 2302. Of the three boats ordered two remain on the Earth side of the Conduit while the third, *RAS Southern River*, is part of the New Perth Defence Flotilla.

The *River*-class are arguably the most powerful system defense boats currently in service in Clement Sector. Big, fast, heavily armed and armored, they are a serious deterrent to any foe short-sighted enough to attack merchant shipping or targets of

Ships of Clement Sector 9: System Defense Boats

opportunity within the member systems of the Hub Federation or within the New Perth Star System.

Specifications

Modification of the *Raptor*-class sloop design entailed removal of the aft fuel tanks and barbette mounts, installation of twin 50dT meson gun bays and the installation of a bigger maneuver drive enabling a maximum acceleration of five gravities. Additional armor was also added to the hull to increase survivability.

The remaining fuel tankage allows for an operational length of five weeks without the requirement to refuel.

The boat has dorsally mounted main armament consisting of two 50dT meson gun bays. Secondary armament consists of two dorsal mounted triple beam laser turrets and ventrally mounted triple missile and sandcaster turrets. Total magazine capacity is one hundred and twenty missiles and one hundred and twenty sandcaster canisters in a single 20dT magazine adjacent to both ventral turrets. The modified design continued the *Raptor*-class Sloop's arrangement of two linked model3fib computers in order to provide adequate processing power and redundancy to all the boat's core systems.

Internally, the system defense boat is separated into three distinct decks:

Deck 1	Command Deck
Deck 2	Crew Quarters
Deck 3	Boat Deck

All decks are accessed from one main location; however secondary access can be gained to each deck fore and aft as shown on the deck plans. Each deck is internally compartmented to ensure full security and to allow for damage control if the boat's hull is compromised.

Deck 1 – Command Deck

The command deck holds the bridge which can be accessed via port and starboard passages, computers, briefing room and the Captain's office. A small fresher accessed directly from the bridge is also available for duty personnel. The bridge is also hardened against radiation. The Captain's office contains a desk with a workstation and bridge repeater. A fold out bunk is also provided, allowing it to function as a day cabin as necessary.

Further aft and accessed by the same passages either side of the bridge is the captain's stateroom, medical bay and ship's armory.

Forward of the bridge is and the main deck access foyer, ship's officers' quarters, the wardroom and galley. Each officer's stateroom contains a single bunk, fresher/washer unit, a desk with a workstation and a secure locker. There are extra storage compartments under the bed and along the wall. The bow end of this deck also has an airlock and a secondary deck access.

Deck 2 – Crew Quarters

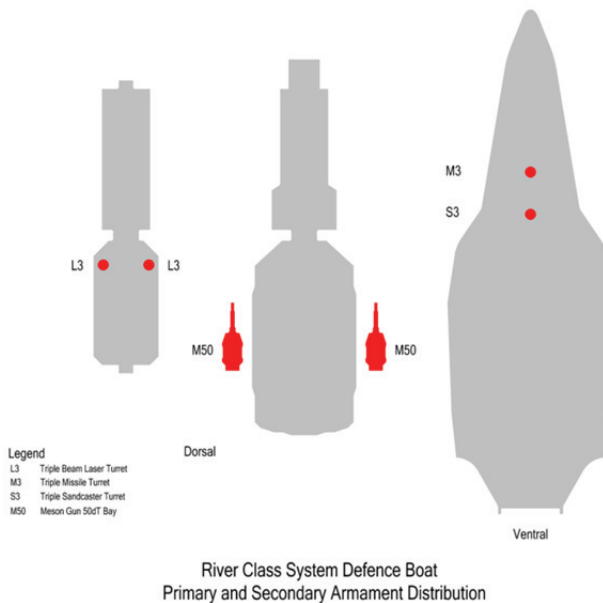
The bow section of this deck of the boat contains the sensor control and advanced military sensors while further aft are the crew's quarters and enlisted mess. Crew staterooms are double occupancy rated and contain a double bunk, fresher/washer unit, a desk with a workstation and two secured lockers. There are extra storage compartments under the bed and along the wall. Aft of the crew accommodation can be found the main deck access, engineering and the meson gun fire control. Right aft can be found the stern airlock.

Deck 3 – Boat Deck

Essentially the utility deck, the boat's missile and sandcaster magazine, cargo bay and main access security station can be found forward of the main airlocks. Aft of the airlocks can be found the ship's launch bay, flight control, repair drone bay and

Ships of Clement Sector 9: System Defense Boats

emergency low berth. The boats powerful maneuver drives take up fully half of the length of this deck, placed port and starboard, either side of the hangar deck and aft fuel tank.



Ship's Launch (utility craft)

The 20dT fast ship's launch is configured primarily for the utility role, boarding disabled or surrendered ships, transferring personnel and cargo, rescuing crew personnel from crippled or damaged ships or moving prize crews to captured ships. Interior cabin space has been configured to allow transport of up to ten passengers and space for 3dT of cargo, externally accessible via a large cargo door. A single fixed mount beam laser provides the boat with offensive/defensive capability as required. The beam laser can be removed from its mount by small craft maintenance crew to free up 1dT for two extra passengers. The boat is protected by crystaliron hull armor.

In extreme situations, the ship's launch can be used as a lifeboat. With extended operations duration of two weeks, this can be a critical though desperate consideration for crew in such situations.

Operational Duties

The *River*-class System Defence Boat's primary role has not changed after the formation of the Hub Federation. All four of the *River*-class boats are currently deployed as part of the defense of the Wellington System, a role they have undertaken for nearly forty years.

Typically deployed to the outer system, the Rivers undertake patrol and security duties, augmenting the system custom and excise vessels in inspecting incoming and outgoing civilian starships. Often one of these vessels will be assigned to merchant convoys when the need for such measures arises. It is rare that any pirate would attack such a convoy knowing that one of these powerful system defense boats is part of the escort.

Like almost all system defense boats the *River*-class can be transferred to other systems using a Zimm module, which allows the Hub Federation greater flexibility to deploy boats where needed. Even when the Zimm module is docked to the boat, a *River*-class can maintain her rated thrust of five gravities.

A *River*-class System Defence Boat is typically commanded by a Korvettenkapitän (Lieutenant Commander).

Phase 2 Refit Program

Over the last year the *River*-class in service with the Hub Federation Navy have been undertaking a refit and maintenance program in order to extend operational life and to upgrade ship systems to fleet standard. The bridge and associated systems will be upgraded to provide holographic controls and ship avatar software and all drives are to be overhauled or replaced. Small craft have been replaced with more modern models.

The phase 2 upgraded boats are now designated as the River B Class. As of 2342 only the *HFS Ganges* and *HFS Patters Stream* have completed the program.

Similarly, the New Perth Navy has undertaken refit of their sole *River*-class boat,

Ships of Clement Sector 9: System Defense Boats

upgrading to a similar standard of the River B refits, including replacing the ship's launch

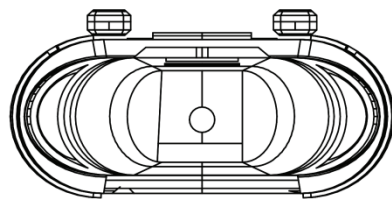
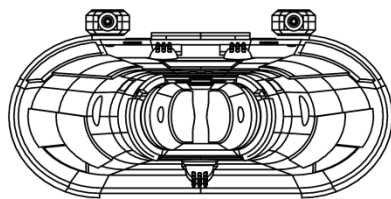
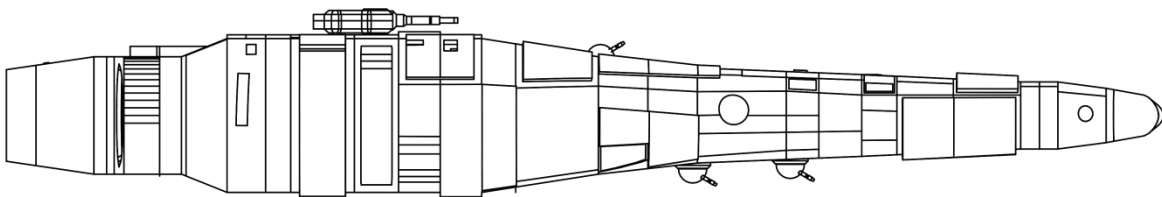
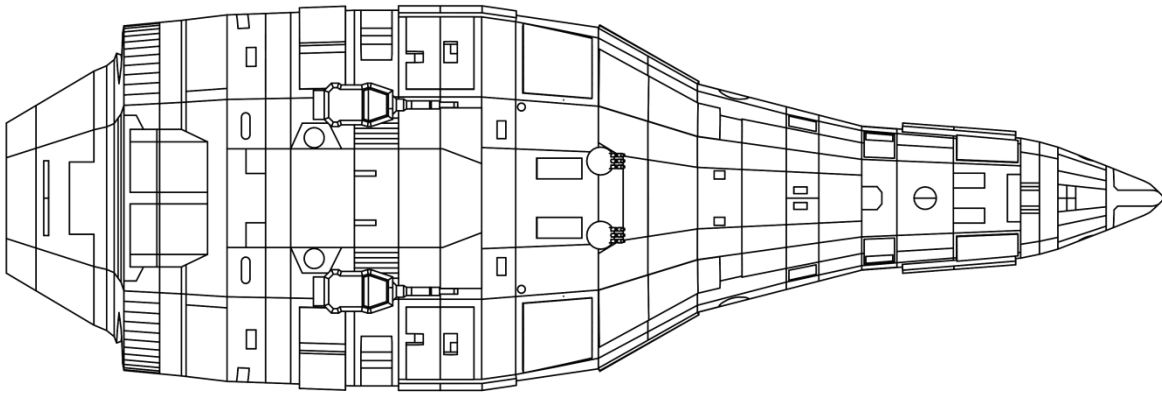
with the locally designed and built *Fire Ant*-class fast launch.

River Class System Defence Boats constructed as of 2342

Boat	RN (HFN) Pennant Number	RN (HFN) Status	Location
<i>HMS Thames</i>	DB1	In commission	Earth Sector
<i>HFS Medway</i>	DB2 (DB-2)	In commission	Clement Sector
<i>HFS Patters Stream</i>	DB3 (DB-3)	In commission	Clement Sector
<i>HFS Severn</i>	DB4 (DB-4)	In commission	Clement Sector
<i>HFS Ganges</i>	DB5 (DB-5)	In commission	Clement Sector
<i>HMS Rhine</i>	DB6	In commission	Earth Sector
<i>HMS Gillcambon Beck</i>	DB7	In commission	Earth Sector
<i>HMS Dunedin River</i>	DB8	In commission	Earth Sector

Boat	RAN Pennant Number	RAN Status	Location
<i>RAS Murumbidgee</i>	DB101	In commission	Earth Sector
<i>RAS Southern River</i>	DB102	In commission	Clement Sector
<i>RAS Canning River</i>	DB103	In commission	Earth Sector

Ships of Clement Sector 9: System Defense Boats



Ships of Clement Sector 9: System Defense Boats

River-class System Defence Boat

Type			Tonnes	Price (MCr)
Hull	550 dT	Hull 11	550	48.0
	Streamlined	Structure 11		
	Reinforced Structure	2 points	28	10.8
Armor	Crystaliron x3	12 points	83	29.0
Zimm Drive				
Maneuver Drive	Type S	Thrust 5	33	68.0
Power Plant	Type S	Rating 5	52	136.0
Bridge	Standard (Hardened)		20	3.8
Computer	3fib x2	Rating 15 x2 = 30		6.0
Electronics	Advanced Sensors	DM+1	3	2.0
Weapons	Hardpoints 1-2	Triple turret beam laser	2	6.0
	Hardpoints 3	Triple turret missile rack	1	3.8
	Hardpoints 4	Triple turret sandcaster	1	1.8
	Hardpoints 5-6	Meson Bay (50 tonnes)	100	200.0
Fuel		5 weeks operation	85	
Cargo	15 tonnes		15	
Crew	26 (7 officers, 19 enlisted)	20 staterooms. Captain has private office	80	10
Extras	Armory		2	0.5
	Briefing Room		4	0.5
	Hangar		22	4.0
		Fast Launch		14.0
	Fuel Scoops	Included		
	Fuel Processor x2	40 tonnes per day	2	0.1
	Probe Drones (5)		1	0.5
	Repair Drones		6	1.2
	Medical Bay	Two Beds	4	1.0
	Emergency Low Berths	1	1	0.1
	Escape Pods	1 per stateroom	13	1.3
	Ammunition (magazine)			
	Missiles	120	10	
		66x Basic		
		12x Nuclear		
		42xSmart		
	Sandcaster Canisters	120	10	
Software	Intellect			10.0
	Evade/1			10.0
	Fire Control/2			10.0
	Library			
	Maneuver			
Maintenance Cost (Monthly)				0.047
Life Support Cost (Monthly)				0.048
Total Tonnage and Cost			550	577.8

