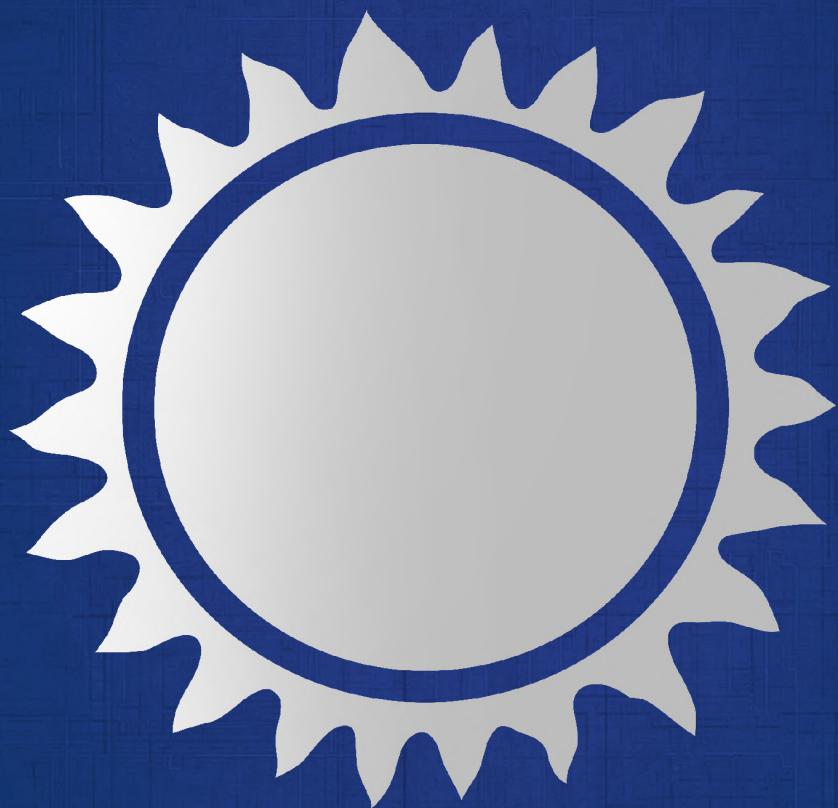


THE
IMPERIAL NAVY



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THE IMPERIAL NAVY

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INTRODUCTION

The Imperial Navy is the ‘senior service’ of the Third Imperium. Its importance to all aspects of Imperial society – strategic, political, economic and social – cannot be overstated. Without the navy the Imperium simply would not exist. It is entwined into the social hierarchy of the Imperium, providing a route for advancement for ambitious individuals, and a worthy role for those born into privilege and wealth. Its procurement and maintenance programmes support industry on countless worlds and its vessels protect the commerce that allows such industry to thrive. The navy is a political tool that makes diplomacy possible, even with hostile powers, and it ensures Imperial dominance even when diplomacy fails.

In the Third Imperium, almost all member worlds are self-governing. However, the Imperium claims jurisdiction over the space between them. All commerce must pass through this territory and is therefore subject to Imperial control. Even diplomatic contact between worlds can be cut off by an interdiction enforced by naval power. The navy is the instrument by which the member worlds are both protected from external threats and kept under the control of the Imperial authorities. Whilst member worlds have some jurisdiction in their home systems it is the Imperial Navy that carries the burden of fighting wars and keeping the peace. It is a big task but the navy has always taken the attitude that, ‘Yes, we can do it. What’s the job?’

OVERVIEW OF THE IMPERIAL NAVY

The Imperial Navy is commanded by professional naval officers who receive political direction from the senior nobility. The Emperor is commander-in-chief and can overrule any other noble but in practice the great nobility are well aware of what the Emperor wants from the navy and how much pursuit of their own agendas will be tolerated. Great nobles are charged with political direction of huge areas – entire sectors, and indeed Domains consisting of four sectors. The requirements of one region might differ considerably from another and the nobility are empowered to make suitable decisions. Inevitably, a certain amount of personal agenda and ambition will influence the decisions made by the domain archdukes and the sector dukes. So long as this is

within acceptable limits it is tolerated. However, the navy does not take orders directly from the nobility and attempting to use it in a dispute with other nobles is an act of rebellion.

Direction comes down to the navy from the Emperor by way of the archdukes and the sector and subsector dukes, but the navy commands its own ships and vessels. The situation is complicated by the fact that most senior naval officers are nobles, however an individual serving as a naval officer cannot at the same time hold a political office. For example, the admiral commanding the naval forces assigned to Gateway Domain might be a family member of the Archduke of Gateway and/or hold a high noble rank but they cannot be the same person. If the admiral were to be offered the post of Archduke of Gateway they would have to leave the navy and might start seeing the same issues from a very different perspective.

Political direction – officially at least – takes the form of indicating what the desired outcome is and any additional considerations, then allowing the navy to get on with the job. In practice there are many attempts at micromanagement and the furtherance of personal goals attached to the direction of the navy, and some nobles insist on acting like they have the right to directly command ‘their’ fleets. This can cause a certain amount of friction and is inefficient. If the admirals are pushovers the naval forces of that region become tools for the ambition of a noble rather than servants of the Imperium and if they resist too strongly the communication and direction process can break down. Being a senior naval officer requires a certain amount of diplomatic talent.

Once the navy has received its directions, it is expected to make every effort to deliver a desirable outcome. This means balancing available resources against needs and desires, and weighing up the consequences of falling short in some areas. Above all else, the navy is charged with ensuring the continuance of the Imperium. Occasionally the decision must be made to abandon a world, subsector or even a sector in order to save what can be protected. The navy will try to save everyone but ultimately it must be willing to sacrifice some in order to ensure the survival of the Imperium as a whole.



The two main areas of concern for the navy are internal security and defence against external threats. The latter can be considered to include rebellions by powerful worlds since defiance of the Emperor by definition places a world or alliance of worlds 'outside' the Imperium. Defeating external threats is work for large, powerful vessels capable of meeting enemy warships head-on and destroying them. The need to concentrate maximum combat power in warfighting fleets absorbs a huge percentage of the naval budget but without these fleets there might not be an Imperium.

Where warfighting means concentrating combat power – and therefore budget Credits – the internal security of the Imperium requires dispersal. Patrol work and protection of commerce is the province of light vessels – and many of them. Proponents of the 'Security Above All' doctrine argue that one less battleship means many more patrol ships, and that translates to safer commerce, and therefore more of it – which in turn means more budget Credits for the navy to buy those battleships with. The counterargument is equally strong, however. 'Defence First' proponents state that without battleships to defeat a major attack, sooner or later all that commerce will belong to someone else. There is a middle road, of course, but no consensus on exactly where it lies.

Perhaps the single greatest challenge facing the Imperial Navy is time. A transit between two star systems takes a week, ensuring that messages and despatches crawl across the Imperium. Wars have been fought and won in the time it took to inform the Emperor of an impending crisis. Most obviously this makes central direction of the fleets impossible. Command must be devolved to a level within reasonable communication times... although how long is reasonable is open to much debate. Minor problems such as a spree by a few pirate vessels require relatively little resources to suppress. A suitable force can be put together in a few weeks and deployed with orders to deal with the situation and report back on progress. Larger threats are more of a problem.

In the event of major conflict, the enemy will make strikes and thrusts with concentrated forces. Attempting a piecemeal response simply guarantees the destruction of the assets assigned. A fleet whose major warfighting squadrons were dispersed across a sector would be faced with a choice between a delay to concentrate and flinging the nearest units into certain defeat in the hope that subsequent arrivals might somehow restore the situation. One solution to this

problem, favoured for many decades, was the 'crust' defensive strategy whereby heavy warfighting assets were concentrated along the frontiers. Experience showed this to be ineffective and liable to expose the forward assets to bypass or defeat in detail.

The current strategy emphasises defence in depth, with warfighting assets concentrated in sector fleets ready to respond to news of an attack or move to a crisis zone. Communications lag is still a problem but at least the fleets are already concentrated. Waiting for concentration would double the reaction time to most situations or force a response with inadequate resources. The standard response is for heavy fleets to move from their peacetime dispositions to forward concentration areas whilst reconnaissance assets scout the conflict zone. A final decision on where to attack or to take up defensive positions is made by the commander on the spot. Naturally this does mean that worlds right on the frontier may be quickly overwhelmed but a combination of local forces and fleet assets deployed to endangered major worlds may be able to forestall this.

To facilitate this doctrine the Imperial Navy uses a two-tier system for its own ready assets. Warfighting vessels – battleships, cruisers and heavy carriers – plus their supports and escorts are under the command of the sector fleet and stand ready to engage major threats. They are kept concentrated and fed information by a constant rotation of fast couriers. Security assets – patrol ships and a few destroyers – are under the command of the subsector fleets and are generally dispersed to provide as much coverage as possible. The basis of this strategy is that 'the sector fleet fights wars, the subsector fleet keeps the peace'. In fact the situation is more complex, requiring variations on the basic theme.

Both the sector and subsector fleets are backed up by what are still known as 'Colonial' assets. This is an archaic reference from the days of the Second Imperium which has resisted all efforts to update it. Colonial assets include the home defence forces of member worlds and any units they contribute to the sector or subsector fleets. In practice, most Colonial assets are not jump capable. They provide security and defence to their home government, sometimes with the assistance of navy vessels assigned to protect sensitive worlds. In some cases a highly important star system close to potentially hostile territory may be designated a 'fortress world' and receive large subsidies to support system defences along with naval assets.

The majority of jump-capable Colonial vessels loaned to the Imperial Navy are assigned to the local subsector fleet. These tend to be minor assets or old vessels not in the best of condition. Only a few worlds in the entire Imperium are rich enough to support first-class major combatants. There is a great deal of prestige and political leverage to be obtained by providing such vessels and maintenance is generally carried out in fleet dockyards, so there are incentives to provide warships to the Colonial Fleet, which must be balanced against the advantages of stronger home defence squadrons. All vessels on loan to the navy come under subsector or sector fleet command until they are transferred back to their homeworld navy.

In addition, there is a 'reserve fleet' of vessels stored and awaiting reactivation. Many of these ships slowly die at their moorings and are never reactivated, but occasionally vessels are transferred to a system navy or converted to a new role. In the event of major conflict, the best of these ships are put back into service and in theory the barrel can be repeatedly scraped to replace combat losses. More often an embattled sector fleet is reinforced from other sector fleets with front-line ships during the conflict. It will reactivate the best of its reserves to plug gaps when the reinforcements go home after the conflict, with reactivated vessels serving until losses can be made good.

In wartime, alterations to the basic fleet structure are necessary but the navy spends the vast majority of its time in conditions of relative peace. There may be tensions and even skirmishes on the borders, threats to internal commerce and disputes between member worlds but when the Imperium as a whole is not at war the fleet structure is mostly concerned with logistics and readiness rather than combat efficiency. As war looms or when a crisis erupts, reorganisation is carried out in accordance with the many contingency plans available and the navy moves to an organisational structure tailored to the situation.

IMPERIAL NAVY FORMATIONS

Sector fleets are named for their home sector, such as the Corridor Fleet. The sector fleet commander is also the commanding officer over each of the subsector fleet admirals. Subsector fleets are not named but numbered to distinguish them. Defensive forces assigned to a single star system are known as the system squadron or system flotilla. Other formations include major fleets formed for a specific conflict or campaign and smaller task forces which are usually put together on a temporary basis.

Imperial Navy Peacetime Fleet Structure

Fleet	Receives Direction From	Commanded By	Contains	Notes
Domain Fleet	The Emperor – Archduke of the Domain	Grand Admiral	One Named Fleet per sector	The Domain Fleets are primarily an administrative concept.
Sector Fleet	The Emperor – Archduke of the Domain – Sector Duke	Sector Admiral	One Named Fleet plus one Numbered Fleet per subsector	The Sector Fleets are the primary warfighting assets of the Imperial Navy.
Subsector Fleet	The Emperor – Archduke of the Domain – Sector Duke – Subsector Duke	Fleet Admiral (Subsector Admiral)	One Numbered Fleet	The Subsector Fleets primarily ensure the security of a subsector.
System Flotilla/ Squadron	The Emperor – Archduke of the Domain – Sector Duke – Subsector Duke – System Government	Fleet Admiral or Commodore	Varies	System Flotillas ensure the defence and security of a single system. They are usually commanded by a local officer unless the system is of major Imperial interest such as a naval Depot system.

HISTORICAL PERSPECTIVE

The Imperial Navy has a long history in its present form but the influences that made it what it is today reach back much further. Arguably, some of the customs and practices of the navy can be traced all the way back to the military forces of Terra and Vland before spaceflight was invented. The navy has been shaped by its experiences, not all of them military. Economic and political factors have at times resulted in decisions that would have a profound effect decades or even centuries later.

Vessel design and fleet structure have been influenced by the capabilities of potential and real enemies, by hard lessons learned in war and by economic factors in peacetime. Some aspects of the navy are forced upon it by social realities; it is not always possible to create the most militarily efficient service without regard to other factors. Attempts to do so have at times caused problems that required the deployment of the navy. Today's Imperial Navy is a snapshot of a body that has been evolving for centuries and will continue to do so.

THE PAX VILANI

When the Vilani became the first species since the Ancients to discover the jump drive, they quickly learned that they were not alone. A loose interstellar community founded upon trade sprang up in a 60-parsec radius around Vland. Individual traders pushed still further out and sold Vilani technology, even jump technology, to the species they encountered. Clashes between ship operators occurred but there was initially no need for a navy as such. Vessels were sometimes armed for self-defence and over time the Bureaux that dominated Vilani society began to create pseudo-warships that could deter or deal with more significant threats. These soon became an instrument of policy.

The Vilani began assimilating into their culture many of the species they encountered. Those that resisted were little direct threat to what would become the Grand Empire of Stars, otherwise known as the Vilani Imperium or Ziru Sirka, but already it was dependent upon interstellar trade. Raids on trade

lanes weakened the Imperium and in some cases the raiders attempted to take by force technologies they could not afford to buy. It became apparent that some species were creating empires that would in time threaten Vilani trade and culture. The three Bureaux that ruled Vilani society were not prepared to let this happen and raised fleets to protect Vilani trade and strike back. The appearance of these fleets, and the new attitude they represented, caused increased friction with the border empires. Wearying of endless crises, the Ziru Sirka decided to put down all opposition. Thus began the Consolidation Wars, which would last 1,000 years.

At first, the three Bureaux each maintained their own fleets but over time it became apparent that central control was needed. The Grand Empire of Stars (Ziru Sirka) was declared in -4045 and with it came a reform of the Vilani fleets. Now operating under central direction, the fleets of the Ziru Sirka systematically destroyed or absorbed all opposition. Eventually there were no organised states left on the Vilani borders. The Vargr were an exception to this but their states were small and constantly at odds with one another. If ignored or kept contained, they could be relied upon to collapse on their own.

After the end of the Consolidation Wars, a peace known as the Pax Vilani descended. The powerful fleets of the Ziru Sirka assumed the role of protectors to the Empire and maintained a careful watch to prevent any 'barbarian' powers from arising on the border. Occasional action was required to put down a nascent threat but for hundreds of years the fleets patrolled and observed, and easily squashed any emerging threat. These fleets were under the control of regional governors rather than military force commanders and very much viewed as tools of policy. This attitude is common to all operators of navies but the Ziru Sirka took it further than most.

The modern tradition of sector and subsector commands can be traced back to the Vilani Imperium, although today's navy draws a distinction between political and military decisions. Today, an Imperial official tells the navy what needs to be done and the navy decides how – and indeed whether – to do

it. In the days of the Ziru Sirka both functions were fulfilled by regional governors. The system worked well enough, especially in the latter days of the Vilani Imperium as it gradually slid into decline. At its height, the Ziru Sirka controlled 15,000 worlds throughout 27 sectors. The price of rigidly controlling such a large area was cultural stagnation and a loss of interest in the worlds beyond Imperial borders.

Every significant threat – and many that would never have been very significant – had been so effectively nipped in the bud that the Ziru Sirka had no idea how unprepared it was for a major conflict. When the people of Terra emerged onto the cosmic stage just outside the Imperial border, the Ziru Sirka discounted the threat as usual. Early encounters did little to shake this attitude despite signs this was no ordinary foe, and the upstarts were for a time contained. Neither side had any idea what they were up against but as the Vilani Imperium dozed in the final years of its golden age, the people of Terra prepared for a war to claim the stars. They were energetic, resourceful and, very soon, desperate. The Vilani, on the other hand, were stagnant and complacent. Stability had become rigidity.

THE RISE OF THE SOLOMANI

The Terrans, now known as the Solomani, developed jump technology independently in -2434. Solomani explorers encountered the Grand Empire of Stars soon after, at Barnard's Star. At first the Vilani ignored the barbarians and their primitive starships. The Solomani insisted upon claiming Barnard as their territory, which resulted in friction and finally, in -2408, a Vilani trade caravan coming under fire from American vessels. The Vilani reaction was predictable. A fleet was dispatched to teach the upstarts their place. The Vilani force met a combined Solomani fleet comprising vessels drawn from the United States Navy, China's Defence Force, the British Royal Navy and Brazil's large commerce fleet. Run-down and overconfident as the Vilani navy was, its vessels still had no difficulty in wiping out the totally inexperienced Solomani force. This served to confirm Vilani overconfidence, while the barbarians were unquestionably taught a lesson.

Unfortunately for the Ziru Sirka, it was not the lesson they had set out to teach. Fearing that they faced annihilation or subjugation, and knowing they could not defeat the vast Vilani Imperium as a collection of individual nations, the people of Terra were forced to co-operate as never before. The United Nations

was given greater powers to coordinate the efforts of nations in a move that eventually led to the formation of the Terran Confederation. Even worse for the Vilani, the Solomani now had some idea how to fight an interstellar war. They constructed fleets organised like those of the Vilani, with homogenous squadrons, and composed of low technology but effective warships. A new class of light attack craft, the missile boat, was created to return Vilani salvos with large numbers of relatively crude weapons, while dreadnaughts mounting spinal weapons closed for a decisive clash.

The Solomani New Fleets also included a number of cruiser classes intended for deep raiding missions to disrupt trade and commerce. These vessels boasted a jump-2 drive, which was a shock to the Vilani since they had monopolised the device for 1,000 years. Despite this, the Vilani remained overconfident and were repeatedly defeated by the Solomani, who saw themselves as fighting for survival. Gradually the Solomani gained ascendancy, although it was not until -2204 that the Ziru Sirka, weakened from within, collapsed and the Rule of Man began. The Solomani navy did what it could to stabilise and govern the shattered Vilani Imperium and held back the night for another 400 years. However, despite all that could be done, the Ramshackle Empire lost its grip and fell into the darkness. It would be 1,700 years before light flared once more and once again the navy would be the torchbearers.

THE END OF THE LONG NIGHT

The period between the fall of the Rule of Man and the rise of the Third Imperium is known as the Long Night. It was not universal; in some areas interstellar commerce continued and states emerged. However, for the most part these were small or short-lived, and at best survived the Long Night. Eventually one gained the critical mass required to keep expanding and led the way back to large-scale interstellar travel. This was the Sylean Federation, established on Sylea in -650.

The Federation grew slowly, absorbing several worlds to create a loose trading alliance. By -30 the Federation was under heavy attack by raiders who looted local colonies and pirates who pillaged the trade routes. A long war against the Chanestin Kingdom drew off many ships that could have dealt with these threats. As the politicians talked of withdrawing Federation ships to the core worlds and abandoning outlying assets, the industrialist Cleon Zhunastu proposed an entirely different solution.

Cleon was a Sylean nobleman of Solomani descent and head of a powerful industrial consortium. His vision was simple but daring – instead of withdrawing in the face of opposition, the Federation would go out and conquer it, and thus create a Third Imperium. To carry out this bold undertaking, Cleon needed to increase the naval power of the Federation so it could protect its assets and strike against the Chanestin. Old records from the First Imperium offered an idea, which Cleon put into practice at his own expense.

The first Sylean battle tenders were simply converted merchant ships carrying a half-squadron of four large gunboats. These gunboats were ideal for combating foes the Federation faced at that time, which could only field relatively small vessels. Sylean gunboats, since they did not need to carry jump drives or fuel, were faster, more agile and better armed than a starship of similar size. The gunships, despite a shaky start, proved very effective against pirates, clearing the way for an offensive against the Chanestin.

Larger and better gunboats were created, carried aboard custom-built tenders. A new fleet organisation was built around squadrons of two tenders, each with six to eight gunboats and an escort force. These gunboat squadrons struck deep into Chanestin space, backed up by assault tenders carrying squadrons of assault landers. The combination was a success and the Chanestin Kingdom was forced onto the defensive.

Gunboat tenders also became the symbol of Sylean diplomacy as they carried economic and diplomatic delegations out beyond the borders of the Federation to begin absorbing non-aligned worlds. As the Federation grew, so money became available to build large, powerful warships. By the declaration of the Third Imperium in Year 0, the first battleships and dreadnoughts of what would become the Imperial Grand Fleet were joining the battle lines and Chanestin resistance began to crumble. In Year 2, the Imperial Sunburst was raised above the Chanestin Royal Palace.

The golden age of the battle tender was short but they provided the Sylean Federation with an effective way to use what resources were available to gain an edge over evenly-matched foes. However, as soon as funds were available, the line of battle role was transferred to capital ships and tenders were relegated to a secondary position as escort carriers and military transports. By this time the Imperial Navy was recognisable as the ancestor of its current form and just as now it served an Emperor through a military chain of command.

THE PACIFICATION CAMPAIGNS

The Pacification Campaigns (76–120) were for the most part more economic and political than military. The Imperium was involved in rapidly absorbing a great number of single worlds and small states, most comprising less than five or six worlds. The naval power of such states was slight but there were a lot of them.

Naval forces played several important roles in the Pacification Campaigns; often without firing a shot. Flag-showing visits from impressive Imperial Navy vessels helped sway many wavering worlds and the presence of a naval squadron that outgunned the locals' entire navy served to underscore the pointlessness of armed resistance for others. The concept of using a 'Single Unkillable Ship' as a diplomatic tool was first demonstrated during this period. Deploying a lone vessel that clearly could take on anything the locals had and win, ran contrary to conventional naval thinking but served a diplomatic purpose.

Nevertheless, the Imperial Navy was forced at times to fight. Many worlds were absorbed by force after a naval campaign. This was more a cruiser war than an affair of battleships and dreadnoughts. Minor powers, unable to take on the Imperial Navy head-on, often resorted to harassing raids and war upon trade. So many such 'small wars' were ongoing at any one time that by the time one small state had been subdued, two or three more had become involved. Fast cruisers, responding to each threat as it arose, fought to contain each conflict while the capital ships ground down the homeworlds one-by-one.

Many conquered worlds remained rebellious and the navy was involved in policing the rear areas for several years after the 'front lines' had moved outwards. This was again an affair of cruisers and escorts; small vessels capable of covering a lot of ground contributed more than the battleships of the striking fleet. The most notable actions of this period took place during the Arnaki Resistance, when the world of Arnaki in the Core sector sat at the head of an alliance of powerful worlds. Although the alliance was spread over too large an area for concentrated action, and was thus eventually defeated in detail, the capital ships of the alliance worlds were powerful enough to slow down the Imperial advance for several years. Effectively integrated with guerrilla activities of minor states, the Arnaki Alliance gave the Imperium a tough time before the sudden collapse of resistance in 98.

THE JULIAN WAR

As the Imperium spread into the Antares sector, alarm mounted among human and Vargr states to coreward. This resulted in the formation of a loose alliance, which took its name from its leader, Julian. The goal of this alliance was simple – curtail Imperial expansion in Antares by any and all means necessary. The Julian Protectorate was thus born, with its striking arm, the Star Legion.

The Star Legion was not a tidy fleet of shiny battleships. While many member states possessed capital ships and contributed some to the Star Legion, the majority were privateers and corsairs or vessels designed to combat them. Thus for every battleship or heavy cruiser, the Star Legion had 100 or more corsairs, commerce raiders, armed merchant cruisers, patrol corvettes or intervention frigates. Many of these vessels were privately owned, recruited for pay or plunder. Command and control was loose.

The Imperials quickly established a line of bases facing the Protectorate and looked down their noses at the random assemblage of ‘spacegoing junk’ facing them across the buffer zone. In the wake of the Pacification Campaigns, the balance of the Imperial fleet had shifted towards heavier units. The reasoning was simple; if more such units had been available during the Pacification Campaigns, more worlds could have been taken, quicker. Other problems such as commerce raiding would simply dry up when the centres of resistance were smashed.

Presented with an ultimatum by the Protectorate, the Imperium was unconcerned. The fleet was ready; it had the right tools. A few concessions were granted but the Imperium was not willing to compromise to any great degree. The Protectorate was forced into a corner and decided to strike before the corsairs grew bored and took their ships home. As a horde of commerce raiders and heavier striking squadrons poured into Imperial space, the grand Imperial fleets charged into the Protectorate, crashing through all opposition and taking world-after-world. Despite the damage being wreaked in the rear, there was simply no way the Imperials could lose. The sword that was the Imperial fleet was too big, too sharp and too heavy for the fragmented Protectorate forces to parry.

Julian knew there was no chance of defeating the Imperial steamroller and fought an entirely different war. Each important world was held as long as possible, with the defences bolstered by heavy units

and capital ships of the Star Legion which would fight hard, then pull back before defeat became inevitable. Worlds were lost but the Imperial fleet was ground down. It was operating at the end of a long supply line and Julian raiders swarmed through every system between the fleet and its depots. Imperial forward bases were raided by fast striking forces. Damaged vessels returning for repair ran a gauntlet of harassing raids and the occasional ambush.

The Imperial advance ground inexorably on but the cost was high and back in Antares, worlds began to reconsider their allegiance to the Imperium. Still, the Imperials were winning and the end seemed to be in sight when a large number of Julian capital ships were suddenly withdrawn from the battle line. Most analysts assumed that the Protectorate was beginning to break up, or that the ships were simply too battered to fight on. Their absence was explained shortly after, when powerful Julian fleets made end-runs against Imperial depots in the Fornast and Ley sectors. Both depots were captured after heavy fighting, although the Fornast fleet withdrew after making repairs and destroying the depot with nuclear explosives.

With the Ley depot in enemy hands, the heavy units of the Julian Fornast Force rampaging through the rear areas destroying escorts and raider-hunters, heavy losses among supply ships and commercial traffic, and political troubles in Antares, Imperial High Command decided that the eventual victory of the battle fleets would come at too high a price. A peace settlement was proposed and after a fraught period of negotiation, accepted. Concessions by both sides led to the creation of a buffer zone, an independent League of Antares, and the curtailment of Imperial expansion in the region. The sector remained a hotbed of incidents and intrigue for many years after the war’s official end in 191.

ASLAN AND VARGR WARS

The Vargr Corridor Campaigns (210–348) and intermittent conflicts with Aslan clans in Reavers’ Deep provided the Imperial Navy with a wealth of experience in fighting relatively small-scale actions against small non-human states. Neither Vargr nor Aslan ever resembled a coherent threat and the goals of these wars were different to many others. There was no massive threat to Imperial security nor any need to mass huge fleets and conquer a region. Instead the campaigns were very much a ‘cruiser war’ in which conflict with one Vargr state or

Aslan clan would be brought to a conclusion just in time to meet the threat from another. These 'wars' resembled large-scale peacekeeping operations more than full-scale warfare.