Ships of Clement Sector 9: System Defense Boats



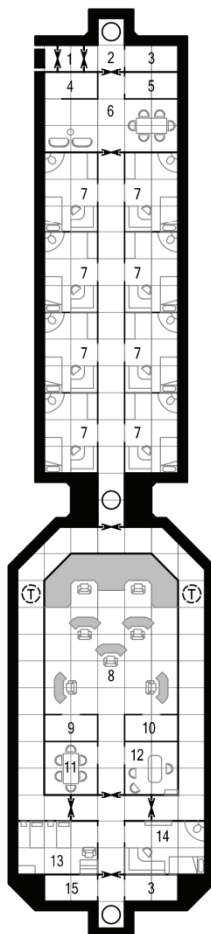
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Ships of Clement Sector 9: System Defense Boats

River Class System Defense Boat

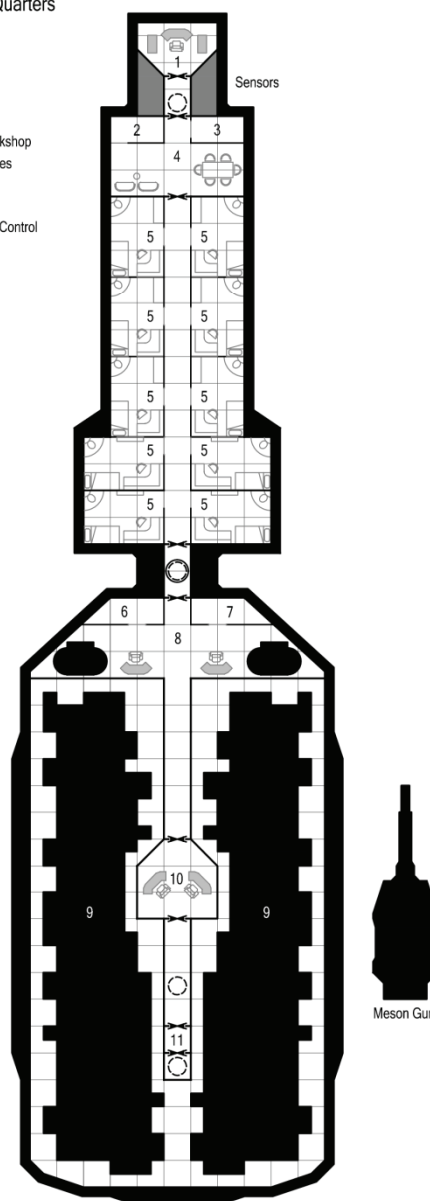
Deck 1 - Command Deck

1. Airlock
2. Circulation Space
3. Stores
4. Galley
5. Galley Stores
6. Wardroom
7. Officer's Quarters
8. Bridge
9. Computer
10. Bridge Fresher
11. Briefing Room
12. Captain's Office
13. Medical Bay
14. Captain's Cabin
15. Armoury



Deck 2 - Crew Quarters

1. Sensor Control
2. Galley
3. Stores
4. Enlisted Mess
5. Crew Quarters
6. Engineering Workshop
7. Engineering Stores
8. Engineering
9. Meson Gun Bay
10. Meson Gun Fire Control
11. Airlock



Deck Plan Symbols

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0 1.5 6
scale in metres

Ships of Clement Sector 9: System Defense Boats

River Class System Defense Boat

Deck 3 - Boat Deck

1. Cargo Bay
2. Magazine
3. Repair Drone Bay
4. Emergency Low berths
5. Security Station
6. Flight Control
7. Airlock

Deck Plan Symbols

⊙ Manual Hatch (overhead)

⊙ Manual Hatch (deck)

○ Iris Valve (overhead)

○ Iris Valve (deck)

⊕ Turret Access (overhead)

⊕ Turret Access (deck)



0 1.5 6
scale in metres

✂ Iris Valve

✂ Manual Hatch

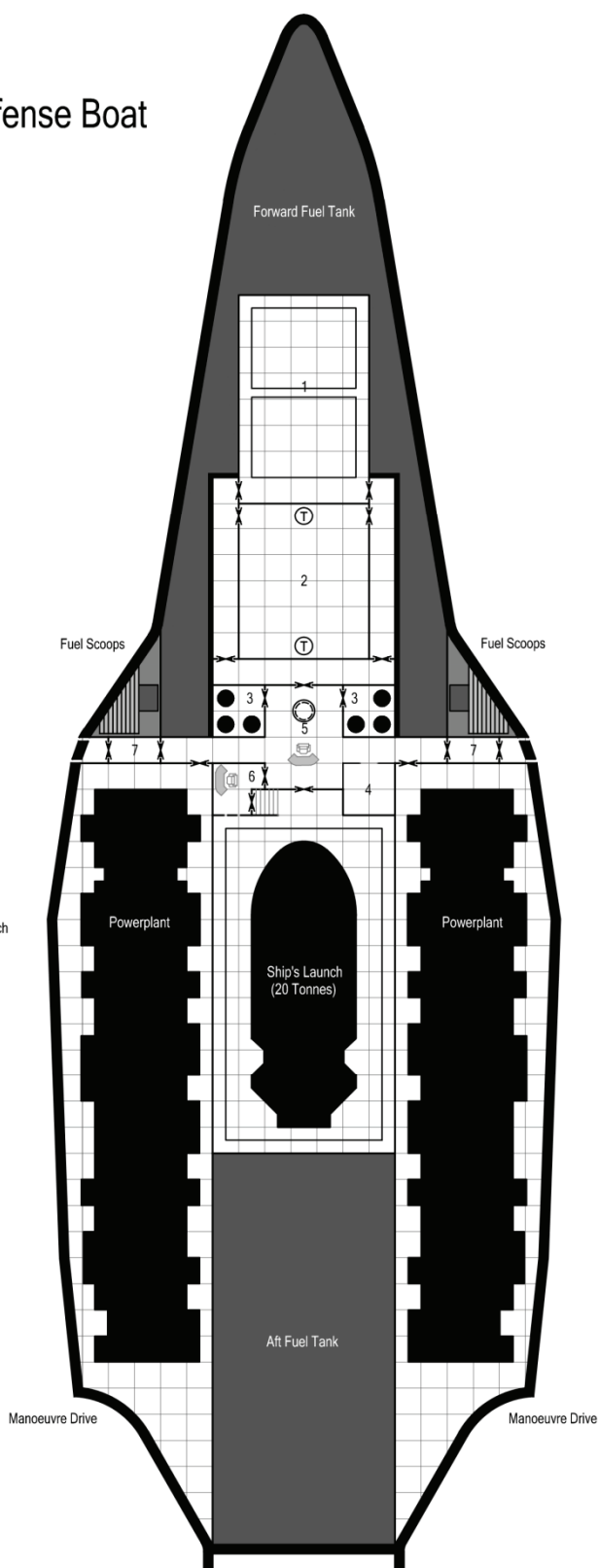
⊞ Workstation

— Sliding Door

— Interior Wall

— Bulkhead

— Maintenance Hatch



Ships of Clement Sector 9: System Defense Boats

Raptor-class Sloop

"The Raptors are fine ships that do everything we throw at them and do it well! No one can ever deny the British design and build good ships."

Flotillenadmiral Annika Aeschelman, Hub Federation Navy 2341 CE

Background and Development

Designed to be used in a variety of roles from fleet escort to anti-piracy duties the *Raptor*-class sloop has been in service with the Royal Navy, Republic of Perth Navy and since the Conduit Collapse, the Hub Federation Navy for over forty years.

During the early 2270's, the Admiralty looked at differing options for a lighter warship design, smaller than a destroyer to undertake a wider variety of roles and take the pressure off the fleet's destroyers. Several designs were considered with displacement tonnages ranging from one thousand displacement tonne frigate sized vessels like the RAN's *Perth*-class to smaller four hundred displacement tonne close escort sized vessels. Eventually, the Admiralty chose a five hundred and fifty displacement tonne design that provided the best balance for the multiple roles it was to undertake.

Construction of the new sloop class was commenced in 2278 and in 2279 *HMS Kestrel* was commissioned. By the time of the Collapse, there were twelve *Raptor*-class sloops in service with the Royal Navy and three in the Republic of Australia Navy.

The *Raptor*-class is well liked by their crews and still perform the same roles for the Hub Federation Navy as they did when in service with the Royal Navy pre-Collapse.

Specifications

The *Raptor*-class is a 550dT streamlined hull configuration design with a crystaliron hull and internal reinforced

structure providing the sloop with good protection for its role.

The sloop's dorsal mounted main armament consists of two particle beam barbettes. Secondary armament consists of two dorsal mounted triple beam laser turrets and ventrally mounted triple missile and sandcaster turrets. Total magazine capacity is one hundred and twenty missiles and one hundred and twenty sandcaster canisters in a single 20dT magazine adjacent to both ventral turrets.

The designers continued the common arrangement of two linked model3fib computers used in most national navy ships in order to provide adequate processing power and redundancy to all ships core systems.

Fuel tankage allows for a single transition of two parsecs and an operational duration of three weeks, with fuel scoops and on-board fuel processors allowing for refining of fuel to fill empty tanks to full tanks in around three days.

Internally, the system defense boat is separated into three distinct decks:

Deck 1	Command Deck
Deck 2	Crew Quarters
Deck 3	Boat Deck

All decks are accessed from one main location; however secondary access can be gained to each deck fore and aft as shown on the deck plans. Each deck is internally compartmented to ensure full security and to allow for damage control if the ship's hull is compromised.

Ships of Clement Sector 9: System Defense Boats

Raptor Class Sloops in service in Clement Sector as of 2342

Sloop	HFN Pennant Number	HFN Status
<i>HFS Kite</i>	SL-1	In commission
<i>HFS Kitesnake</i>	SL-2	In commission
<i>HFS Kestrel</i>	SL-3	In commission
<i>HFS Raptorcat</i>	SL-4	In commission
<i>HFS Peregrine</i>	SL-5	In commission
<i>HFS Dillinger</i>	SL-6	In commission

Sloop	RAN Pennant Number	RAN Status
<i>RAS Wedgetail</i>	SL2	In commission

Deck 1 – Command Deck

The command deck holds the bridge which can be accessed via port and starboard passages, computers, briefing room and the Captain's office. A small fresher accessed directly from the bridge is also available for duty personnel. The bridge is also hardened against radiation. The Captain's office contains a desk with a workstation and bridge repeater. A fold out bunk is also provided, allowing it to function as a day cabin as necessary.

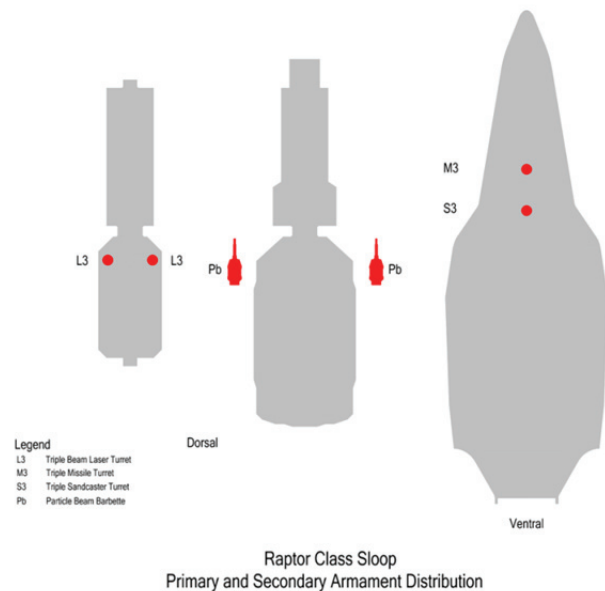
Further aft and accessed by the same passages either side of the bridge is the captain's stateroom, medical bay and ship's armory.

Forward of the bridge is and the main deck access foyer, ship's officers' quarters, the wardroom and galley. Each officer's stateroom contains a single bunk, fresher/washer unit, a desk with a workstation and a secure locker. There are extra storage compartments under the bed and along the wall. The bow end of this deck also has an airlock and a secondary deck access.

Deck 2 – Crew Quarters

The bow section of this deck of the sloop contains the sensor control and advanced military sensors while further aft are the crew's quarters and enlisted mess. Crew staterooms are double occupancy rated and contain a double bunk, fresher/washer

unit, a desk with a workstation and two secured lockers. There are extra storage compartments under the bed and along the wall. Aft of the crew accommodation can be found the main deck access, engineering, the particle beam barbettes fire control and the sloop's Zimm drive. Right aft can be found the stern airlock.



Deck 3 – Boat Deck

Essentially the utility deck, the sloop's missile and sandcaster magazine, cargo bay and main access security station can be found forward of the main airlocks. Aft of the

Ships of Clement Sector 9: System Defense Boats

airlocks can be found the ship's launch bay, flight control, repair drone bay and emergency low berth. The sloop's maneuver drives take up fully half of the length of this deck, placed port and starboard, either side of the hangar deck and aft fuel tank.

Ship's Launch (utility craft)

The 20dT fast ship's launch is configured primarily for the utility role, boarding disabled or surrendered ships, transferring personnel and cargo, rescuing crew personnel from crippled or damaged ships or moving prize crews to captured ships. Interior cabin space has been configured to allow transport of up to ten passengers and space for 3dT of cargo, externally accessible via a large cargo door. A single fixed mount beam laser provides the boat with offensive/defensive capability as required. The beam laser can be removed from its mount by small craft maintenance crew to free up 1dT for two extra passengers. The boat is protected by crystaliron hull armor.

In extreme situations, the ship's launch can be used as a lifeboat. With

extended operations duration of two weeks, this can be a critical though desperate consideration for crew in such situations.

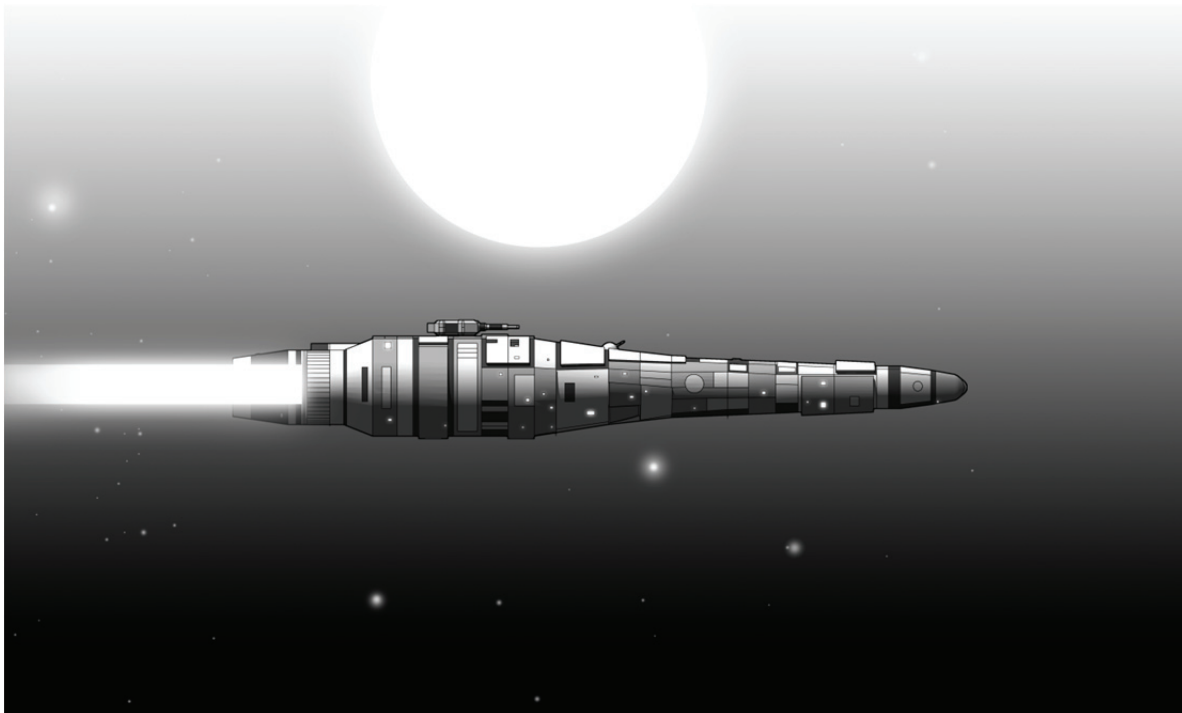
Operational Duties

Raptor-class sloops are designed to undertake a variety of roles ranging from escort to independent anti-piracy operations. With the introduction of the *Kiviat*-class corvettes into service however the *Raptor*-class primary anti-piracy role has reduced as the *Kiviat*-class increasingly takes over that duty. Regardless, they are amongst the busiest units in the Hub Federation and are a familiar sight to merchant convoys transiting through systems with high pirate activity.

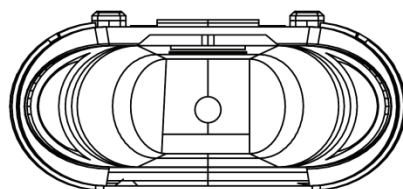
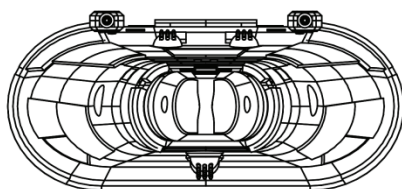
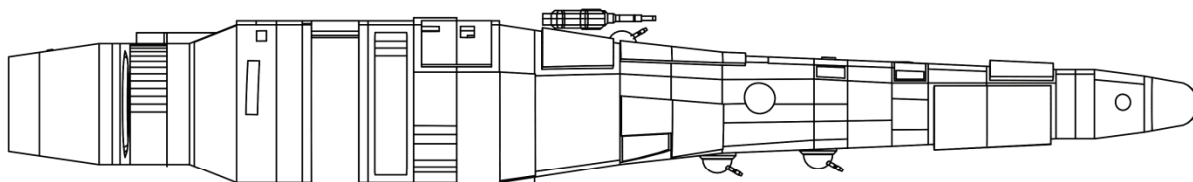
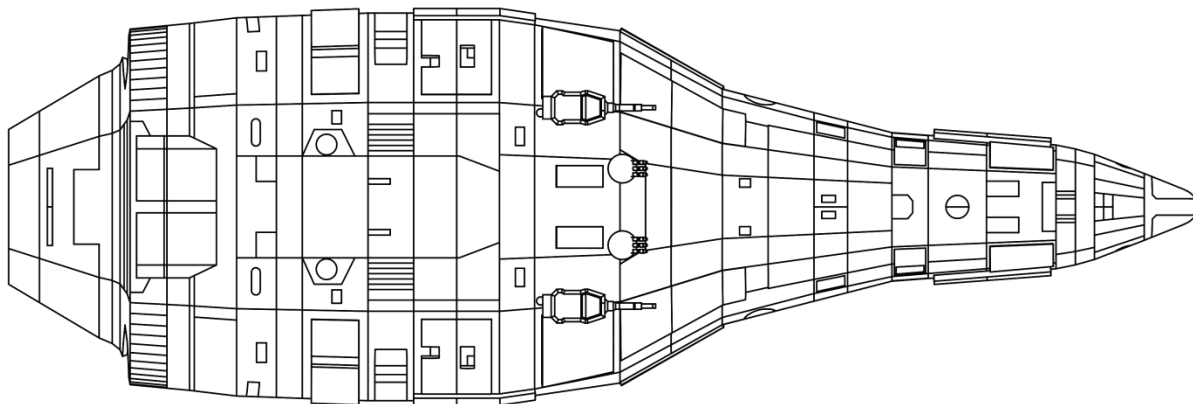
A *Raptor*-class Sloop is typically commanded by a Korvettenkapitän (Lieutenant Commander).

Phase 2 Refit Program

As yet, no *Raptor*-class has undergone phase 2 refit, though the first sloop, *HFS Raptorcat*, will begin the refit process once its current commission is completed in 2343.