The Vargr Corridor Campaigns dragged on for 130 years, although fighting was not constant, before the Corridor region was properly secured. To this day the Corridor Fleet remains one of the most active in the Imperium, since the region stays secure only as long as sufficient force to deter Vargr raiders is stationed there. The occasional corsair does still try their luck however, so patrol elements of the fleet remain at high readiness.

The Aslan wars were a slightly different affair, being mainly concerned with keeping expansionistic Aslan clans out of Imperial space. These clans were not seeking conflict with the Imperium but were unable – or unwilling – to control *Ihatei* who wanted to seize territory. After centuries of intermittent fighting, some of which became large-scale as clans were dragged into war by their *Ihatei*, a peace deal was finally hammered out. The Peace of Ftahalr remains in force to this day but only at great effort. While the Imperium and the clans want peace, groups on both sides seek their fortune in the buffer zone created by the treaty and this inevitably leads to major peacekeeping requirements. The Imperium maintains a special fleet composed mainly of cruisers and light forces to maintain the Peace and it has its work cut out for it.

EARLY FRONTIER WARS AND THE CIVIL WAR (589–620)

The Third Imperium has fought four Frontier Wars against the Zhodani to date. The first and second framed the series of immense internal conflicts collectively known as the Civil War (604–622). The First Frontier War (589–604) was the result of tensions between the aggressively-expanding Imperium and the more conservative Zhodani Consulate. Brought to a successful conclusion by Grand Admiral Plankwell with almost no support from outside the region 'Behind the Claw', the First Frontier War was a catalyst for the Imperial Civil War that followed immediately after.

In the wake of the First Frontier War, Grand Admiral Olav hault-Plankwell proceeded to Capital with his victorious fleet, murdered Empress Jacqueline and

proclaimed himself Emperor by Right of Fleet Control. Plankwell had considerable support and various legitimate grievances, but these were not sufficient to guarantee his position as Emperor. The power struggle that followed lasted for 18 years and saw no less than 18 Emperors declared. The Imperial Navy was instrumental in the strategy of most of these Emperors and provided many from its ranks.

Various factions of the Imperial Navy supported one candidate or another, or played kingmaker from a position of power. Squadron and even fleet battles were common during this period as even those candidates who cited other means of accession to the throne, such as Right of Assassination, recognised that the navy was the single most important tool in pursuit and maintenance of power.

Naval actions during the Civil War took three forms. Demonstrations of military power served to sway worlds and even sectors into supporting an Emperor or pretender to the Iridium Throne. Relatively bloodless skirmishes decided many issues in what was more akin to the display-competition of male animals at mating time than a serious attempt to win battles. Far too often, all-out battles to the death took place – either for control of Capital and the surrounding Core Worlds or as one faction attempted to destroy the fleet or support base of another.

While the Civil War was a nasty business and atrocities occurred, on the whole it was conducted with a surprising amount of regard for sophonts' rights and the understanding that innocents should be spared as far as possible. Whether this was in recognition of the fact that the opposition were Imperial citizens too, or simply a cynical understanding that people you have bombed from orbit are unlikely to offer you their wholehearted support later, will never be known.

More than half the Imperial candidates of the Civil War period were killed in naval actions. The only one to survive, Grand Admiral Arbellatra, fought the Second Frontier War (615–620) to a hard-won victory then marched on Capital as Plankwell had done. The Second Frontier War was an attempt by the Zhodani-led Outworld Coalition to reverse their defeat of a decade previously by exploiting the weakness of Imperial forces due to the Civil War. Inspired leadership by Grand Admiral Arbellatra eventually resulted in a close victory for the Imperials and acted as her springboard to Imperial power.

Despite a clear advantage in naval terms and control of the key star systems, Arbellatra proclaimed herself regent rather than Emperor and set about pacifying the other candidates. She eventually became Emperor but as ratified by the Moot rather than self-proclaimed by Right of Fleet Control. However, the part played by her control and leadership of the fleet cannot be overstated. The Imperial Navy put Empress Arbellatra on the throne, as it had others before her.

The Third Frontier War (979–986) is often considered to be part of the Early Frontier Wars period despite occurring over three centuries later. This is because it is difficult to trace a specific point where conflict became inevitable. The tensions between Imperium and Consulate which led to the war can be tracked to before the first Frontier Wars and the outcomes of both. The Third Frontier War is thus often considered to be a continuation. Be that as it may, complacent Imperial forces made a poor showing and while the armistice of 986 gave little away, the war resulted in the abdication of Emperor Styryx as well as rethinking at court and within the fleet.

THE SOLOMANI RIM WAR (990–1002)

In 990, rising tensions between the Imperium and the Solomani Autonomous Region suddenly became outright war. Caught off guard, the navy was driven back along almost the entire battlefield and suffered heavy losses. Immediate and effective implementation of a delaying strategy, coupled with the launch of deep raids into Solomani territory, slowed the advance while Imperial reserves were brought up. The contribution of Imperial ground forces and planetary defence crews, holding out behind enemy lines, cannot be discounted. While initial Imperial battle performance was unimpressive, especially among reserve forces brought up from deep in the Imperium, hard lessons were learned in the early stages of the war. Soon the Imperial fleet was on the offensive. From this point on, the Solomani had lost, although hard years of war were needed to convince them of it.

The Imperium could field more and better ships, and remembered the mistakes made by the First Imperium against the Solomani. There would be no piecemeal commitment of local forces; the Solomani were a threat to the existence of the Imperium and no effort would be stinted to crush them. Whole fleets joined the battle lines and more importantly, the Imperial high command had a unified strategy aimed at defeating

the Solomani and winning the war. At no time was a policy of taking back lost territory or ‘teaching the Sollies a lesson’ even considered. The enemy would be smashed; territory would then be claimed. It was a hard-nosed policy that embraced true principles of warfare and made few concessions to public opinion.

Rather than nibble at the enemy along the front and take back ‘prestige’ worlds, or go to the assistance of fortress planets heroically holding out, the Imperial Fleets plunged into Solomani space. They struck at bases, depots and worlds whose industry was critical in supporting the war effort. The Solomani fleets were forced onto the defensive and, pinned against these vital objectives, shattered by superior Imperial forces. Meanwhile, light raiding squadrons slashed in and out of Solomani-held space, gathering intelligence, distributing propaganda and causing as much nuisance as possible. As the main-line Solomani fleets were pulled into defensive actions to defend critical bases, reserve and second-line Imperial fleets assaulted worlds and took them back in a ‘crumbling’ strategy along the frontier that left the Solomani guessing where the next blow would fall – and unable to mass against it.

The war dragged on for more than 10 costly years but gradually the scales tipped more and more towards the Imperials. Finally, the knockout blow was launched; the invasion of Terra itself. The remaining Solomani fleet units and Terra’s impressive planetary defences put up a tremendous fight but the outcome was never in doubt. With the fall of Terra, the Solomani finally agreed to a ceasefire that has become an uneasy peace. Live-fire incidents are not uncommon between Imperial and Solomani vessels but neither side wants to go through the grinder again, so the fragile peace holds... for now.

THE FOURTH FRONTIER WAR [1082-4]

The Fourth Frontier War (1082-4), also known as the ‘False War’, is mainly remembered for the fact that it was over before the Emperor’s instructions for the conduct of the war reached the commanders fighting it. Despite early Zhodani thrusts made in strength, little gain was made. The discovery of a Zhodani forward base in deep space between Yres and Menorb resulted in the climactic Battle of Two Suns, which was a victory for Imperial forces.

There are many who believe a fifth Frontier War is overdue. Tensions have not been dissipated and the Fourth Frontier War did not achieve either side's long-term aims. It has been suggested, not without some justification, that the Imperial forces in the Spinward Marches are complacent and distracted by internal politics of the region. If so, any renewed Zhodani offensive might strike deep into Imperial territory before an effective counter can be launched. These warnings have fallen upon deaf ears.

SMALL WARS

With a history spanning over 1,000 years and an even greater period stretching back to its origins, the Imperial Navy has fought countless conflicts. Many of these are 'small' only by the standards of the Civil War and similar titanic struggles. Each conflict, whether actually fought or averted by diplomacy backed by the threat of force, has shaped the navy of today. Lessons have been learned, and in some cases forgotten or overlaid with new knowledge, but the basic concepts remain the same. The navy can prevent wars as well as fight them. By being seen, or by dashing to a trouble spot with whatever is available, it can be a stabilising influence in a deteriorating situation. These minor interventions rarely find a place in the history books but are important nonetheless. History records the times the Imperium was heroically preserved from utter destruction but it has not entirely forgotten the role of the navy in preventing it from being slowly crumbled into fragments.

COMMISSIONED AND ENLISTED PERSONNEL

Broadly speaking, the navy has two kinds of people working for it. Officers hold a commission from the Emperor and are usually well educated. Many hold noble titles or will receive them one day. Enlisted personnel, also referred to as ratings, do not hold a commission. They are highly trained and may well be highly educated. Most personnel spend their entire career as either enlisted or commissioned, although some may be sent to officer candidate school and move into the commissioned category. Downwards movement only happens one of two ways. Someone who fails officer training might continue as a rating – and might have a highly successful career.

The only other way someone can move down is to be stripped of the Emperor's Commission but for some reason remain in the navy. This might happen if a very dedicated officer screws up extremely badly and wants to atone, or if the navy retains a cashiered officer whilst they serve out a penal sentence. Few commanders would want a demoted officer serving under them and a 'broken' former officer among the ratings is a recipe for unrest and endless troubleshooting. In short, not everyone wants to move up from enlisted to commissioned and nobody wants to go the other way.



THE ROLE OF THE NAVY

The role of the navy is to serve as a political instrument for the leaders of the Third Imperium. That is, it exists to ensure that whatever needs doing gets done. This is a rather vague mission statement, however, and of necessity the navy's role is broken down into a number of more specific missions. These can be contradictory at times, a problem solved by creating specialist subdivisions of the navy whose priorities differ and placing command officers who can make intelligent decisions. The navy is constantly subject to cross-cutting requirements. For example, there is no point in providing security patrols to protect internal commerce if a major enemy is overrunning key worlds but equally no amount of battleships on the frontier can prevent economic collapse if major systems are in rebellion or pirates are crippling internal commerce.

These conflicting requirements pervade not only strategic thinking but also procurement and deployment decisions. In addition, powerful Imperial nobles often try to use the navy to further their own agendas or increase their prestige. A sector admiral may receive repeated demands that a battle squadron be positioned over a strategically important world that happens to be the home of a major noble. Refusal may result in friction but removing a squadron from a strategically sensitive area could be disastrous. The admiral must weigh up the consequences versus the likelihood of any given outcome, keeping in mind what assets are available and how quickly vessels can be redeployed in a crisis.

PRESENCE

The most basic role of the navy is to be present. This is more than merely existing; the navy must 'show the flag' to remind potential criminals and aggressors that it is never far away. The navy is far more 'present' in a system where minor vessels occasionally carry out a patrol or land a few personnel for liberty at the starport than in one where a force of battleships lurks unseen in the outsystem. Presence has a stabilising effect in local politics and tends to improve economic conditions as commercial shipping is perceived to be safer. 'Navy money', however little, is spent in systems the navy visits which can stimulate local commerce. A crew of thirsty enlisted personnel every few weeks can be a real boon for a small starport.

Presence also works on a large scale. The navy generally keeps the movements of its powerful battle squadrons secret but at the same time it needs to remind members and foreign powers they exist. A detached battleship visiting a port – perhaps a friendly port just over the border – is a powerful reminder of the might of the Imperium. This both conflicts and combines with the idea of ambiguity as a protection for the fleet. On the one hand it is counterproductive for an enemy to know where the Imperial fleet is currently located but they must be reminded that it is somewhere. Indeed a potential enemy who cannot be certain where the Imperial fleet is – and where it is not – may be deterred or must tie down powerful forces to counter a threat that may or may not exist. History provides many examples of times a 'fleet in being' has affected politics or exerted strategic weight without actually doing anything.

One part of the 'presence' mission is territorial enforcement. A claim of ownership is all but meaningless if it cannot be backed by force or the threat of it. For the most part, territorial enforcement is the preserve of light patrol forces. Whilst insufficient to drive off any but the smallest threat, they are a tripwire. Firing on any part of the Imperial Navy means firing on all of it. One old patrol destroyer passing through a group of systems every few weeks or months might not seem like much protection but it has the capability to order interlopers to go elsewhere and refusal will bring down retribution from much more potent assets.

Maintaining an effective presence in multiple systems can be difficult. Putting a ship in a given system for one week requires at least two more weeks spent jumping to and from base. There are three solutions to this problem. The first is to mount patrols through multiple systems, with a varying amount of time spent in each one. A five-system loop requires seven jumps; that is seven weeks in which the vessel is not in any system. However, if it is carried out as a 12 week patrol the vessel's commander has 35 days of presence to allocate. This might be evenly distributed but more commonly some visits will be short – perhaps under 24 hours – to allow more time in a system the vessel's captain thinks merits it.

Patrols allow a presence to be maintained on an intermittent basis and are useful for covering a wide area in which trouble is not deemed likely. In sensitive areas a vessel may be deployed on standing patrol, transiting straight to its patrol area and remaining there for the duration of deployment. This ensures a presence in the area on a near-constant basis, which can be made constant by swapping vessels on station. However, the navy only has so many hulls and a vessel guarding one spot cannot be anywhere else. Where a vessel is deployed in this manner, the mission is termed a standing patrol. If the vessel is instead assigned to remain close to a particular location such as the system's highport, it may instead be termed a guardship deployment.

These two options are the bread and butter of security operations but there are simply not enough ships to maintain complete coverage. The problem is alleviated by the use of associated forces to secure areas where they are present. Associated forces typically include local defence squadrons, which will protect the area around their homeworld and sometimes a little farther afield. The 'route protector' vessels used by some merchant lines also provide a useful armed presence. Whilst these are not navy vessels this system of cooperation and assistance frees up naval ships for operations elsewhere.