Ships of Clement Sector 9: System Defense Boats

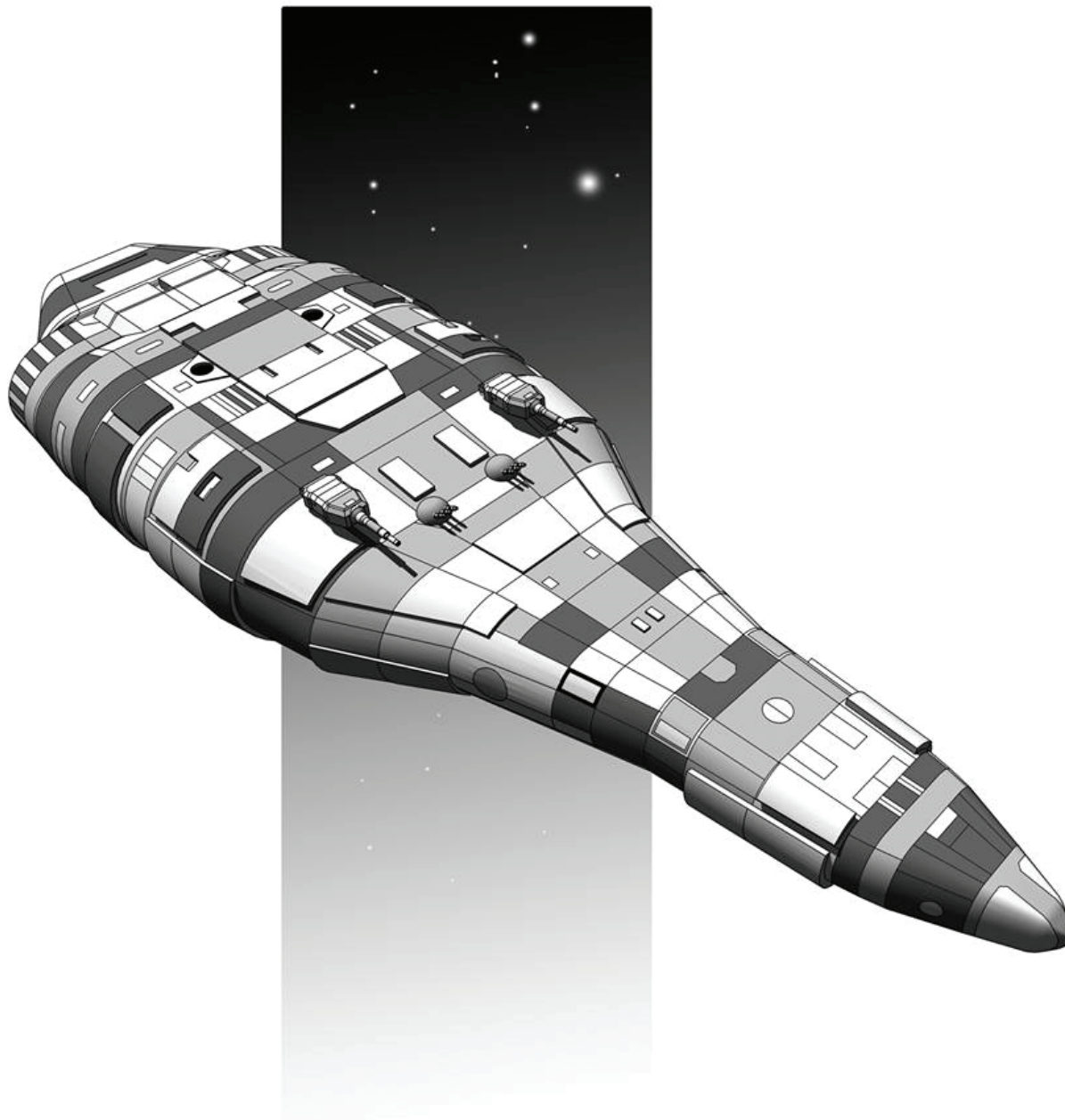


Ships of Clement Sector 9: System Defense Boats

Raptor-class Sloop

Type			Tonnes	Price (MCr)
Hull	550 dT	Hull 11	550	48.0
	Streamlined	Structure 11		
	Reinforced Structure	2 points	28	10.8
Armor	Crystaliron x2	8 points	55	9.6
Zimm Drive	Type F	2 parsec range	35	60.0
Maneuver Drive	Type P	Thrust 4	27	56.0
Power Plant	Type P	Rating 5	52	136.0
Bridge	Standard (Hardened)		20	3.8
Computer	3fib x2	Rating 15		6.0
Electronics	Advanced Sensors	DM+1	3	0.2
Weapons	Hardpoints 1-2	Triple turret beam laser	2	6.0
	Hardpoints 3	Triple turret missile rack	1	3.8
	Hardpoints 4	Triple turret sandcaster	1	1.8
	Hardpoints 5-6	Particle Accelerator Barbettes	10	16.0
Fuel		1x 2 parsec jump and 3 weeks operation	158	
Cargo	20 tonnes		20	
Crew	26 (7 officers, 19 enlisted)	20 staterooms. Captain has private office	80	10
Extras	Armory		2	0.5
	Briefing Room		4	0.5
	Hangar		30	13.0
		Launch		14.0
	Fuel Scoops	Included		
	Fuel Processor x3		3	0.2
	Probe Drones (5)		1	0.5
	Repair Drones		6	1.2
	Medical Bay	Two Beds	4	1.0
	Emergency Low Berths	1	1	0.1
	Escape Pods	1 per stateroom	13	1.3
	Ammunition (magazine)			
	Missiles	120	10	
		66x Basic		
		12x Nuclear		
		42xSmart		
	Sandcaster Canisters	120	10	
Software	Intellect			1.0
	Evade/1			1.0
	Fire Control/4			8.0
	Library			
	Maneuver			
	Zimm Control			0.2
Maintenance Cost (Monthly)				0.035
Life Support Cost (Monthly)				0.032
Total Tonnage and Cost			548	409.9

Ships of Clement Sector 9: System Defense Boats



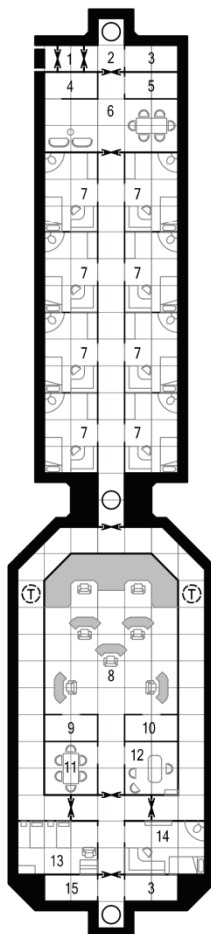
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Ships of Clement Sector 9: System Defense Boats

Raptor Class Sloop

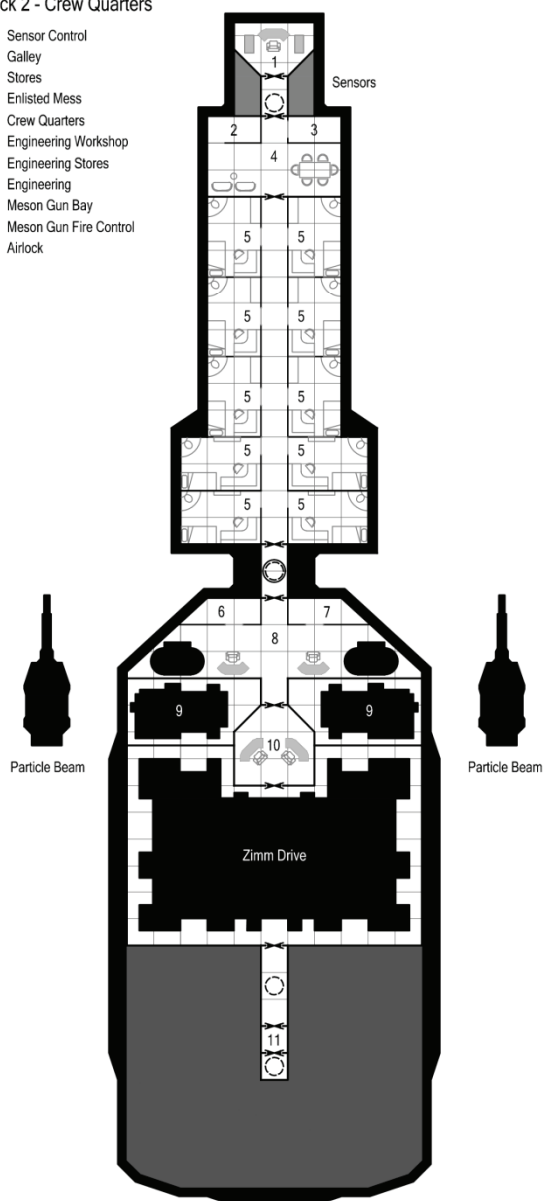
Deck 1 - Command Deck

1. Airlock
2. Circulation Space
3. Stores
4. Galley
5. Galley Stores
6. Wardroom
7. Officer's Quarters
8. Bridge
9. Computer
10. Bridge Fresher
11. Briefing Room
12. Captain's Office
13. Medical Bay
14. Captain's Cabin
15. Armoury



Deck 2 - Crew Quarters

1. Sensor Control
2. Galley
3. Stores
4. Enlisted Mess
5. Crew Quarters
6. Engineering Workshop
7. Engineering Stores
8. Engineering
9. Meson Gun Bay
10. Meson Gun Fire Control
11. Airlock



Deck Plan Symbols

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0 1.5 6
scale in metres

Raptor Class Sloop

Deck 3 - Boat Deck

1. Cargo Bay
2. Magazine
3. Repair Drone Bay
4. Emergency Low berths
5. Security Station
6. Flight Control
7. Airlock

Deck Plan Symbols

Manual Hatch (overhead)

Manual Hatch (deck)

Iris Valve (overhead)

Iris Valve (deck)

Turret Access (overhead)

Turret Access (deck)



0 1.5 6
scale in metres

Iris Valve

Manual Hatch

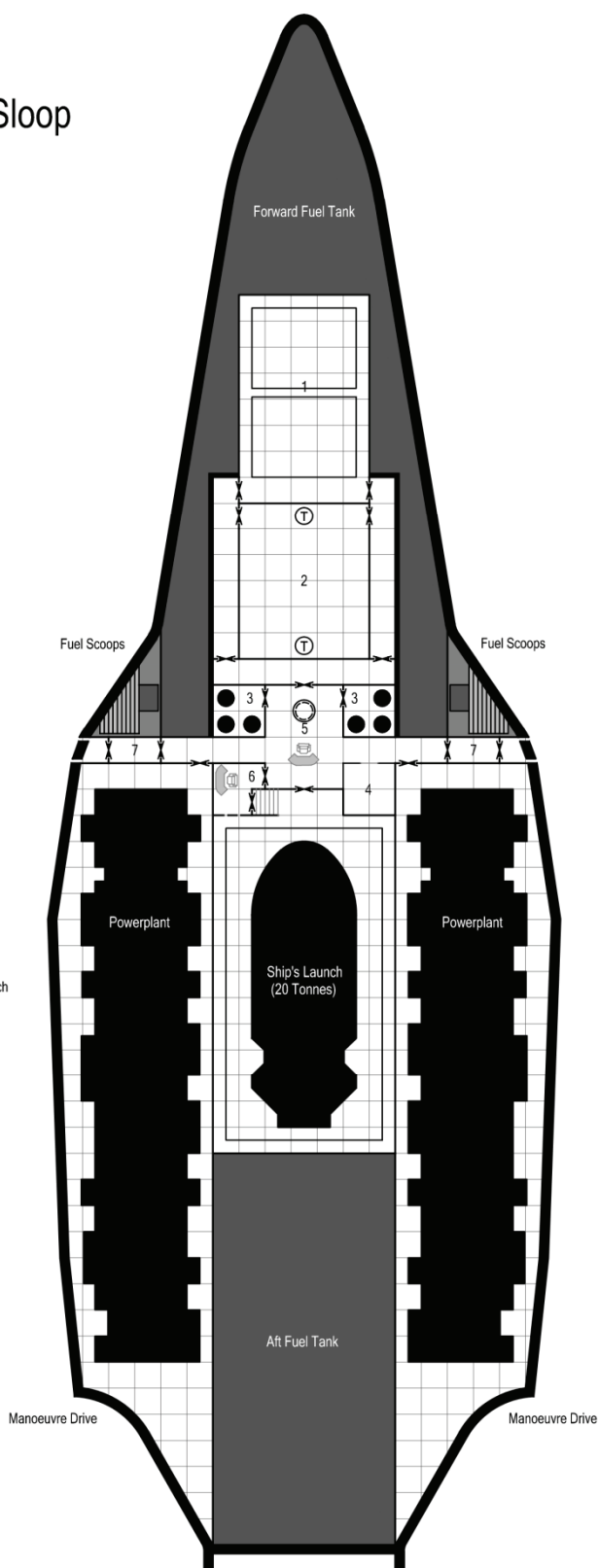
Workstation

Sliding Door

Interior Wall

Bulkhead

Maintenance Hatch



Ships of Clement Sector 9: System Defense Boats

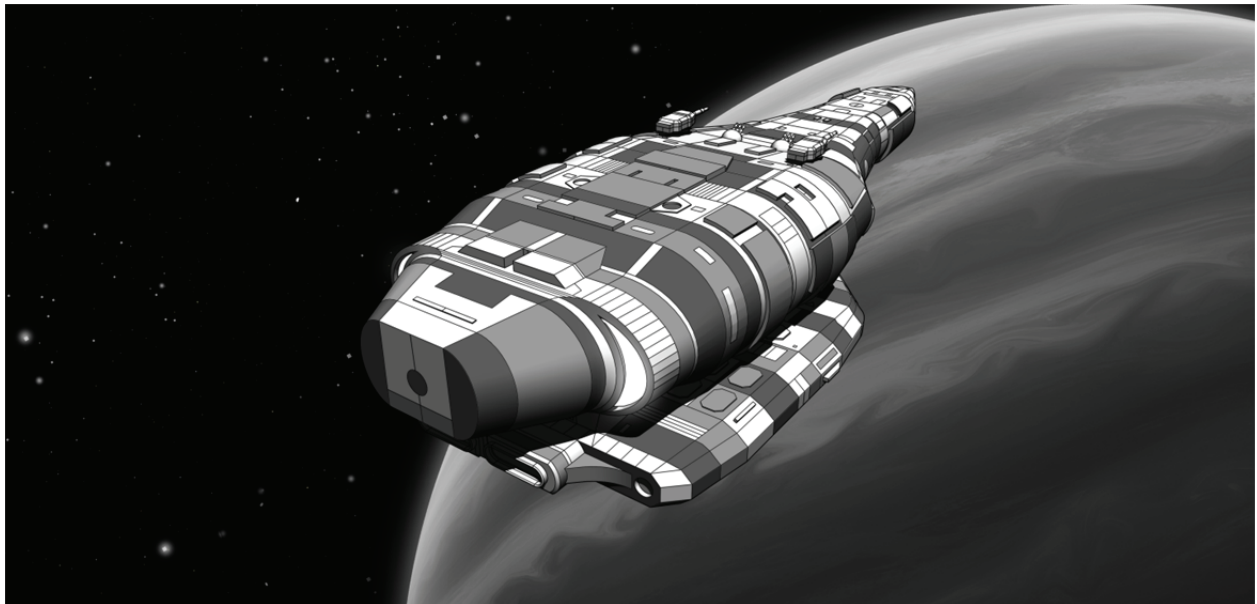
Zimm Modules

Because system defense boats do not have Zimm drives, a means was devised to enable them to be transferred to other systems using a Zimm module, which allows greater flexibility to deploy boats where needed. This was particularly important for nations with multiple colonies in Earth Sector and later, the multi system Hub Federation in Clement Sector. Cascadia has a Zimm module available for her Type 2 system security cutters as well.

A Zimm module needs to be designed to suit the system defense boat that it is to

operate with. Typically, they are little more than fuel tank, power plant and Zimm drive and only have a low thrust maneuver drive so to be able to dock, detach and station keep. The module crew (typically 2) can freely access the SDB they are docked to.

When deploying to another system, the module will remain with the boat until it can refuel at the nearest gas giant or convenient source of water and then leave the system to return to retrieve the boat after a mission ends.

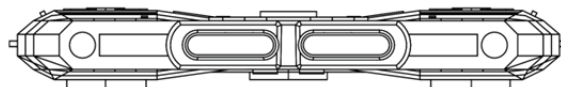
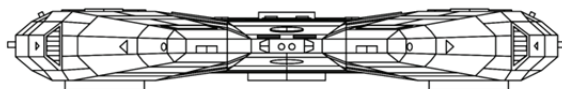
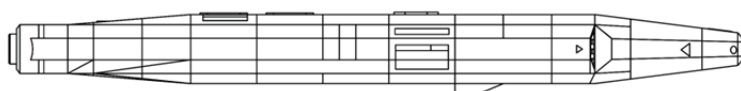
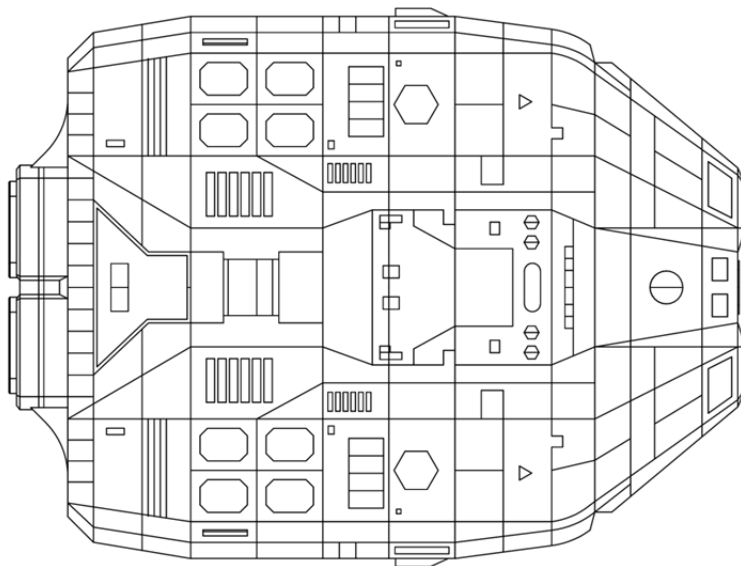


Ships of Clement Sector 9: System Defense Boats

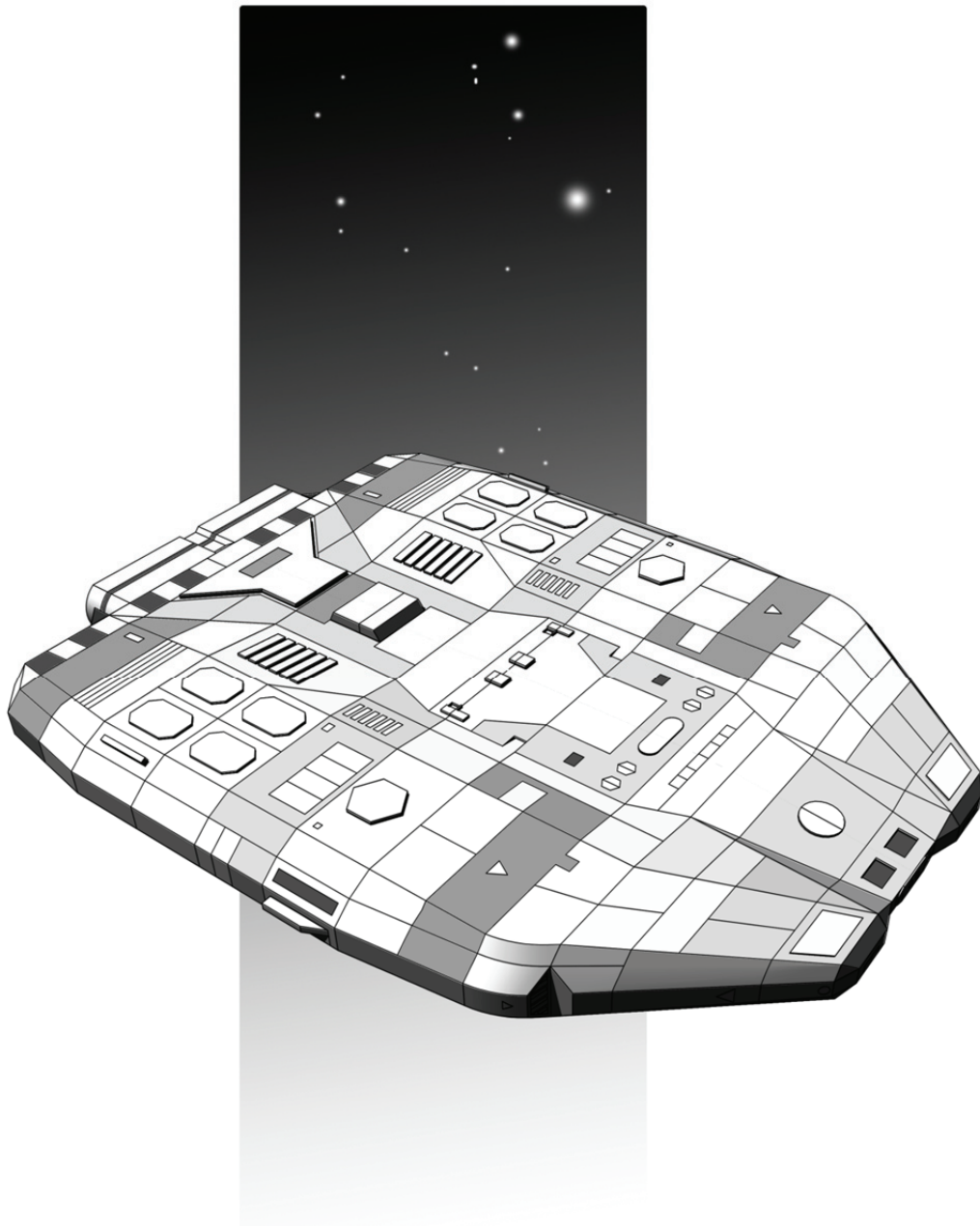
River-class System Defence Boat (Zimm Module Equipped)

Type			Tonnes	Price (MCr)
Hull	300 dT	Hull 6	300	12.0
	Standard	Structure 6		
Armour	None			
Zimm Drive	Type H	2 parsec range	45	80.0
Manoeuvre Drive	Type E	Thrust 1 (only for module)	9	20.0
Power Plant	Type H	Rating 2	25	64.0
Bridge	Standard		10	1.5
Computer	Model 2	Rating 10		0.2
Electronics	Standard	DM -4		
Weapons	Hardpoints 1-3	None		
Fuel		1x 2 parsec jump and 2 weeks operation	186	
Cargo	None			
Crew	2			
Extras	Docking Clamps		20	4
	Fuel Scoops			1.0
	Fuel Processor x1	20 tonnes per day	1	0.5
	Stateroom	1x	4	0.5
Software	Library			1.0
	Manoeuvre			
	Zimm Control			0.2
Total Tonnage and Cost			300	184.9

Ships of Clement Sector 9: System Defense Boats



Ships of Clement Sector 9: System Defense Boats



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Ships of Clement Sector 9: System Defense Boats

Zimm Module River Class System Defence Boat

Deck 1 - Main Deck

1. Main access and Airlock
2. Bridge
3. Computer Access
4. Ship's Locker
5. Crew Stateroom
6. Common Room and Galley
7. Equipment Locker
8. Stores
9. Engineering
10. Fuel Processor
11. Docking Clamps

Deck Plan Symbols

Manual Hatch (overhead)

Manual Hatch (deck)

Iris Valve (overhead)

Iris Valve (deck)

Turret Access (overhead)

Turret Access (deck)