LAW ENFORCEMENT AND INTERNAL SECURITY

Many Imperial worlds lack the capability to enforce laws anywhere other than on their homeworld surface. Indeed, in some cases large areas of the surface are out of reach. The navy does not concern itself for the most part with small-scale crimes such as thievery or murder, but when starships or spacecraft are involved naval assets may be called upon to provide assistance. Naval involvement in law enforcement tends to be more specialist, however; naval vessels will stop and search ships suspected of carrying contraband or violating interstellar law. That might be something relatively harmless such as not having up to date spaceworthiness certification, or more hazardous situations such as a vessel suspected of mounting illegal weaponry. Naval vessels also monitor or actively enforce interdictions.

Whilst the term 'law enforcement' can be applied, much of the navy's work involving lawbreakers might better be considered as paramilitary action against minor threats. Stopping a suspected smuggler for inspection is enforcement of laws but if the suspect vessel attempts to fight its way out this becomes a 'naval' matter. Navy ships are empowered to fire on vessels that flee when ordered to stop, but this is always a last resort unless the suspect vessel opens fire. Shooting at the navy gets a 'navy' response.

Similarly, piracy suppression can be considered law enforcement work but it goes well beyond that. A pirate vessel is essentially attacking the economic well-being of the Imperium and is therefore an enemy rather than criminal. Captured pirates are typically tried in naval courts at a nearby base and incarcerated or otherwise punished – often with the death penalty – by naval personnel. This keeps pirates out of local jurisdictions which might be sympathetic to claims of legitimate commerce warfare or other offered excuses, or which might be run by backers of the pirates. So, where a common criminal might be able to negotiate trial somewhere that does not use certain penalties or where the crime is not viewed seriously, a pirate always faces naval justice.

Piracy suppression is only part of the internal security mission. 'Security' in this sense essentially means controlling the space between worlds of the Imperium and preserving the well-being of those passing through it. In wartime that might mean chasing raiders or protecting convoys but most of the time the navy is there as a deterrent or source of assistance if a vessel gets into distress. Maintaining confidence among commercial spacers is deemed to be essential to the Imperial economy. The fabulous expense of diverting a heavy cruiser to provide medical assistance to one person aboard a free trader seems a poor bargain on the face of it but knowing that help is available at need is one of the incentives to push into potentially hazardous new markets. Even without any consideration of the needs of an Imperial citizen, the numbers work out.

DIPLOMACY AND SOFT POWER PROJECTION

The presence or perceived presence of the navy is vital to Imperial diplomacy, both internal and external. Often nothing more is required than a task force just happening to pass through a system. Diplomats and political leaders understand the language of fleet movements and ‘friendly visits’, and will often come to an understanding without anything explicit being said or written. In this role the navy is engaging in what is known as soft power projection; furthering the political aims of the Imperium without fighting anyone.

Soft power projection goes on all the time. A warship deployed to a system where piracy is becoming a problem improves the security of the area but also conducts a form of diplomacy just by being there. If actual pirates are caught or their ships destroyed, so much the better. The opposite is also true; an ineffectual response or no response at all can harm the political credibility of the Imperium. For example, a spate of pirate attacks on a previously secure communications route might undermine the efforts of Imperial diplomats to negotiate an end to an entirely unrelated insurrection. This gambit is used deliberately at times of course but the commander of an Imperial warship must always be mindful that their actions can have far-reaching consequences.

At times the navy is a more direct tool of diplomacy. An enemy that haughtily invites an Imperial delegation to negotiate an end to the conflict might be put in a different frame of mind when the single warship grudgingly permitted as transportation for the negotiators turns out to be a battleship outgunning the entire enemy fleet. On other occasions the navy is charged with demonstrating freedom of navigation, which can be hazardous. Typically a local power will claim a system or region and attempt to exclude foreign traffic. A naval task force sent to cross the loudly proclaimed ‘line of death’ creates a tense situation – will the local power fire on Imperial Navy vessels or back down? It is hard to present a territorial claim as valid when foreign vessels freely wander through the area. Such a gambit can trigger a war, of course, but the navy is used to games of brinkmanship.

PROTECTION OF COMMERCE AND OTHER INTERESTS

Commerce is the lifeblood of any civilisation but it is also expensive. Investment in ships and supporting infrastructure will pay for itself over time but disruption – or worse, destruction – of commercial traffic can have a serious effect on the economic wellbeing of an entire region. For every merchant pirated or destroyed by commerce raiders, others are withdrawn or moved to safer routes. Every attack prevented is worth millions, perhaps billions, of Credits in terms of shipping and economic activity that would otherwise be curtailed.

Protection of commerce can and does involve dramatic battles with pirate vessels but far more often it is about creating an environment in which attacking commerce is not viable. Strong enforcement of starship and weapon licensing laws, careful monitoring of starport sales and purchases, and constant intelligence gathering produce a constant pressure on those who would otherwise harm trade routes. These activities are rarely dramatic but can eventually lead to a pirate haven being shut down or a notorious raider brought to justice. In wartime, raids on commerce tend to be more blatant, with the intent of causing economic damage rather than making a profit. If the raiders are cruisers and destroyers rather than small converted merchants, a more robust response is needed. Chasing down raiders becomes an imperative as lost merchant ships result in a loss of political support in addition to the economic cost. The navy must be seen to be doing all it can, which can mean taking vessels away from warfighting missions. This serves the interests of an enemy state, pulling a far greater tonnage of warships away from the front lines than the raiders themselves. Balancing the needs of warfighting and commerce protection is one of the many challenges facing the Admiralty.

When diplomacy or implicit threat of naval force does not suffice, naval assets can be deployed in support of the state’s interests. This can mean placing a vessel over a vulnerable installation as a guardship, or be more complex. The presence of a small Imperial warship over a disputed world might not prevent attack – after all, how much can one close escort or patrol corvette achieve? – but attacking it means firing on the Imperial Navy. Even the stupidest aggressor knows that if you take on any part of the navy, you end up taking on all of it.

INTERVENTION AND PEACEKEEPING

Sometimes the capability to project power, as demonstrated by moving a ship, squadron or even fleet into the region, is enough to influence events. At times, however, direct intervention is required. This can take place entirely *in space*, by way of a blockade, or *from space*, such as attacks on military installations from orbit. In some cases direct intervention on the ground is necessary. Many naval personnel receive special 'Naval Regiment' training for such ad-hoc intervention. If it is at all possible, the Imperial Marine Corps conducts intervention on the ground, backed up by forces from the Imperial Army as needed.

Peacekeeping sometimes takes place in a region threatened by war and might suffice to prevent the situation escalating. If this does not succeed and intervention is required, it does not end sharply when the newsvids declare success. Simply pulling out at that point virtually guarantees a resurgence of conflict. Instead it is necessary to maintain a peacekeeping presence in the area to ensure the region stays pacified. The peacekeeping mission revolves around keeping potential combatants apart and rigorously applying Imperial Law. Infractions that would in another area be given the benefit of the doubt are investigated and dealt with to the utmost extent of the law. The message this sends to belligerents is simple – the navy will make their lives as difficult as possible until they begin to behave themselves.

At the same time, diplomats attempt to create an environment biased towards peace and stability. The navy can be a powerful tool in this regard, creating an incentive for the local factions to restrain their more hot-headed members. Essentially the navy makes it inconvenient for the factions to do anything and they cannot get rid of the naval presence by making trouble. This creates an incentive to return to peacetime conditions.

In some cases the Imperium wishes to prevent access to a world or even a whole region. There are many reasons why a world may be Red Zoned or interdicted, usually to protect a developing culture or fragile ecosystem, or keep clueless starfarers from blundering into severe danger. These interdictions are mainly a matter of stopping vessels, delivering a stern lecture about obeying interstellar law and searching them for contraband. Violence is rare and the vessels monitoring the Red Zone tend to be of low combat capability.

The situation is quite different when a world is interdicted as punishment for a severe infraction or in order to contain a rebellion. In this case the navy will deploy a powerful force including vessels in the cruiser class or possibly even battleships. An 'active' Red Zone is a much more turbulent environment than watching a world interdicted for scientific reasons turn slowly from day to night. Likewise, blockade-runners tend to be fast and stealthy, and may be well-armed, requiring high-capability warships to counter them. On the other hand, vessels trying to get into a quiet Red Zoned system are likely to be opportunistic traders or artefact-hunters.

WARFIGHTING

Warfighting is defined as any large-scale confrontation, internal or external. Whether a full-scale invasion by a foreign power or a rebellion by a couple of worlds, these situations require multiple ships or fleets, which in turn imposes logistical and communications burdens. Most operations are carried out by task forces or single ships and might be considered routine even if they become dangerous. Wars, on the other hand, require the navy to operate as a navy, with multiple levels of command, control and political oversight.



FIGHTING AN INTERSTELLAR WAR

Fighting a war is not merely a matter of smashing up the other side's major warships. That is a means to an end but those who seek instant victory from a decisive battle often find themselves drawn into protracted conflict. Indeed, some states go to war without any clear idea of how to win, making it virtually certain they will be defeated or forced to compromise after a long and expensive struggle.

There are two ways to win a war. The first is to totally annihilate the opposition. This is generally not feasible and rarely desirable. A war of extermination is, however, possible. It is the 'nightmare scenario' for conflict with the K'kree, who openly vow to wipe out all meat-eaters from the cosmos. It might be that the only way to bring a war to an end would be extermination and it is virtually certain this would be the goal of the K'kree. Even so, it is hoped that negotiation might prevail if the enemy can be made to see how high the price will be.

The second way to win a war is to persuade the opposition to stop fighting. Diplomacy can work and sometimes it is more cost-effective to essentially bribe the enemy for a treaty than to fight for one. However, without the fear of defeat and cost of winning a war as disincentives, there may be little reason to respect that treaty. Thus diplomacy must be backed by firepower to be truly effective. Wars have been won in space and lost at the negotiating table but as a rule Imperial diplomats can do more if they have a string of victories behind them.

Persuading the enemy to stop fighting is a difficult business in some cases. A desire for revenge can impede efforts to create peace, as can fanatical opposition to way-of-life changes. Propaganda intended to create support for a war may create attitudes that make it hard to stop it. On the other hand, demonstrating that the opposition's leadership is ineffectual or handing its armed forces a tremendous defeat can create a sudden desire for reconciliation. A regime might be toppled from within as a result of defeat and replaced by a pro-peace administration. Even if this does not happen, the possibility can be an incentive to seek a resolution.

If the enemy cannot yet be persuaded that peace is in its best interests, the navy is charged with accruing more and more advantages until the diplomatic wind changes. Advantages might be battle victories, occupation of important installations or facilities, or the weakening of the enemy's ability to fight. The latter can be accomplished by destroying warships of course but crippling industry or seizing shipbuilding yards may have a major effect. Even apparently 'soft' options such as freezing offworld assets can be used to apply diplomatic pressure to end a conflict.

When the Imperial Navy goes to war it has a set of goals distilled out of centuries of experience.

Avoid Losing: The obvious first and foremost goal is to avoid losing the war or suffering defeats that will worsen the negotiating position. This means that usually the first actions are defensive. That may mean securing key locations and protecting merchant shipping but it also refers to force protection measures. It is better to abandon a frontier system than risk losing vessels in an exposed position. Not only will those ships contribute to eventual victory but their loss would be a worse political hit than temporary occupation of a star system. Some objectives have to be held no matter the cost but as a rule, preserving the fleet is the paramount objective at the start of a conflict and generally throughout it.

Concentrate Forces: Concentration of force is the key to victory. Rather than have multiple ships badly damaged winning simultaneous hard-fought battles the Imperial Navy vastly prefers to concentrate against targets in turn, overwhelming the enemy for little loss each time. Conversely, dispersed forces may be defeated in detail by an enemy who has had time to concentrate before launching an attack. For this reason, the Imperial Navy prefers to proceed cautiously in the early stages of a conflict. Light forces will skirmish with the enemy or establish where they are absent, feeding information back to the Imperial commander.

Conduct Reconnaissance and Maintain Communications:

The ability to obtain and disseminate information is vital to a successful campaign. With communications times measured in weeks or months, a certain amount of initiative is required on the part of field commanders. However, a force out of contact cannot be redeployed, nor can it request assistance. Once command and control breaks down the conduct of the campaign drops to a lower level. Local commanders may be effective but the ‘big picture’ is lost. Successes cannot be exploited and setbacks may not be remedied. The result is a longer and bloodier conflict, and occasionally a startling defeat.

Strike at the Decisive Point: Once the enemy’s strengths and weaknesses are identified, concentrated forces can be directed against key points. These are not always obvious and not necessarily the end goal; movement against a key system might actually be intended to draw out the enemy’s heavy units to be overwhelmed. Whilst attrition is not a favoured tactic, the loss of a powerful asset can shock an enemy into seeking peace and sometimes the enemy’s strength must be ‘written down’ before a decisive clash becomes feasible.

Create Conditions for Victory: The mission of the navy is to create a favourable outcome rather than to seek victory for its own sake. Many famous engagements were in fact meaningless despite all losses incurred. Often the ends of the Imperium are better served by less violent – and less glorious – means and it is the duty of the navy to put aside thoughts of career or pride of the service in favour of getting the real job done. This does not always happen, of course, and the navy has at times suffered from misjudgements of glory-hounds. However, the mission remains the same; give the Imperium conditions whereby the conflict can be brought to a successful conclusion. That might mean smashing battlefleets or some subtler action; the navy is expected to determine the best possible outcome, then strive to create it.