0 1.5 6
scale in metres

Iris Valve

Manual Hatch

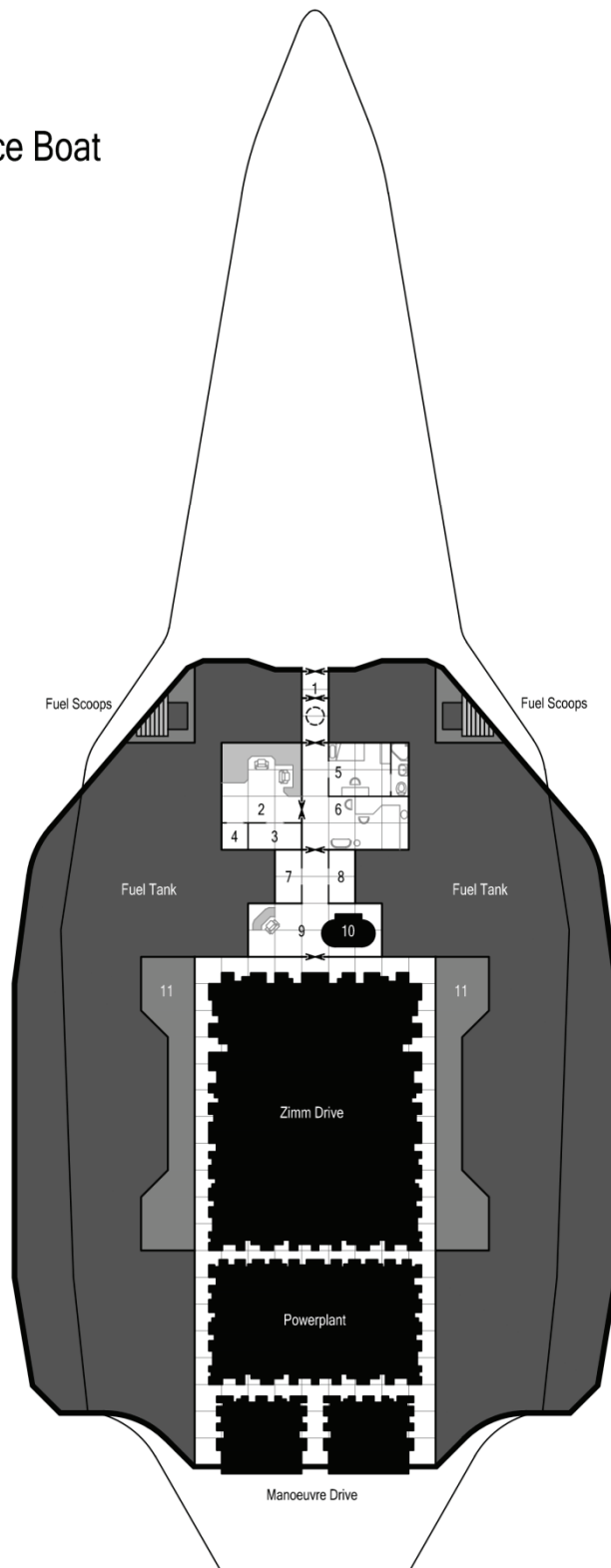
Workstation

Sliding Door

Interior Wall

Bulkhead

Maintenance Hatch

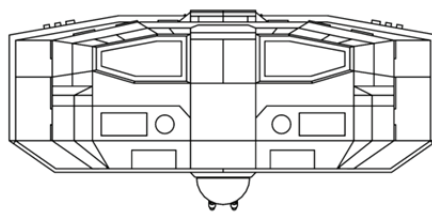
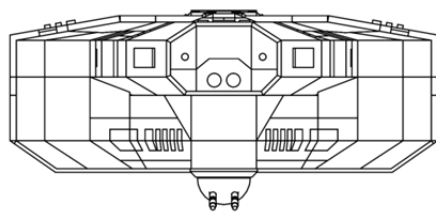
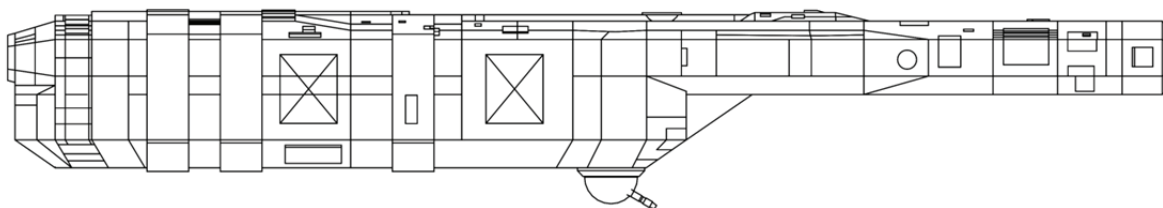
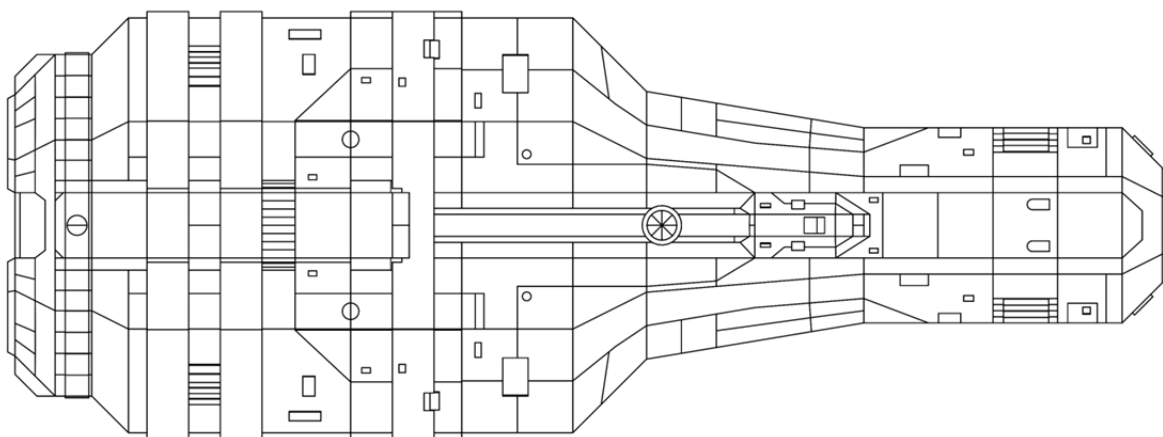


Ships of Clement Sector 9: System Defense Boats

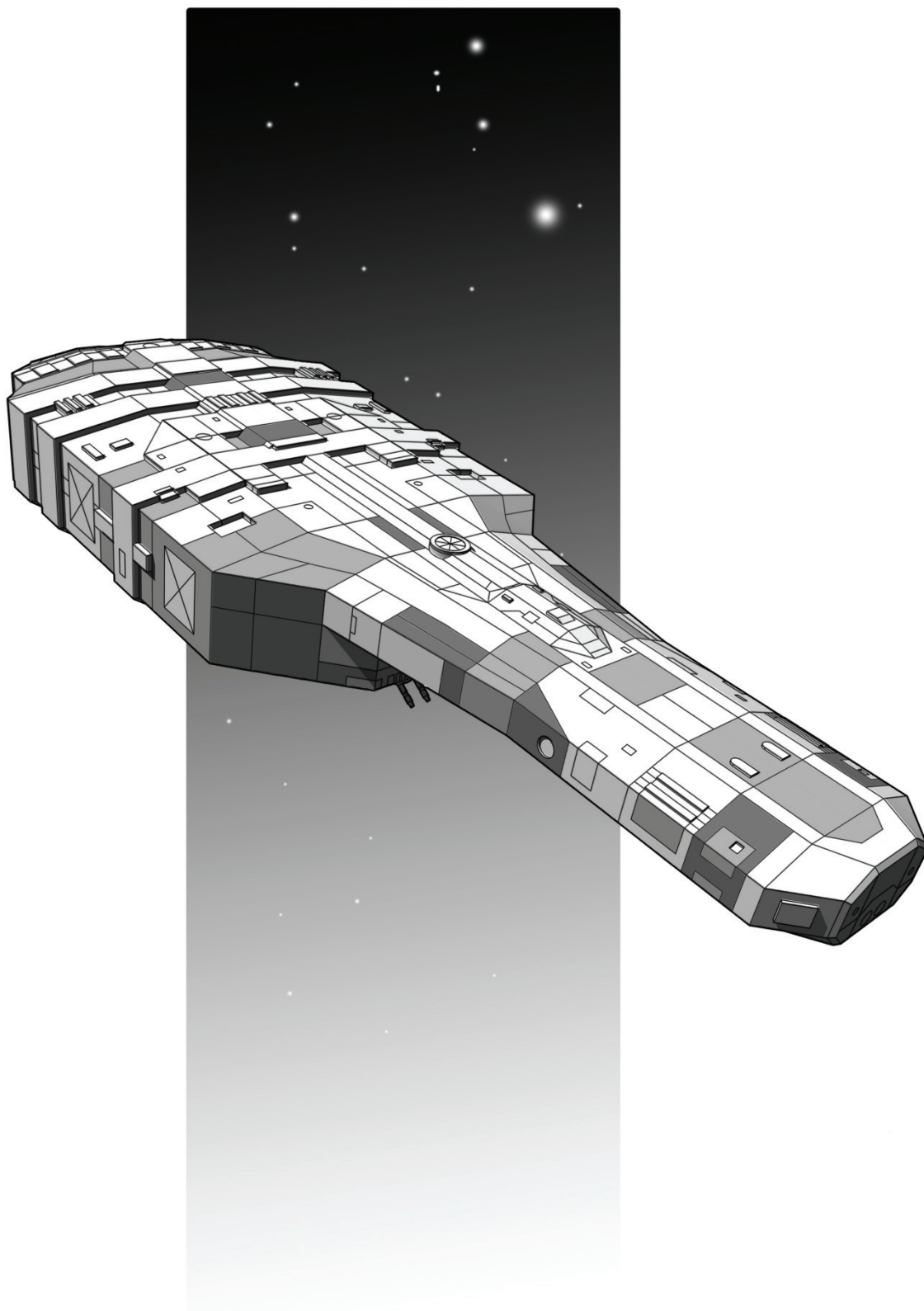
Antelope-class System Defence Boat (Zimm Module Equipped)

Type			Tonnes	Price (MCr)
Hull	200 dT	Hull 4	200	8.0
	Standard	Structure 4		
Armour	Crystaliron	2 points	5	1.6
Zimm Drive	Type F	2 parsec range	35	60.0
Manoeuvre Drive	Type B	Thrust 2 (only for module)	3	8.0
Power Plant	Type F	Rating 2	19	48.0
Bridge	Standard		10	1.5
Computer	Model 2	Rating 10		0.2
Electronics	Standard	DM -4		
Weapons	Hardpoint 1	Dual turret beam laser	1	2.0
	Hardpoint 2	None		
Fuel		1x 2 parsec jump and 2 weeks operation	112	
Cargo	None			
Crew	2			
Extras	Docking Clamps		10	2
	Fuel Scoops			1.0
	Fuel Processor x1	20 tonnes per day	1	0.5
	Stateroom	1x	4	0.5
Software	Library			1.0
	Manoeuvre			
	Zimm Control			0.2
	Fire Control/1			2.0
Total Tonnage and Cost			200	134.5

Ships of Clement Sector 9: System Defense Boats



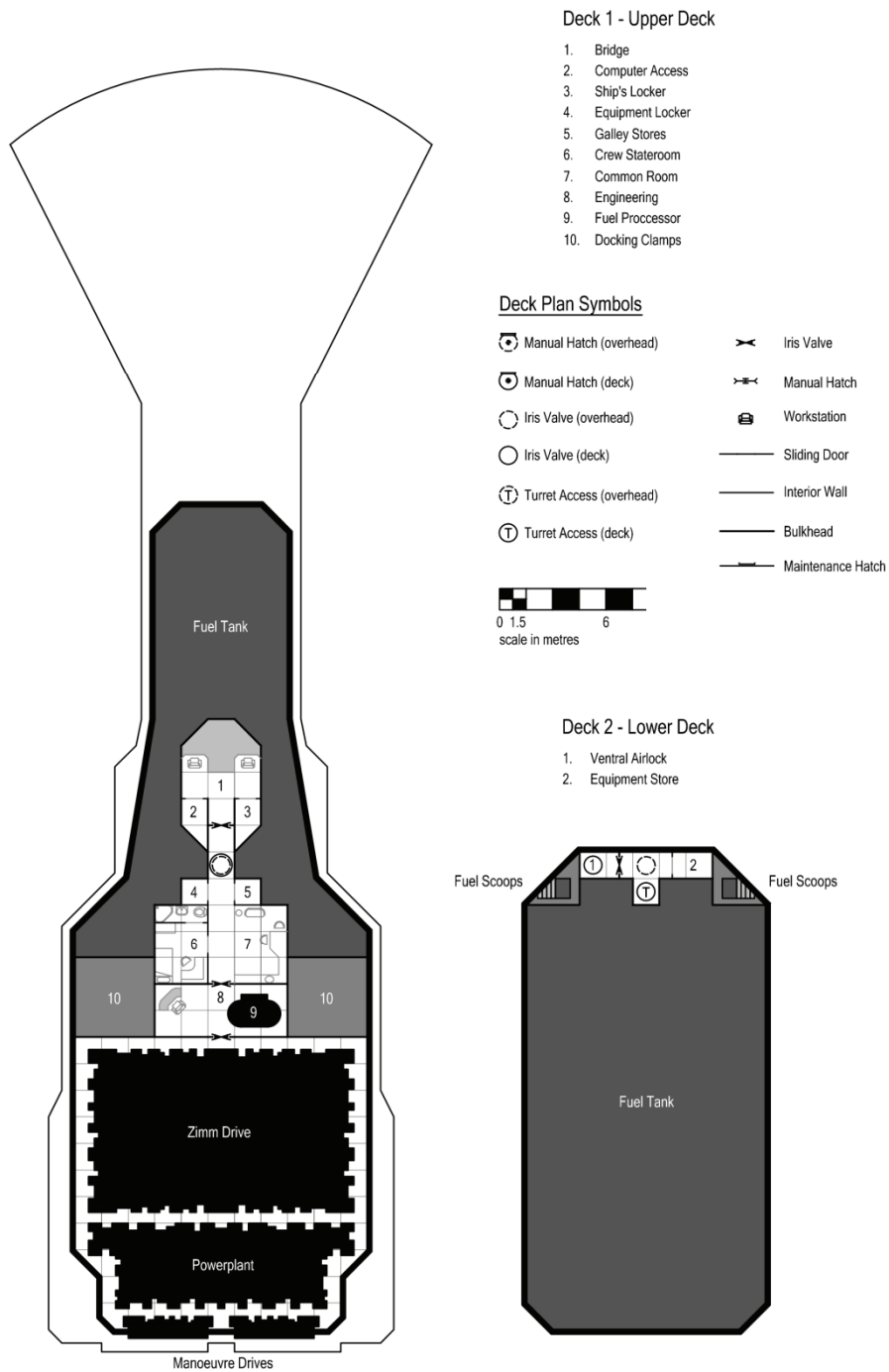
Ships of Clement Sector 9: System Defense Boats