REALITIES OF INTERSTELLAR WARFARE

When a navy commander enters combat, they fight with what they have. Reinforcements are at least two weeks away. Assuming 100% readiness – which never happens – a courier would have to jump to the reinforcing squadron and it would have to move straight to the target area. This is a lag of two weeks, even assuming the reinforcing formation was actually present and the commander sending the courier had authority to order movement. The courier might have to search more than one system, or might have to go to a nearby base whose admiral would then authorise and order a movement. This is an additional jump, creating another week of lag. If the reinforcing formation was not ready, perhaps waiting for supply ships, an even greater delay is imposed.

During these two or more weeks, almost anything could happen. The forward-deployed force might be destroyed or forced to retreat, in which case reinforcements might be jumping into a trap. If the forward force had moved, the reinforcing formation would then have to search and make an additional jump – with all the logistical complexities that entails. Even if a vessel were left behind to direct the reinforcing formation, the lag between asking for reinforcements and receiving them might be several weeks. By this time the opportunity might have passed or the situation completely changed.

These two factors – logistics and communications – drive the strategy of all successful naval commanders. It is not enough to know a force can reach its target; it must get there in a condition to deal with whatever comes next. This means fuel and munitions must accompany or follow a moving force, and this line of supply must be protected. Enemy movements must be correctly predicted – nobody ever won an interstellar war by chasing weeks-old reports of enemy activity.

One solution to this problem is the ‘crust’ strategy, whereby powerful combat assets are deployed forward to create a bulwark upon which an enemy assault will break. The problem with this approach is that it invites defeat in detail and the possibility an enemy might bypass or jump past well-defended crust systems. The latter creates a situation in which the dispersed forces of the Imperium would have to chase the intruders, negating the advantages of forward deployment. The former is much worse; if a sector fleet has part of its battleship strength deployed in a crust it cannot be as strong at all points as an enemy that has concentrated its forces. The enemy does not have to attack at all points; it can strike in overwhelming force where it chooses and annihilate significant combat assets for no loss.

This situation is even worse than it seems at first glance. By the time news of the attack reaches the admiral in charge of the region the attacking force can already be elsewhere. It might push deep into Imperial territory or move along the border, taking out other ‘crust’ forces. Imperial squadrons might be overwhelmed by concentrated forces or ambushed as they move to assist. In short, the crust strategy requires dispersal and dispersal brings defeat. One alternative, placing a small ‘battle’ force in each subsector, appears to allow concentration anywhere but again represents a dangerous level of dispersal. Each of these forces is inferior to a concentrated enemy fleet and the time required to concentrate ensures that at least some forces will be overwhelmed or fail to reach the battle zone in time.

The only viable solution is to start out concentrated. For this reason, warfighting assets are not scattered all over the sector but instead held at a few key sites. If hit by surprise, the fleet is already concentrated. If it must move, it can move together. This is the most effective setup for an interstellar navy but wielding it is a bit like swinging a sledgehammer in the dark. Penetrating this darkness is the role of cruisers and destroyers. Skirmishing with the enemy, fleeing when necessary and winning where they can, these light forces locate the enemy and feed information back to commanders of the warfighting formations. The problems inherent in fighting this kind of war are enormous but with initiative, solid procedures and good communications, the Imperial Navy is as capable of overcoming them as any force in all of history.

Experience has shown that the most effective way to handle large naval forces is by way of a cycle: Concentration, Deployment, Dissipation, Reconcentration. A force is assembled and sent into the combat area along with whatever supporting and logistics elements it needs. Initially, this force is highly effective and can be wielded with precision. However, over time the inevitable ‘friction’ of military operations takes its toll. Some of this is physical, in terms of damage to ships, but mostly the problem is a weakening of control and logistics.

Over time, a force may be required to detach elements which then are subject to the usual communications lag. Its own movements make it difficult for logistics ships and couriers with information and orders to find the formation. The delay between the regional commander perceiving a need for action and orders reaching the force gets steadily longer until its effectiveness is undermined. The best solution is to withdraw, regroup and re-enter the combat area well concentrated and under good control. In the meantime some elements of the engaged forces have to keep the enemy busy. This cycle works best when there are multiple forces available. As one becomes unwieldy another is concentrating for a precise strike. Usually this is facilitated by the arrival of reinforcements from other sectors.

NAVAL ENGAGEMENTS

The navy must be prepared to fight a variety of engagements. Single-ship actions sometimes take place between lone cruisers or destroyers, or on a very small scale involving patrol vessels. More commonly a group of ships will engage another group, with some disparity in the forces engaged. Indeed, creating a favourable disparity is the goal of strategists and logicians. A force of 10 heavy cruisers will more than likely be defeated by a force of twenty but if a detachment of four can be found and attacked it may be annihilated for relatively small losses. In this manner a force with better intelligence and mobility can defeat or at least weaken a larger but less well handled formation.

There are numerous ways to defeat or neutralise a naval force. Neutralisation means making the force unavailable to its commanders for a time, or occasionally on a permanent basis. Whilst neutralising a force might be less dramatic than blowing it up, it is usually achieved at lesser cost. This can be beneficial even when enemy losses are reduced; negotiations after a relatively bloodless war may be easier than one in which desire for vengeance burns on. Neutralisation by diplomacy is one option. It may be possible to persuade a third party not to send assistance to its allies, or cause a segment of the enemy fleet to refuse orders. This sometimes happens in civil wars, where some squadrons remain in port whilst protesting their loyalty.

Neutralisation can also be achieved by deception, perhaps causing the enemy force to be out of position and unable to reach the combat area in time to make a difference, or by interrupting communications. A unit that never receives orders may not be able to act and if it does it will not be in concert with other forces. Shortage of fuel and ammunition can also weaken an enemy force or incline its commanders to be highly cautious. Attacks on lines of supply and bases can not only impose physical limitations on the enemy but might also alter strategic thinking. A force concerned mainly with protecting bases and lines of supply will not undertake bold lunges at the enemy, which in turn frees opposing commanders from concentrating on their own defensive needs. Neutralisation can also occur due to sabotage or command paralysis, which occurs when admirals do not have enough information to make a decision and are stuck waiting for the situation to become clearer.

Attacks on bases or lines of supply can neutralise part or all of an enemy force, which may lead to the defeat of another component. Defeat, in this context, means the force can take no part in future operations. Destruction of warfighting vessels is one option but a force out of fuel and unable to obtain more might be considered defeated, as are ships limping home for repairs. Killing a senior commander or rendering them unable to direct the force usually results in only temporary neutralisation but defeat can occur if the force is thereafter unable to operate. This typically only occurs in the case of extremely charismatic commanders.

Defeat can be inflicted without confronting the main enemy force head-on. Raids to draw off strength, feints to take force elements out of position, interruption of supplies and communication, and a denial of good information can weaken an enemy force to the point where the political will to fight dissipates. The will to fight can also be attacked by targeting prestigious vessels or important assets. For example, an enemy might concentrate all efforts against a single famous battleship, knowing that its loss will shock the public back home and lead to pressure for a ceasefire. Likewise, the fall of an important base or star system might deliver a similar blow. This could put the enemy commander in a position where they have to accept battle on unfavourable terms or cannot manoeuvre freely. Both can influence the strategic situation to an enormous degree.

To be meaningful, any naval engagement must further this agenda. Simple attrition of enemy forces is always an option but it is an expensive way to win – or lose – a war. Ideally, the enemy is weakened and demoralised before confrontation is sought and the battle is fought in a manner and location where defeat has the greatest effect upon the enemy. Sometimes this is not possible but engagements may be part of a greater plan. For example, a commander might decide to skirmish rather than seek decisive action and concentrate on depleting the enemy's escort forces by direct action and harassment of supply lines. Once the escorts are weak enough, direct attack on heavy units by way of missile salvos has a much better chance of achieving a decisive result.

Naval engagements are to a great extent consensual; that is, both forces want to fight. If one side feels the battle is unwinnable or not worth the cost, it can break off and jump out. Some wars drag on like this for months, with forces chasing each other around with little idea what to do when they bump into one another. Conquest and control of objectives changes this, creating a situation in which a commander may have to fight even if at a disadvantage.

No volume of empty space can be considered much of an objective. Objectives are therefore bases, key worlds or sources of fuel. For this reason most actions take place close to one of these objectives, or represent attempts to destroy an enemy force in order to reduce the threat. A naval engagement might be fought to prevent an enemy force refuelling, thereby limiting mobility or trapping it in-system until reinforcements arrive to finish it off. Orbital space of a key world must be defended to prevent bombardment or the landing of troops. Indeed, control of space around an enemy capital or key world is one of the indicators of victory used by diplomats and newscasters alike.

'System control' has slightly different meanings in peace and war. In peacetime, the phrase refers to operations to eliminate piracy and improve security, whereas in war a heavier presence of major ships is required to truly control a system. Controlled systems are extremely dangerous for even a major force to enter but full control is not always possible. Instead 'system denial' is sought, whereby a sufficient threat is posed to enemy vessels that operating there is hazardous. A major fleet might be able to move through a denied system but couriers, tankers and damaged warships would be in danger. If denial is not possible, the best a commander can hope for is to dispute a system. This usually means having a presence there but in some cases a system can be disputed merely by the threat of a raid from somewhere nearby.

A full-scale naval war is a highly complex situation in which commanders attempt to control their own key systems and take control of enemy territory. Other systems are denied to the enemy or disputed in order to disrupt communications and logistics. This may result in some systems being disputed by minor forces; one side controls a gas giant convenient for refuelling, the other a minor mainworld. Neither has the resources for decisive action, so they both cling on as best they can. Fleet elements could quickly change the situation but are tied down confronting the enemy's major forces, so a stalemate begins. This is common in warfare and can lead to prolonged conflicts.

However, wise commanders know they do not have to win everywhere; they must win somewhere and avoid defeat everywhere else. The balance might be tipped by minor forces which gain control over a local area and begin harassing enemy vessels trying to pass through. A tanker here, a courier there and the main force is weakened. The opposite also happens; the 'sideshow' actions fizzle and spit in the background until the fleet breaks through and troops start landing in enemy cities. A senior commander who knows everyone will do their job can make good use of all assets available. In lesser navies the commander can only hope the route is still open when the emergency resupply convoy attempts to pass through.



ORGANISATION OF THE IMPERIAL NAVY

The Imperial Navy is organised with flexibility in mind, and the twin needs of warfighting and internal security. Peacetime structure is built around Named Fleets, one for each sector of Imperial space. Named Fleets, usually referred to as Sector Fleets, have a nominal composition which varies little from one sector to another. Within each Sector Fleet are several Numbered Fleets, usually known as Subsector Fleets. These are generally sufficient to deal with whatever arises but in time of major war are augmented by forces from other sectors.

PROCUREMENT AND DISPOSAL

Naval procurement is a lengthy and complex business. Admirals and ship crews might wish for ships bought with nothing but capability in mind but procurement is far more complex than this. It has been wisely said that many naval actions were won or lost in a procurement meeting five decades before and that the only certainty in strategic planning is that whatever you are best prepared for will not happen.

Procurement decisions are made by the Admiralty, subject to a great many competing requirements. Obviously, the type of ship the navy wants or needs must be considered and often the decision is made to create a class that can handle more than one role. This approach sacrifices high-end capability for cost-effectiveness, allowing the navy to buy more hulls for the same budget allocation. With a lot of star systems to cover, this is an essential consideration.

There are other pressures at play, as well. Megacorporations and major shipyards have a lot of influence and can persuade the procurement board to buy their design despite that of a competitor being, on balance, better. Employment is yet another issue; the navy has at times ended up with rather poor vessels because building them kept huge numbers of people in work. It is the naval crews that end up paying the price for this economic decision but in a system as complex as the Imperium, trade-offs are inevitable.

The procurement process can be very complex, with the cost of a ship class offset in various ways. For example, a shipyard might offer to build a particular class at a discount, providing the Imperium funds the construction of a prototype it hopes will later be adopted for service. Conversely, the navy might agree to award a build contract to a particular megacorporation in return for the construction of infrastructure on a key world. These offset deals can be so complex that nobody really knows the true cost of the project, and in turn can lead to rather strange decisions.

Once a contract is awarded, ships go into production, usually at several yards in different regions. Lessons learned with the lead ships of the class are then incorporated into later examples, which in some cases can lead to an extensive mid-build redesign. One trick commonly used by the procurement board is to initially build a ship with a reduced specification, then ask for money for upgrades in future budgets. When this works, it can produce very capable vessels that would not have been affordable in a single budget allocation, but if the extra funding is not awarded the ship will have to manage without some of its intended systems. This is one reason why some classes never receive their full electronics fit, point defences or other necessary components.

Disposal is in some ways the opposite of procurement. Something has to be done with old warships and their fate can vary a lot. Some are mothballed in the reserve fleet, awaiting reactivation in the future. Usually this never happens and vessels deteriorate over time, but occasionally a class will be put back into service either 'as is' or after an upgrade and refit.

A few retired ships become museums or monuments but most go to the breakers' yard for dismantling. A lot of the basic materials and some of the systems built into a ship can be re-used, but breaking is not simply about recouping some of the costs of the ship. A vessel that has been dismantled has definitely gone and can be written off the books. Those that are out of service but still extant must be monitored – an old warship is dangerous in the wrong hands and rival powers can learn a lot from possession of a former navy ship.

Some warships are transferred to other users, typically the planetary navy of a world rich enough to operate warships of its own. Planetary navies may not feel the need for a jump-capable force, in which case jump drives may be removed, creating a powerful defensive asset whose systems, even if old, are interoperable with those of the current generation of Imperial Navy ships. Veterans of the Imperial Navy who go into service with a planetary force sometimes find themselves crewing a ship they served aboard earlier in their career.

Other end users include the Scout Service, which sometimes buys vessels for conversion into exploration platforms and corporate fleets. Regulations exist governing what systems can be carried aboard a vessel in private hands; often the spinal weapon of a warship will be disabled by the removal of critical components, although there have been occasions where these were then mysteriously 'lost', giving a well-connected corporate noble a vessel capable of taking on all comers.