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Ships of Clement Sector 9: System Defense Boats

Zimm Module Antelope Class System Defence Boat

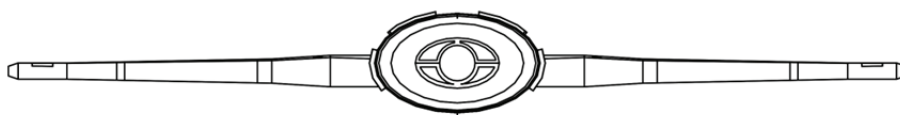
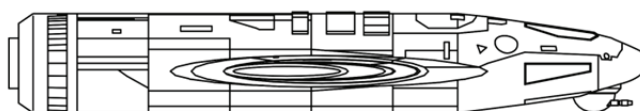
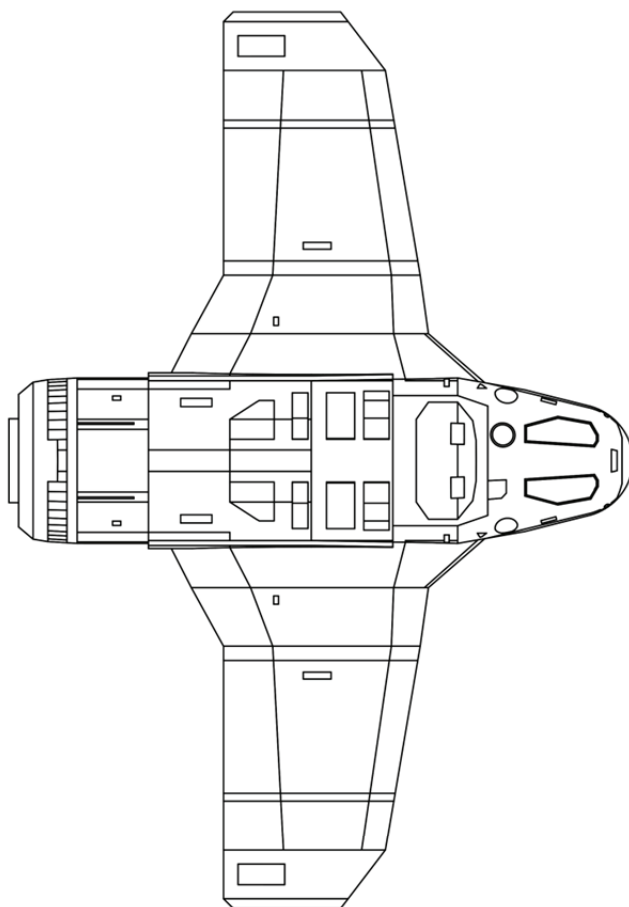


Ships of Clement Sector 9: System Defense Boats

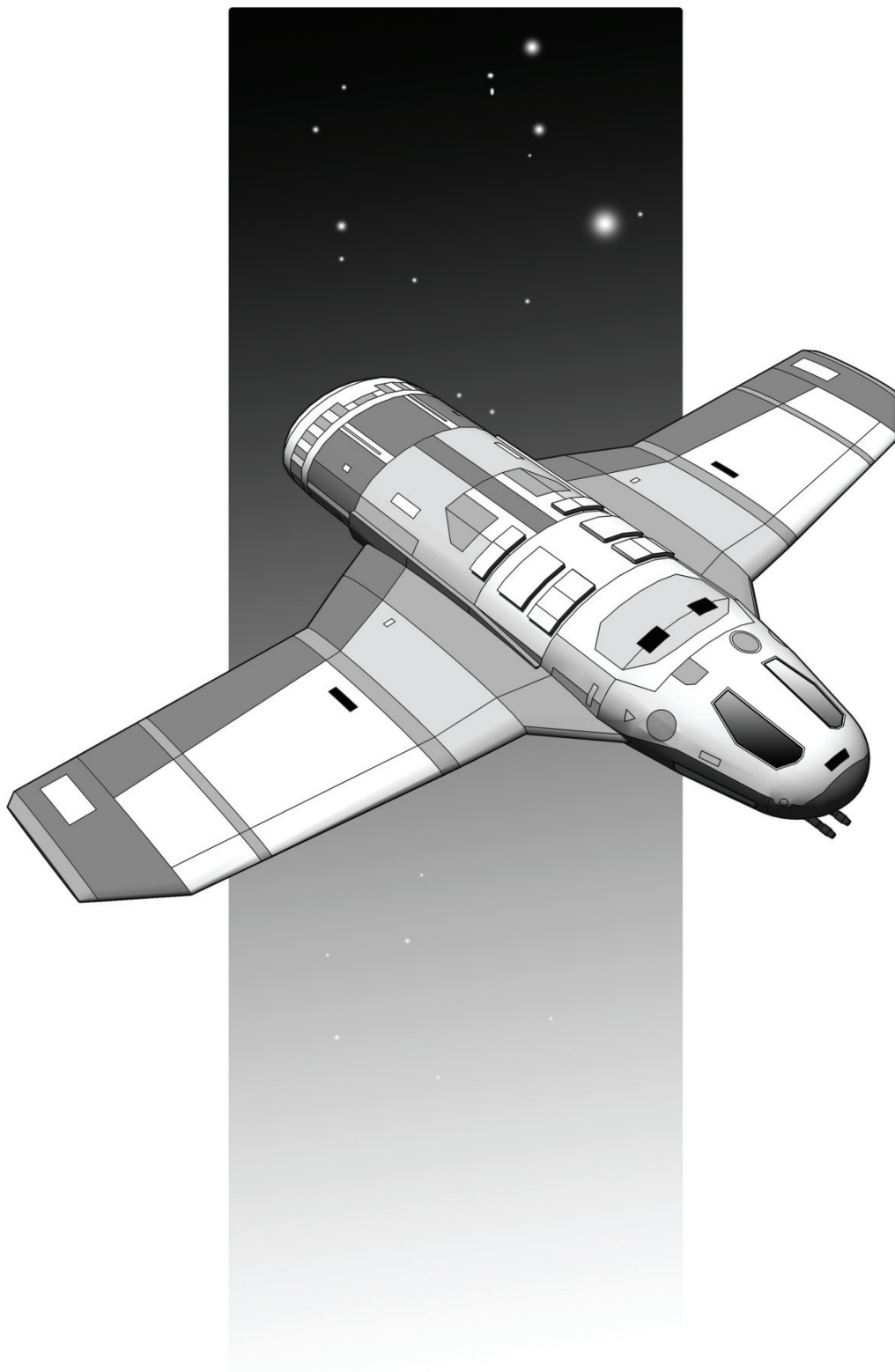
Type 2 System Security Cutter (Zimm Module Equipped)

Type			Tonnes	Price (MCr)
Hull	150 dT	Hull 3	150	8.0
	Standard	Structure 3		
Armour	Crystaliron	2 points	5	1.6
Zimm Drive	Type D	2 parsec range	25	40.0
Manoeuvre Drive	Type A	Thrust 1 (only for module)	2	4.0
Power Plant	Type D	Rating 2	13	32.0
Bridge	Standard		10	1.5
Computer	Model 2	Rating 10		0.2
Electronics	Standard	DM -4		
Weapons	Hardpoint 1	Dual turret beam laser and sandcaster	1	1.3
Ammunition	Sandcaster Canisters	12	1	
Fuel		1x 2 parsec jump and 2 weeks operation	78	
Cargo	None			
Crew	2			
Extras	Docking Clamps		10	2
	Fuel Scoops			1.0
	Fuel Processor x1	20 tonnes per day	1	0.5
	Stateroom	1x	4	0.5
Software	Library			1.0
	Manoeuvre			
	Zimm Control			0.2
	Fire Control/1			2.0
Total Tonnage and Cost			150	95.7

Ships of Clement Sector 9: System Defense Boats



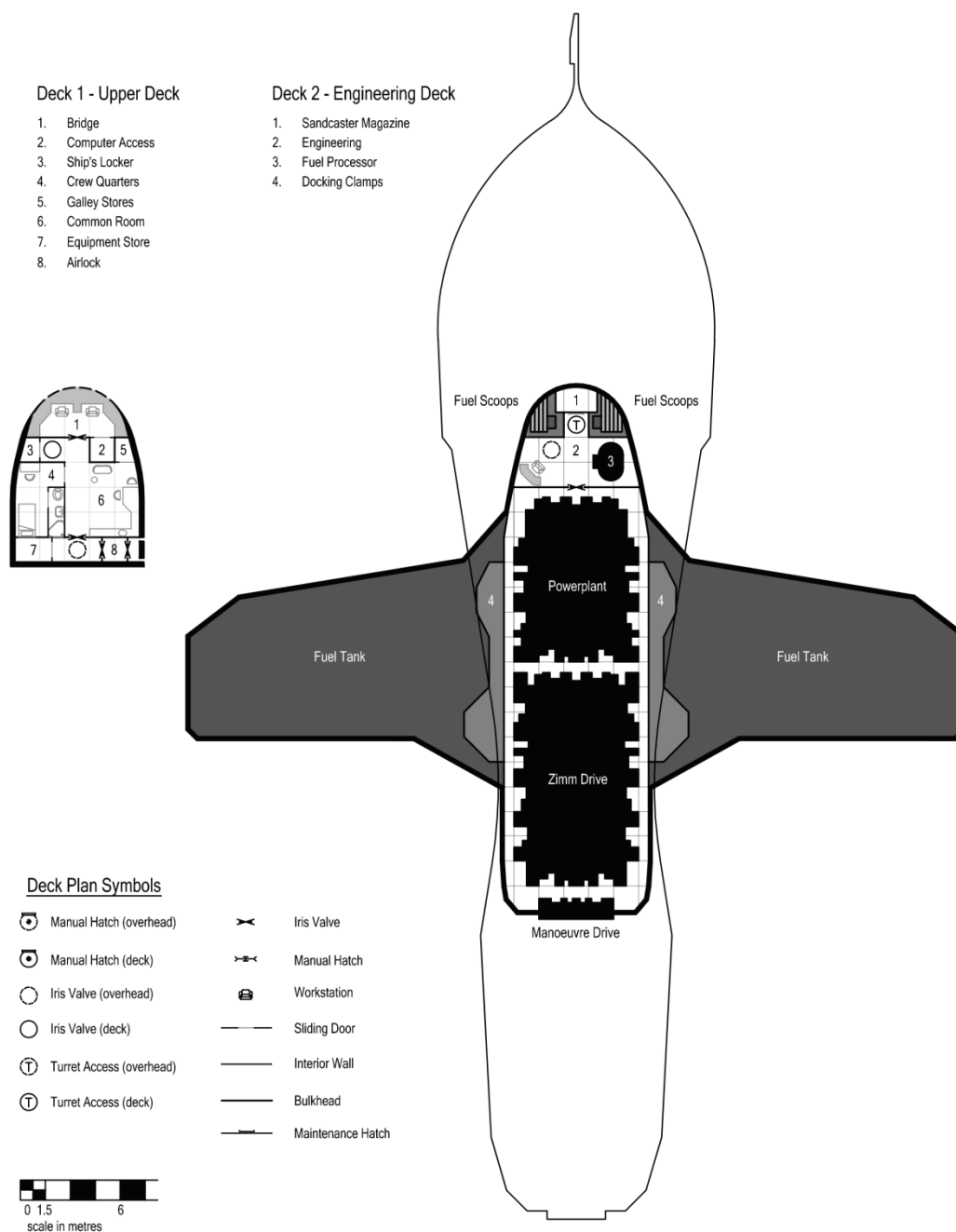
Ships of Clement Sector 9: System Defense Boats