Those vessels that do not find another home or are too decrepit for mothballing are often expended as targets, testing weapons under live conditions. This is a rather sad end for a well-liked warship and large-scale campaigns to save a vessel are not uncommon. These occasionally succeed, with ancient ships assigned to the navy's 'glory squadrons' to participate in ceremonial occasions. Most, however, are destined to be dismantled or blasted to pieces at the end of their career.

THE REGULAR NAVY

Most of the naval assets of the Imperium belong to the Imperial Navy proper; the 'regular navy'. These forces answer, through their officers and admirals, to the Emperor and are available full-time to perform duties. When not on combat operations, deployed to a region on one of many possible missions, or in port conducting essential maintenance, the ships of the Imperial Navy train and exercise, maintaining and upgrading skills that will hopefully never be put into action.

The regular fleet is maintained in a high state of readiness, although its competence varies from region-to-region. Some areas have not seen anything worse than an orbital traffic violation in decades. Others have near-constant border incursions to deal with. For this reason, ships and squadrons are

regularly rotated from 'safe' sectors to more troubled borders in order to keep experience current. Despite the best efforts of 'adversary' squadrons and training officers, complacency can be a problem.

THE IMPERIAL CORE FLEET

The Imperial Core Fleet is a sub-division of the Imperial Navy but rather than being assigned to a sector it is assigned to the Emperor – its area of operations is wherever the Emperor happens to be, plus the Imperial capital and surrounding regions. Squadrons are often detached to escort members of the Imperial family when they are away from Capital.

The Core Fleet provides personnel for ceremonial detachments and the Bodyguard Squadrons, which form the close escort and heavy support for the Emperor's ship and those of the immediate household. Bodyguard vessels are liable to sudden visits from dignitaries, so ships and personnel are maintained in a parade-ground state of shine and polish when not actually under fire. Bodyguard duty is extremely prestigious and positions are hotly competed for.

The Core Fleet is far from the borders and has little opportunity to gain combat experience. For this reason, vessels are temporarily assigned to other fleets in a never-ending rotation. Around 20% of the nominal strength of the Bodyguard Squadrons will actually be serving with other fleets at any given time.

THE COLONIAL FLEET

The term Colonial Fleet is a misnomer, thought to originate in the early days of the Second Imperium. It is a 'shadow' organisation which parallels the regular navy and contains vessels available to Imperial admirals, but which are not owned by the regular navy. A better name might be 'Auxiliary Fleet' but all attempts to change the title have been vigorously resisted.

The primary source of ships for the Colonial Fleet are member worlds which maintain their own warships and loan them to the Imperial Navy. It is very rare for a member world to possess battleships, even obsolete ones, and even cruisers are uncommon. The Colonial Fleet typically supports local subsector fleets with additional escorts and patrol vessels, usually deployed close to the owning system to create a safe zone and free Imperial vessels to operate more widely. More powerful ships are often assigned

to third-line or reserve squadrons for the defence of the local area. Again, this frees Imperial vessels for operations elsewhere, as any battleship – however decrepit – is a powerful deterrent to raiders.

Additional vessels may be provided by corporate interests or the major nobles of an area. The latter are referred to as ‘Huscarle’ forces. Auxiliary vessels taken from trade, such as merchant ships that receive a subsidy in return for an agreement to assist in wartime, are assigned to the Colonial Fleet when activated. Mercenary vessels may also be hired in a crisis. This has the side-effect of removing many potential corsairs from the equation, although it can occasionally backfire.

THE RESERVE FLEET

The Reserve Fleet is a second shadow organisation, although it is directly run by the Imperial Navy. The difference is that the vessels of the Colonial Fleet are active but only sometimes assigned to Imperial command whereas reserve ships are usually inactive but always the property of the Imperial Navy. The Reserve Fleet also has responsibility for naval reserve personnel, including those who have left the force in recent years but subject to recall, and long-term naval reservists who can be called up when additional personnel are required.

The most commonly activated Reserve Fleet assets are merchant craft on a navy reserve contact. These are called as needed and released afterward. Missions are rarely very sensitive but these vessels allow an increase in logistics or communications capability for a short time. Rates of pay are not much better than a standard charter but there is also a modest retainer when the vessel is not active, and the navy offers access to repairs and refits at a discounted rate. The deal is good enough that many small merchant craft take it but not all are enthusiastic when actually required to do something.

Other reserve vessels and personnel come from the ready-reserve forces, which are maintained in a state suitable to be reactivated at a few days’ notice. These are the best of the ships recently retired from service, and over time descend through the reserve status hierarchy from Category 1 – vessels which are essentially functional but require thorough checks before re-entering service – all the way down to Category X.

Vessels gradually slide down the scale and their current status is not always apparent despite inspections every few months. These ‘mothball fleets’ sometimes yield a useful surge of reduced-capability vessels to replace losses or permit more capable ships to be transferred to the combat area, but the activation of anything below Category 2 is rare except in the most bloody of conflicts. Lower readiness ships may be demilitarised and repurposed, or bought by Colonial forces to whom they are still a powerful asset.

Reserve Categories

Category	State of Readiness	Typical Time to Enter Service
Contracted Reservist	Currently in service and ready for assignment	Immediate
Ready Reserve	Fully functional, requiring only a full crew	Immediate upon crew arrival
Category 1	Fully Functional, requiring test flights and inspection	1–3 days
Category 2	Reduced functionality, entry to service subject to some maintenance work	3–20 days
Category 3	Significantly reduced functionality, entry to service subject to some maintenance work	10–60 days
Category 4	Greatly reduced functionality, entry to service subject to major repairs	40–120 days
Category 5	Very low functionality, entry to service subject to major repairs	60–300 days
Category 6	Beyond return to a useful state without a major rebuild	300+ days
Category X	No longer useful as anything but a source of spares	Never

LOCAL DEFENCE FORCES

Variously referred to as system squadrons, system flotillas, or local forces, the defensive forces maintained by Imperial member worlds are usually made up of non-jump-capable warships such as system defence boats and monitors. They are staffed entirely by local personnel, other perhaps than a few advisors. Local forces are not part of any fleet but owned by a single world and controlled by that world's System Defence Command, which acts in close conjunction with Close Orbit and Airspace Control Command (COACC) to ensure a seamless defence of local space.

In-system forces are far more common than jump-capable Colonial squadrons. Vessels are mixed and can include anything from large custom-built monitors and obsolescent battle riders, to fighters and armed inspection cutters. System defence boats of 200–1,000 tons are the most common feature of system squadrons.

THE ARMY AND MARINE CORPS

The Imperial Army needs starships for interstellar mobility and logistics, and for communications between worlds. However, it does not possess starships. The decision was made long ago to completely separate army and navy areas of operation. Essentially, if it can leave orbit, it belongs to the navy or the marines. Some army aerospace and orbital defence formations have craft capable of orbital combat but in general the rule holds true.

The Imperial Navy is charged with providing transportation and information transfer to army units. Navy transports bring supplies and navy assault ships land the troops. Navy bombardment ships provide heavy support. In general cooperation is good, although sometimes the navy's own needs for logistics vessels mean the army does not receive what it needs on time. This has caused friction and a handful of famous army-navy feuds.

There is one partial exception to the 'no army starships' rule – personal transport for high ranking officers and transportation of sensitive information. Even then, the couriers used for this role are seconded from the navy and crewed by navy personnel but do technically belong to the army until returned to navy command. This means that these vessels are outside the naval chain of command and cannot be repurposed until proper orders are received.

The Imperial Marine Corps has starships of its own. Most of the time it relies on naval transports but has assault vessels and support ships, including marine fighter carriers. These deploy craft capable of descending into atmosphere as well as fighting in space, enabling marines to protect their own assault ships and secure lines of communication to orbit without having to constantly request navy assistance. The technical crews of these ships – engineers, gunners, astrogators and so forth – train alongside navy counterparts. Personnel can swap from a navy to a marine ship with only an insertion on the personnel roster being required.

In addition to operating their own ships, marines serve aboard navy vessels and protect naval installations. Small vessels may only have a squad, or no marine presence at all, whilst larger vessels may have a significant force of ship's troops. When on a ship's troops deployment marines are placed in the vessel's chain of command and take their orders from the navy. Small detachments may have no marine officer present, being led by a non-commissioned officer, and are placed under the command of one of the ship's officers or its master-at-arms. If an officer is present they command the ship's troops and are slotted into the ship's chain of command wherever appropriate. This is usually under the command of the gunnery officer, although in some cases the ship's troops commander might actually function as gunnery officer as well.

Marines are typically trained in naval gunnery as well as the usual emergency procedures. This means that in addition to providing security and acting as a shore patrol when necessary, the marines can help fight the ship and keep it in action. Those with specialist skills may be loaned to shipboard departments as necessary but will be recalled to the disposal of the ship's troops commander whenever their primary role is required.

Ship's troops are part of a warship crew, whereas marines carried aboard are not. The difference is whether the marines are part of the warship's mission or intended to function as an independent command with a job of their own. Some warships carry large complements of troops which can be deployed as the captain sees fit and remain attached to the vessel's chain of command. Transported marines, on the other hand, have their own role and can decline requests for assistance if they compromise this mission. By way of example, a cruiser with a company of marines as its ship's troops are a single force under the command of the cruiser captain who can order the marines to carry out appropriate tasks. A company of marines carried

aboard a cruiser as transportation are not ship's troops and still answer to their own chain of command. Cooperation is desirable, and indeed likely, but the cruiser captain does not 'own' these marines.

POLITICAL DIRECTION

Political direction of the navy is exercised by the nobility but nobles exercise *influence*, not *command*. No noble has the right to give direct orders to naval personnel – orders must normally come through the proper chain of command. There are exceptions to this, however. The Emperor has the right to command any Imperial military unit at any time and certain Imperial Warrants give the bearer the right to assume command of Imperial assets.

Outside these two situations, the process of commanding the navy is simple; political leaders inform the Admiralty of the situation and the outcome they would like to see and the Admiralty decides if it can be done and, if so, how. There are some limitations on the direction a noble can give, although generally speaking the more senior the noble, the more influence they can exert over the navy. A subsector duke who wants the fleet to charge over the border and chastise some 'barbarian state' will probably not be obeyed, but if the archduke of a domain thinks it is in the Imperium's best interests to launch a pre-emptive attack on a developing threat, the fleet might well comply.

Some actions are absolutely forbidden, however. The nobility cannot use the navy to fight one another, directly or otherwise. The term for this is 'civil war' and nobody likes those. Naval commanders must sometimes make tough decisions, such as when a subsector duke tries to stop fleet elements from falling back in the face of a powerful assault. A 'not one step back' policy might be in the interests of local worlds but the navy must consider the needs of the Imperium as a whole and the desires of its senior leaders.

Imperium-Wide

The Imperial Navy owes its ultimate allegiance to the Imperium as personified by the Emperor. All personnel swear an oath to preserve and defend the Imperium, and to do the will of the Emperor. The Emperor holds the honorary title of Admiral-in-Chief

of the Grand Fleet, although an Emperor has not actually led any Imperial fleet into battle for centuries. However, ultimate responsibility for the actions of the fleet; for the appointment of its admirals and its officers; for the provision of ships and spares, rests with the Emperor and whomever the Emperor appoints to oversee the specifics.

Fleet Control is one of the rights recognised by Imperial Law as a legitimate claim to the Iridium Throne. No Emperor since the Civil War has held the position merely through this right but it is still recognised as one of the most important factors making an Emperor fit to rule – the Emperor must be able to impose their will on the Imperium and its enemies, and the Imperial Navy is the perfect tool for that task.

The navy is used by the Emperor as a political tool as much as a military one and the choice of subordinates, deployments and strategies must weigh military considerations against political ones. Thus it may be necessary to 'waste' a powerful fleet on garrison duties in a peaceable region, or appoint a poor officer to the Admiralty, in return for loyalty and support from a segment of the Imperial population.

The Domains

The Imperium is subdivided into domains, most of which currently have an archduke. The archdukes are the Emperor's representatives in their area of interest and expected to have a good grasp of strategy. Domain level naval organisation is mainly administrative. Domain Fleets remain an administrative concept only, despite the attempts of some archdukes to gain more direct control. Instead, procurement of ships and equipment, and most recruiting, takes place at the domain level along with much training. The result is that the ships and crews most likely to be working together in a crisis have habits of cooperation and near-identical training regimes.

In the event a major crisis or war erupts, domain level cooperation will furnish the first wave of reinforcements. The archduke is in constant communication with the sector nobles and admirals within their territory, and will be up to date on the local situation. Similarly, intelligence work is typically collated at domain level then fed back down to sector and subsector levels as needed.

Sector Level

Most sectors have a sector duke who is responsible for providing political direction to the fleet assets assigned there. The sector duke does not command the sector fleet, however. They may have forces of their own which sometimes cooperate with the navy but can only ask admirals to perform any given task. In the event of a crisis or war, the sector admiral takes immediate charge, although they may send out fleet elements under the command of a subordinate.

A sector fleet contains one numbered (subsector) fleet per subsector, plus fleet elements based on the number of subsectors in the sector. This is 16 for a sector fully within the Imperium, and border sectors typically have a fleet of equivalent strength. The nominal strength of a sector fleet is one BatRon (Battle Squadron) per subsector and one CruRon (Cruiser Squadron) per subsector, plus sufficient escorts and support vessels to create an efficient and effective force.

These elements are not dispersed in ‘penny packets’ across the sector. To do so would be to invite defeat in detail. Instead the warfighting elements – the BatRons and most of the CruRons – of the sector fleet are held at two or three major bases. Squadrons and ships may be detached for various missions but the main elements of the sector fleet are concentrated and ready to fight at all times. Some of the sector fleet’s assets – typically cruisers and destroyers – are sent to the assistance of the subsector commanders as needed.