IS

Zimm Module

Type 2 System Security Cutter

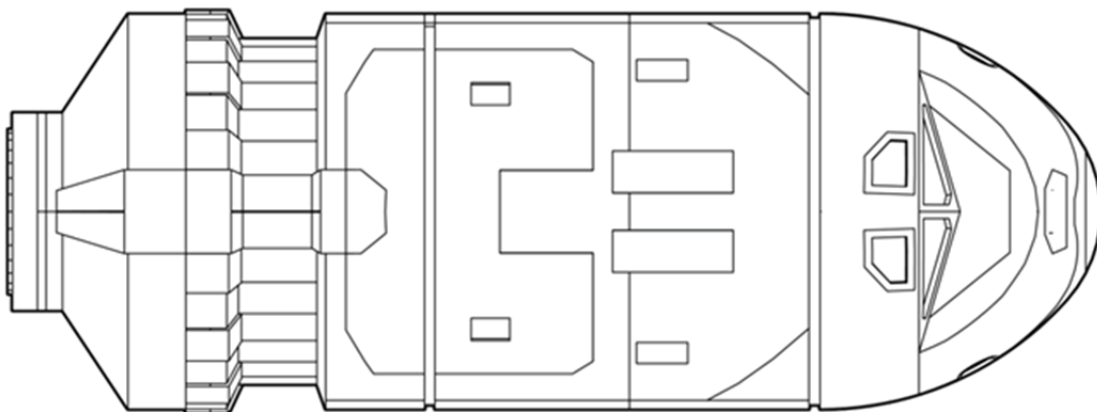
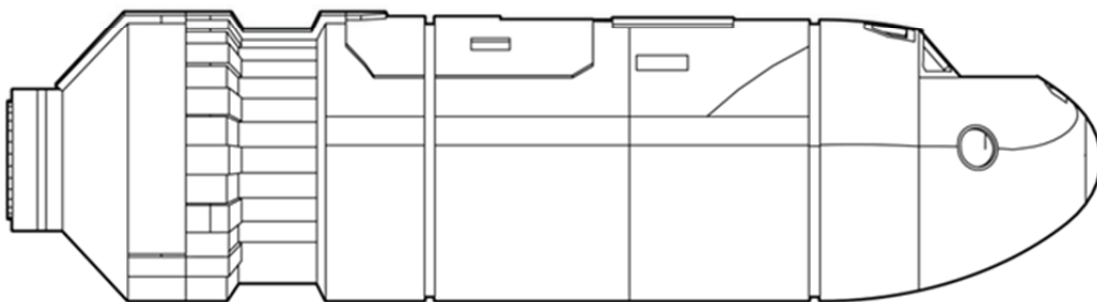
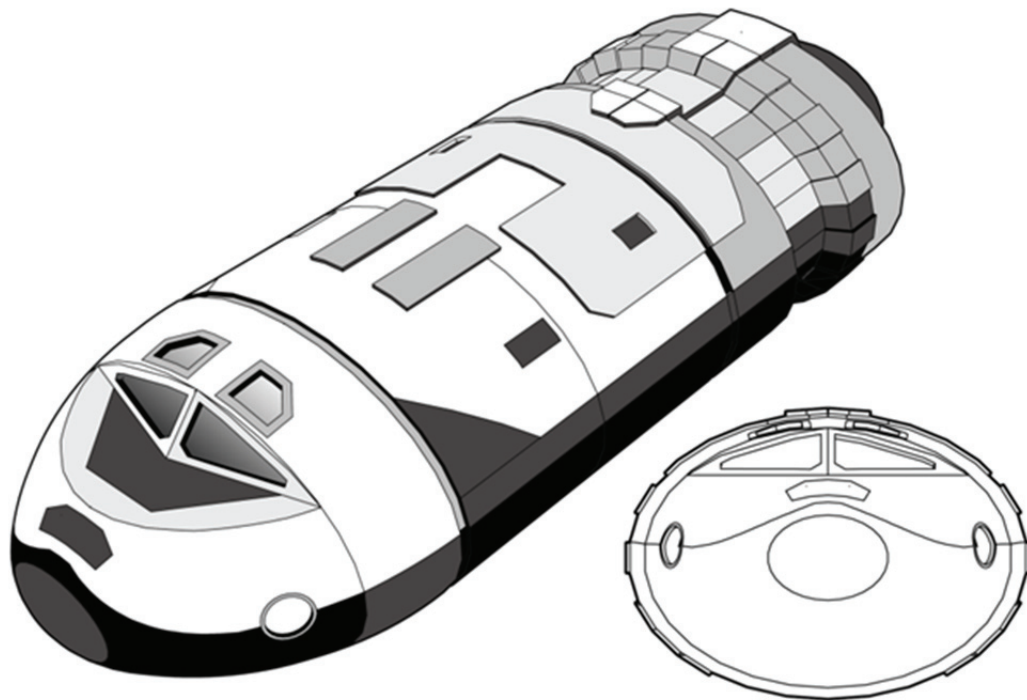


Ships of Clement Sector 9: System Defense Boats

Fast Launch

Type			Tonnes	Price (MCr)
Hull	20 dT	Hull 0	20.0	1.2
	Streamlined (flattened cylinder)	Structure 1		
Armor	Crystaliron x1	4 points	1.0	0.3
Zimm Drive				
Maneuver Drive	sF	Thrust 6	3.0	6.0
Power Plant	sF	Rating 6	2.7	5.5
Bridge	Cockpit		1.5	0.1
Computer	Model 1	Rating 5		
Electronics	Standard	DM -4		
Weapons				
Fuel		2 weeks of operation	1.5	
Cargo	4 tonnes		4.0	
Crew	1			
Airlock			1.0	0.2
Software	Maneuver/0			
	Library			
Passengers		10 passengers	5.0	0.3
Total Tonnage and Cost			19.7	13.6

Ships of Clement Sector 9: System Defense Boats



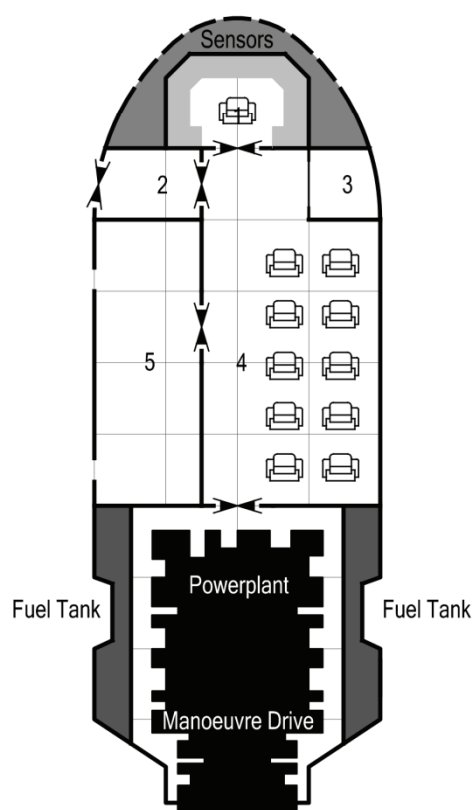
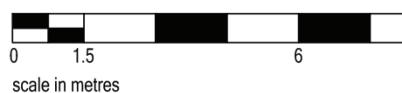
Fast Launch

Deck Plan Key

1. Control cabin
2. Airlock
3. Fresher
4. Passenger section
5. Cargo section

Deck Plan Symbols

-  Manual Hatch (overhead)
-  Manual Hatch (deck)
-  Iris Valve (overhead)
-  Iris Valve (deck)
-  Turret Access (overhead)
-  Turret Access (deck)
-  Iris Valve
-  Manual Hatch
-  Workstation
-  Sliding Door
-  Interior Wall
-  Bulkhead
-  Maintenance Hatch



Ships of Clement Sector 9: System Defense Boats

Twyla Fay Fuller

Lieutenant Commander
Harrison Customs Service (System Branch)
Age 53 (28)

STR 7 DEX 10 END 9 INT 10 EDU 9 SOC 5

Investigate 2
Melee (Unarmed Combat) 2
Pilot (Small Craft) 2
Pilot (Starship) 2
Admin 1
Astrogation 1
Carouse 1
Computers 1
Gun Combat (slug pistol) 1
Language (German) 1
Leadership 1
Persuade 1
Tactics (Naval) 1
Vacc Suit 1

Twyla can best be described as a pocket dynamo. Only just over 1.5m tall she compensates her short stature with a quick wit and a forward personality. Part of her persona is to ensure her southern drawl is noticeable and pronounced, even more than Harrison's native population. She is adored by her crew and respected for her professional skills by her peers. Being able to outdrink many of them with her favorite drink, New Tennessee Old Sour Mash, factors in that as well.

Youngest daughter of a wealthy family, Twyla was never interested in mixing in polite society, preferring to spend as much time with her Uncle Cletus, who commanded a small coast guard cutter based on the Hampion Bay, as she could. Her love of the sea was finally displaced with the love of being in space when she visited the mining colony within the London Belt. She and her family accompanied her father who was meeting government officials to discuss the purchase of new mining equipment.



When she was of age, Twyla decided to make an attempt to join the Harrison Customs Service, striking for the space arm and was successful. Her father was proud and her mother was hysterical. Cletus did not say much at all, presenting her with his own slightly tarnished ensign collar rank bars when she graduated.

Twyla is a short-statured, longhaired redhead with a full figure. She likes being called curvy but if you called her lush, the consequence would be very sudden and very painful.

Ships of Clement Sector 9: System Defense Boats

System Defense Boat Adventure Seeds

- | | |
|---|--|
| 1 | Heave To! – The player's ship is ordered to heave to for a custom check on the outbound leg just before making the transit out to the next system. With the cargo hold stuffed full of "questionable" items not strictly legal, well anywhere really, how will they explain this away? |
| 2 | Silent Running – The party, officers and crew on board a system defense boat, have been waiting for three days under minimum power and emissions for the pirate ship to make an appearance. Now the passive sensor drone deployed earlier reports arrival of not one but three pirate ships. Going to be an interesting day after all! |
| 3 | The Hunted – Over the last twenty four hours the players pirate ship's sensors keep picking up an intermittent contact at long range and one of the gunners, an ex USSN spacer reckons it is a stealthed SDB following them. The captain decides to go to maximum thrust and that ghost suddenly becomes very visible and that is not good at all. |
| 4 | War Games – The party, officers and crew on board an SDB that is currently involved in a war games exercise, lurking in the upper atmosphere of the systems large gas giant waiting to pounce on the rear of the oppfor support squadron expected to refuel. The high guard escort needs to be dealt with first though and that is where the wheels fall off the Captains plan. Not only had the expected high guard arrived to take up station, but as the player's SDB emerges from the gas giant, another escort vessel is detected and ambusher becomes the ambushed. |
| 5 | A Tough Choice – An emergency beacon is picked up by an incoming Rucker and relayed to the party's system defense boat that is currently dealing with a dispute between two mining freighter captains who want to take their disagreement to more deadly levels. A decision needs to be made. |
| 6 | Grand Theft Attack Craft – Your employer could have been anyone and you did not ask him who he worked for. The money was really, really good, probably too good considering what the party now has to undertake. Transit into Monroe, infiltrate the refueling station and steal the Rattlesnake that is docked there undergoing routine maintenance. Skeleton crew, no security of any sort and a Zimm module waiting at coordinates to be sent once the attack craft was secured. Simple....Yeah right. |

Ships of Clement Sector 9: System Defense Boats



Customs and Excise Cutter



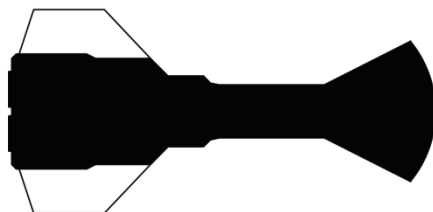
Type 2 System Security Cutter



Rattlesnake Class Attack Craft



Small Craft



Antelope Class System Defence Boat



Raptor Class Sloop/River Class SDB

System Defence Boats of Clement Sector - Size Comparison Chart

Authorised For Public Distribution
Admiral Commanding Dept. Training and Education
Current as at February 21 2341 ES-ST / 52ES,132

Approved Watts J, Flottillenadmiral
Designed Johnson MJ, Fregattenkapitän
Prepared Johnson MJ, Fregattenkapitän



scale in meters



Et fortis viribus unum

Ships of Clement Sector 9: System Defense Boats

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