Subsector Level

Each subsector has a subsector admiral in command, who is advised and directed by the subsector duke. A subsector admiral has responsibility for security and peacekeeping in peacetime, in keeping with the adage that ‘sector fleet fights wars; subsector fleet keeps the peace’. In wartime, a subsector commander might receive additional forces, perhaps including cruisers and front-line destroyers, if raiding is likely to be a problem. Other commanders might find some of their escorts and patrol assets moved to sector command.

A subsector (numbered) fleet usually has a single cruiser-type vessel as its flagship, plus destroyers of reasonable capability. The remainder of its forces are old or light vessels best suited to patrol work and general security duty. Upon occasion, a subsector

admiral has been given command of a powerful force of battleships in order to conduct the defence of a critical world or avenue of advance but it is exceedingly rare for a peacetime subsector admiral to command any capital ships unless they are extremely old.

System Level

The Imperial Navy does not maintain many system-level deployments. The exception is major naval bases and Capital itself, all of which have powerful system defence forces. In some cases the navy sends additional forces to assist in the defence of a key system but these are temporarily under the command of local officers rather than their parent fleet. There is one exception to this – officers so assigned are always empowered to remove their ships from local command for any sufficient reason. This allows the naval assets to be reassigned to fleet command or refuse inappropriate orders from a system commander. It also makes provision for the abandonment of indefensible systems despite protests from local leaders.

FLOTILLAS, SQUADRONS AND TASK FORCES

Most naval missions are carried out by task forces. A task force is a temporary formation usually built around a primary vessel suited to the mission at hand, plus additional ships to provide escort and support. A task force carrying out a minor anti-piracy sweep might be led by a small destroyer and supported by three to five corvettes, plus an auxiliary carrying supplies. The latter might also be used to transport captured hostiles or items for use in evidence. A larger task force might be built around a cruiser or carrier, in which case it would have more and larger supports.

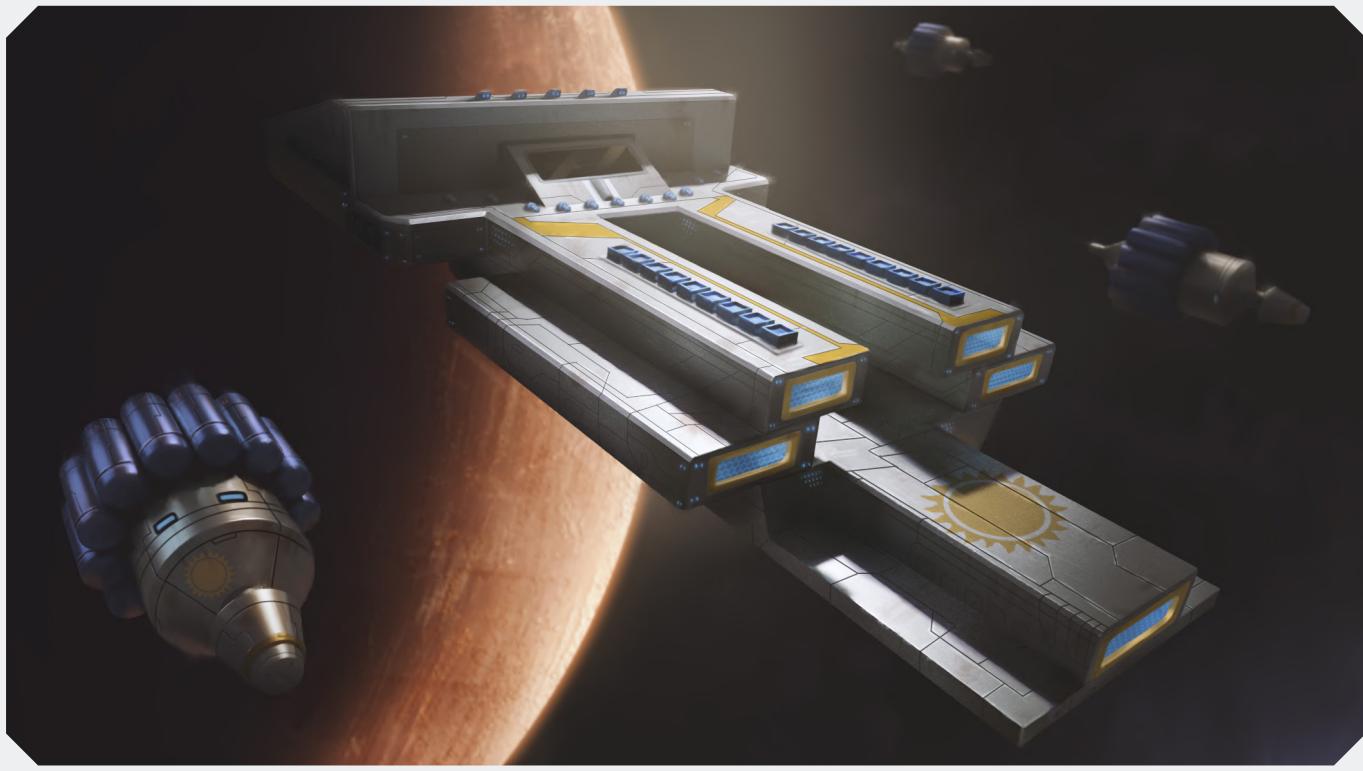
By definition, a task force contains vessels with differing capabilities and/or primary roles. The flagship and some of the supporting vessels are tailored to the mission at hand whilst the supports are typically scouts, escorts and transports or specialist vessels. The result is a self-contained force which can handle a variety of challenges whilst getting the primary job done. The term ‘squadron’ can have more than one meaning but in all cases a squadron is a longer-term formation than a task force and typically contains vessels with the same primary function and similar capabilities.

In the formal peacetime organisation of the navy, squadrons are composed of vessels of the same type and capabilities, and generally comprise two divisions of two ships making a squadron of four. On paper these should be identical ships, or at least members of the same class, but in practice squadrons tend to number between two and six vessels of similar type. For example, if only three destroyers are present at a given location they will usually be grouped as a single squadron of three even if they are of differing types and capabilities. If five ships were available these might be grouped as two squadrons – perhaps a squadron of three highly capable ships and a squadron of two lesser ones.

Squadrons of smaller ships such as corvettes and destroyers are typically led by the most senior captain of the squadron, whilst squadrons of cruiser-sized vessels and above will usually have a commodore in command. If so, command of the squadron is preferred to rest with a different person to command of the lead vessel, as discussed on page 120. Commonly, however, both roles are fulfilled by the senior captain with no additional resources.

In this context, naval squadrons are homogenous units intended to be part of a larger force or to detach vessels to form task forces. However, sometimes a ‘system squadron’ is formed from whatever vessels are available. Such a formation resembles a task force in composition but is assigned long-term to a given star system so is considered a semi-permanent formation. The term ‘squadron’ is also sometimes used for a group of small craft or system defence boats of similar size and capability. Small craft squadrons tend to be nominally twice the size of larger ship squadrons, comprising two flights of four craft for a total of eight. In practice they can be anything from five to twelve vessels.

The term flotilla is used for a system defence force containing craft of varying sizes and capabilities, or a force too small to be considered a fleet. A flotilla typically contains too many ships to be considered a task force or ad-hoc squadron, and might in fact contain multiple squadrons each with a specific purpose. For example, a system defence flotilla might have two or three system defence boat squadrons, several fighter squadrons and a support and logistics squadron. Whilst containing a fair number of vessels this force is most definitely not a fleet and would be commanded by a commodore rather than an admiral. Another flotilla might be a composite formation containing a squadron of four obsolescent destroyers and a squadron of 11 patrol corvettes, plus a few auxiliary vessels, all tasked with securing an area of several star systems.



FLEETS

Any major grouping of warships can be termed a fleet but there are fleets and there are fleets. Each subsector has a numbered fleet for its security and each sector has a named fleet assigned to deal with major threats. Other fleets might be formed at need, such as a logistics fleet sent to support a war effort or a battle fleet assigned to augment the local fighting power. These fleets are usually created by borrowing vessels from other sector fleets, or sometimes reserve formations. A fleet will, by definition, contain squadrons of vessels of various types, although fleets with a specific mission will receive a core of vessels suitable to carry out that role. Most will also contain task forces and flotillas. All fleets are commanded by admirals of varying rank.

In addition to the sector and subsector fleets, political or military requirements may prompt the creation of special fleets. This is common in time of war but also happens for coronations and other major events. Some special fleets draw ships from many sources, to which they are returned once the need has passed, while others are created by detaching a component of a single sector fleet. Donor formations will eventually get their ships back, or will be replaced from other sources. However, the need to prosecute a major war will inevitably leave areas depleted for a time. Sectors facing potential foes, which have lost part of their forces to support other conflicts, are usually placed on high alert to get the most from the remaining formations.

Battle Fleets

Battle fleets are usually constructed around a core of capital ships – battleships and dreadnoughts – plus sufficient supporting forces to prevent their potency being nullified. Battle fleets are intended to engage the enemy's main strength and break it.

Strike Fleets

Strike fleets are similar to battle fleets but optimised for speed and firepower. Their usual role is to advance quickly against a known target, deliver crippling damage, then retire. A strike fleet may have more raw damage output than a battle fleet but lacks staying power; it will take disproportionate losses in a protracted engagement. Strike fleets are sometimes used to clear a path for an assault or battle fleet, smashing resistance aside to allow the heavier force to move unimpeded.

Penetration Fleets

Penetration fleets are designed to punch deep into enemy territory and cause as much damage as possible before retiring or receiving assistance from a slowly advancing battle fleet. They differ from strike fleets in that survivability is of paramount importance and usually contain an enlarged support and logistics element.

Assault Fleets

Assault fleets are created to carry surface forces to a world and land them there in the face of heavy opposition. They are well-equipped for orbital bombardment and fire support. Assault fleets often use vessels with a lower jump capability than line-of-battle vessels, trading strategic mobility for additional capacity and firepower.

Interdiction Fleets

Interdiction Fleets are rare, since most interdictions can be handled by a task force. However, upon occasion it is necessary to prevent major forces moving through a system or in and out of a certain world. The usual role of such a fleet is to stop all traffic accessing and egressing a world, carrying out bombardment if necessary. Interdiction fleets are sometimes created to block a likely avenue of approach or retreat, or to dissuade a foe's allies from moving forces to assist. Composition can vary considerably and often the fleet has to operate in several systems at once.

Reinforcement Fleets

Reinforcement fleets are temporary fleets of mixed squadron types, created from squadrons moving up to join an ongoing conflict or prepare for one. They are administrative formations, although capable of fighting at need. Upon reaching the war zone, the reinforcement fleet is usually broken up into squadrons and integrated with local forces of the same type. Some of its elements – and its commanding officer – may be redesignated to create a specialist fleet in the battle area.

Glory Fleets

There are two kinds of ‘glory fleet’. One is a fully extant force that has won the accolade for meritorious service. Conferred by the Emperor, this grants the honour of using the term ‘Imperial’ before the fleet’s designation – but only for a limited time. For example, if the rather mediocre 100th Fleet, assigned to the Glisten subsector, were to cover itself in glory it might be permitted to refer to itself as the Imperial 100th Fleet until the death of the current Emperor or some other specified date. Some formations are designated ‘Imperial’ on a permanent basis, including the Imperial Core Fleet.

The other ‘glory fleets’ are temporary formations that won the accolade and were to be disbanded before it expired. Rather than having the identity lapse when the fleet stands down, it becomes a home for honoured vessels that are no longer in naval service. Thus whilst the 44th Battle Fleet only existed for a few months as a fighting formation, its traditions live on in a squadron of beautifully maintained museum ships, recruiting vessels and last survivors of notable warship classes. In times of war, these vessels transfer out to another placeholder designation allowing the grand traditions of the 44th Imperial Battle Fleet to pass to a new generation of ships and crews who are assigned to turn it back into a fighting formation; thus the honour of notable formations never dies, even if they sleep for a time.

HANDLING A FLEET

In a major war, different fleets will be given their own tasks. For example, a penetrator fleet might be assigned to punch through enemy-held space and eliminate key bases whilst a battle fleet drives towards a specific objective followed by an assault fleet carrying troops to take and hold the target world. Each has its own job to do and – hopefully – the right vessels to do it. Fleets may vary in composition and size from one another and indeed over time. If the penetrator fleet takes excessive losses it may be broken up, with some vessels added to the battle force and others assigned as small raiding groups with a more limited remit – or the former penetrators might be assigned to chasing down the enemy’s raiders.

At the core of a fleet are its most powerful vessels suited to the mission at hand. These may not be the ships with the most fighting power. For example, the purpose of an assault fleet is to get troops on the ground and suppress opposition. Bombardment cruisers and assault transports are the vessels for this task. However, the fleet flagship might be a battleship, with additional battleships assigned to smash through opposition and provide fire support. If this was the primary mission the force would be a battle fleet and have more fighting ships; battleships in an assault fleet are supporting assets rather than the main players.

Cruisers and the more powerful destroyers provide protection against lighter enemy vessels and ‘secure the flanks’ of the force. This is jargon for making use of their balance of fighting power and quick response to secure refuelling locations and prevent hostiles from bypassing the main fleet to attack its logistics ‘tail’. Cruisers also supply additional firepower and specialist functions such as heavy missile support. Light craft such as close escorts provide a final line of defence against attack by enemy gunboats and fighters. A fleet will usually contain supporting craft such as tankers, which must also be protected.

This model works on a sliding scale for fleets of varying sizes and also forces down to the size of a task force. Where one battle fleet may have several squadrons of battleships supported by just as many cruisers, another might have a single BatRon plus a handful of cruiser squadrons to provide additional firepower. Alternatively, a strike fleet might have no capital ships at all, in which case its primary elements are cruisers and the ‘cruiser’ role slides down to the destroyer squadrons. The same applies to a small task force; it may have a single cruiser at its head and be made up of light escorts for the most part. However, the same principles apply.

A successful commander makes good use of their fleet elements and pits them against weaker enemy units wherever possible. For example, a force of enemy destroyers headed for the logistics ships might best be intercepted by light cruisers fast enough to get into range and potent enough to smash the attacking force. Using equivalent destroyers creates a fair fight, which the Imperial Navy should win due to superior training and technology but which may

result in unnecessary casualties. However, pulling a CruRon off the flank to intercept a destroyer squadron might mean having to send destroyers to intercept strike cruisers charging through the gap at the capital ships. There are always trade-offs unless the fleet commander has overwhelming superiority in all areas.

CONDUCT OF A WAR

It is not possible to predict exactly what will happen when war breaks out but commanders will be aware of likely targets within their area of operations and can plan accordingly. An enemy will want to destroy elements of the Imperial Navy and/or take control of strategic systems. These goals are often complementary; a thrust towards a world that absolutely must be held will pull in all the available naval forces, which might be ambushed in transit or pinned against the objective and overwhelmed. Whilst it is not possible to predict the exact course of a conflict, the navy will always have contingency plans.

The success or otherwise of a campaign is often predetermined by decisions made years before. Having the wrong ships, or positioning them poorly, can make actions unwinnable. Key systems close to the border might be overrun before word reaches the sector admiral that anything has happened. This gives the initiative to the enemy, as these systems must be retaken which makes the Imperial Navy predictable. In order to avoid this, key systems are 'defeat-proofed' to as great an extent as possible.

Defeat-proofing is not the same as returning to a crust strategy. Instead, selected systems are assigned naval vessels or, more commonly, granted a large subsidy to pay for powerful in-system forces of their own. If there is time, these might be augmented by battle riders transferred from the sector fleet. Light forces will usually be forward-deployed at these key worlds to contest surrounding star systems and conduct reconnaissance.

These fortress worlds are expected to function as breakwaters for an advancing enemy and hold out without reinforcement for a significant time. A direct attack will be costly for the enemy but bypassing the fortress worlds allows them to function as bases for attacks on the supply line. Major fleet elements may well join the battle for these systems but might on other occasions defend them by striking elsewhere. In short, the fortress worlds along the borders are expected to withstand the initial assault, permitting the fleet to mass against the enemy as the picture

becomes clearer. Rather than a crust that could be attacked in overwhelming force at a point of the enemy's choosing, fortresses and the fleet act as shield and sword. Systems of lesser importance might be occupied by the enemy but can easily be retaken when their strength is broken.

As soon as word arrives of conflict, the sector admiral becomes the theatre commander. They will usually remain at the sector's main naval base and direct operations from there. Whilst the urge to sally out at the head of a powerful fleet may be intense, it is the duty of the sector commander to be somewhere that couriers can find them. Commanding from the front inevitably leads to a breakdown in command and control everywhere the admiral is not.

The sector admiral will usually remain in charge throughout the conflict, sending subordinates out to command the squadrons and fleets actually fighting the war. Likewise, each subsector admiral will usually remain at their headquarters and direct local operations. Sector fleet assets might be assigned to a subsector admiral, particularly in the case of threatened border subsectors, but commonly the sector fleet cooperates with subsector forces rather than transferring to subsector command. This means that squadrons operating in a given subsector are not commanded by its admiral. Instead they answer, through their own commanders, to the sector admiral.

Subsector commanders are expected to gather intelligence and undertake whatever harassment they can achieve against enemies in their area but their primary role is to facilitate the actions of the concentrated sector fleet. They will make recommendations and provide information, allowing the theatre commander to decide how best to conduct the conflict. Reinforcements arriving from other sectors will pass to the command of the sector admiral for the duration of their deployment. It is exceedingly rare for a sector admiral to lead a fleet reinforcing another sector. Indeed, this might be seen as dereliction of duty. Instead the supporting sector admiral sends subordinates to command whatever forces are transferred.

In the event of a major war, some subsector admirals may be moved to command part of the sector fleet. Their deputies or a new admiral will take over the subsector fleet. This is unusual, however. More commonly, fleet admirals are assigned to command sector fleet elements and newly arrived reinforcements, and the subsector admiral remains in

post. Occasionally, where a subsector is considered critical to the defence of the region, additional forces, possibly including capital ships, will be transferred to subsector command. The subsector admiral will take responsibility for local defensive operations which explicitly includes strikes against targets such as enemy bases supporting threats to the subsector. Where this means crossing a subsector boundary, the admiral must consider the implications for command and control in the overall theatre of war but a quick strike two or three parsecs outside the subsector boundaries will usually be considered appropriate.

Whether or not heavy forces are assigned, the subsector admiral continues to be responsible for the security of the subsector and will gather reconnaissance data to be passed to sector command. The sector fleet operates in all subsectors of the sector and it is typically more effective to retain heavy battle elements at sector level. This means that battle units in a subsector are commanded by the sector admiral and cannot legally be given orders by the subsector admiral but will receive information and suggestions or requests from the subsector admiral.

The most usual situation in wartime is for subsector admirals to gain a few extra destroyers and maybe a cruiser or two if raiders are anticipated, plus any Colonial Fleet elements that have been made available. These forces are used at discretion and if reinforcements or action on behalf of the sector fleet seem necessary, the subsector admiral is responsible for requesting them. However, subsector admirals also have a duty not to request reinforcements they can get by without. Every ship borrowed from elsewhere weakens the fighting power of the Imperial Navy – unless of course it is truly needed at the new location. Subsector admirals might like to get a few more ships but the question they are required to ask is: how badly are those ships needed here as opposed to somewhere else?

The provision of these transferred forces is, initially at least, conducted at the domain level. Forces from the same domain typically train together and have a long history of cooperation. The archduke will have contingency plans in place for the reinforcement

of each sector in the domain and often begin arranging support as soon as news of war arrives. As always this is subject to the approval of the naval commanders within the domain but the archdukes serve as a conduit for rapid reinforcement. This has important political ramifications, since fleets can only move between sectors with the Emperor's approval. In this case the request of an archduke empowered to speak in the Emperor's name makes the movement legal.

Additional reinforcements may come from other sectors and domains. The usual procedure is for the archduke to request assistance from a neighbouring archduke and at the same time request the Emperor send assistance. Reinforcements from the neighbouring domain can be en route long before the Emperor receives the request and granting assistance is done in the Emperor's name. Essentially, archdukes have the authority to get a solution in process quickly and their actions will be ratified when the Emperor finally hears about the conflict.

In some situations a grand admiral might be sent to take over a war zone. This could occur in the case of very large conflicts or where multiple sectors involved. If the conflict spills over only a little into neighbouring sectors the admiral of the primary conflict zone acts as overall theatre commander and is authorised to send vessels into the neighbouring sector as needed. That sector's admiral will provide support and cooperation but vessels fighting in the conflict will be under the control of the theatre commander.

Supporting sector admirals remain responsible for defending their own territory and containing the combat area but by definition areas that see a great deal of combat are part of the main theatre of war. If this spreads far enough, a grand admiral will be assigned to take overall control and sector admirals will revert to controlling forces in their area of operations. Few conflicts have ever reached this stage. Even the Frontier Wars were fought in a single sector, plus a few outlying systems. Current naval thinking is that another Frontier War is likely, making the office of Sector Admiral of the Spinward Marches one of the most sensitive posts in the whole Imperium.

COMMANDING THE FLEETS

Whilst the great nobility of the Imperium provide political and strategic direction, the navy is commanded by its admirals. This is the highest echelon of naval rank, known as 'flag rank' for an ancient tradition whereby an admiral was entitled to fly a flag identifying the command vessel – the flagship. The rank of commodore is part of this upper echelon but traditionally a commodore could fly a pennant, not a flag. Today the distinction is less important but commodores can only command squadrons or flotillas. If a formation is designated a fleet it should be commanded by a flag officer.

It is not always possible to provide an officer of the correct rank to a formation, especially in wartime. An officer commanding a squadron may be given 'acting' rank on a temporary basis, such as the senior captain of a cruiser squadron acting as commodore. Acting rank is always temporary. Longer-term assignments to a post above the officer's rank will come with a brevet to the correct rank. This is a semi-permanent promotion which may later be confirmed if the officer does well. However, the officer will need to complete the correct training when it becomes possible to do so.

Despite portrayals in fiction and popular vid shows, the navy does not make someone an admiral as a reward for heroics. Admirals are strategists and administrators, and without correct preparation all someone can do is bodge through and hope things work out. That might be acceptable in a desperate war but no amount of courage and instinct for shiphandling can substitute for planning and coordination. Admirals direct fleets and ensure commanders at the front have the resources they need. Failure at this level means disaster in battle.

An admiral is a living repository of decades of experience, honed by training and exercises. They combine strategy with politics and can balance demands of the nobility against the hard reality of warfighting. They have worked their way up through all levels of command and a good admiral understands the differences between those levels. As a junior officer, the admiral focused on relatively

small tasks, gradually moving up to head a division aboard a major vessel and probably to command one. The perspective from the bridge is rather different to the experience of a junior officer, requiring an understanding of the bigger picture. The jump to flag rank brought another shift in perspective and the picture got bigger once again.

A good admiral never forgets what the navy looks like from those other perspectives but does not have time to worry about the details. Instead, the admiral knows what a ship captain needs to get the job done, and tries to provide it. The admiral should not micromanage. Sadly, this is all too common in officers who lack confidence in subordinates or competence in their own field. A flag officer overwhelmed by the vastness of their task might seek comfort in returning to what they know. Such officers are prone to ignore their own responsibilities whilst telling squadron commanders exactly how to deploy close escorts or ship captains which targets to fire upon. Such an officer has not made the transition to admiralty and will compromise their subordinates' actions. Great efforts are made to avoid this but there will always be those who have been promoted beyond their competence.

THE ADMIRALTY

The actual command of the navy rests with a chain of admirals and senior officers. While subject to influence and political pressure, this body exerts direct control of the fleets and is the ultimate authority in time of war. Archdukes may request, world governments may protest, but the Admiralty is in charge until the Emperor says different.

The Emperor is Admiral-in-Chief of the Imperial Navy, assisted by the Admiralty Board. This consists of the heads of the various divisions within the navy and its overall commander. Whilst all authority devolves from the Emperor, in practice the navy is commanded by the Admiral of the Fleet, the highest naval rank in the Imperium. It is a mainly ceremonial and advisory role, although the Admiral of the Fleet may take command of a naval force if this is deemed necessary.

As the head of a large planning staff, the Admiral of the Fleet is responsible for ensuring that a contingency plan exists for every conceivable naval situation – and many inconceivable ones. Within hours of news of a crisis reaching Capital, the Admiral of the Fleet must be ready to present possible responses to the Emperor, along with detailed briefings on enemy capabilities and possible outcomes of any given course of action.

The Admiral of the Fleet is also the Emperor's chief advisor on naval matters. They must have ready answers to any question, no matter how obscure, about the capabilities of any vessel or state. It is their responsibility to have accurate predictions of enemy intentions, as well as detailed information about the Imperial Fleet and its leaders. While the Emperor makes large-scale decisions wherever possible, the Admiral of the Fleet has the right and the responsibility to deploy the fleet as they see fit unless overruled by the Emperor. In practice, this means that the Admiral of the Fleet is responsible for the day-to-day running of the entire Imperial Navy and ensuring that it is ready for whatever happens.

In the event that the Emperor is not available, the Admiral of the Fleet is expected to make naval decisions in his absence. Their word carries the weight of an Imperial Standing Warrant – lawful orders to naval personnel can only be overruled by the Emperor himself. The Admiral of the Fleet is usually assisted by a staff of senior officers including one or more Grand Admirals. These 'spares' can be sent off to deal with a crisis or kept at home where their advice and many years of experience can benefit the planning process. It is an unfortunate reality of the Third Imperium that connections and titles can lead less competent people to high office and appointment to the staff of the Admiral of the Fleet provides a way to keep these individuals from becoming disaffected whilst ensuring they do not compromise the effectiveness of the fleet.

Grand Admirals

The most senior officers of the Imperial Navy are grand admirals. The term is both formal rank and job title. A grand admiral spends most of their time at a domain capital overseeing the activities of the sector fleets within the domain and is primarily occupied with administrative tasks. The grand admiral is responsible for procurement requests, which often means making the case for a greater budget and countering the arguments of those who think the money would be better spent elsewhere.

Since there is no domain fleet as such, a grand admiral does not directly command any forces most of the time. However, in the event of major conflict a grand admiral might be assigned to take over a theatre of war. This will usually be the grand admiral of the nearest domain but occasionally someone is sent from Capital or reassigned from another domain.

The Imperial Navy has only a handful of grand admirals on strength at any given time. Mostly their duties are ceremonial and/or to oversee the fleets of a region in the capacity of an inspector-general. However, they can be assigned to a troubled region to take over command of all naval assets.

Sector Admirals/Staff Admirals

Each sector admiral commands a Named Fleet, which is to say that they are in overall command of the fleets of a sector. Their station is normally at a naval depot or the sector capital, although when a combined fleet is formed from elements of several numbered fleets, the sector admiral will sometimes command it in person. The sector admiral is often a high noble in their own right and will certainly be made one upon attaining the rank.

The sector admiral is much more than a 'fighting admiral'. Their staff are responsible for contingency planning and the provision of suitable logistics for operations. The sector admiral is also advisor to and in close liaison with the archduke of the domain and/or the sector dukes, and submits regular reports and recommendations to the Admiral of the Fleet at Capital.

Officers of equivalent rank who do not command a sector fleet are termed staff admirals. These include the heads of the navy's various branches, such as the senior flag officer (engineering) who heads the entire Engineering branch of the Imperial Navy. It is possible to reach a position as head of a branch without commanding a warship but such specialists are unlikely to ever be assigned a fighting command. Those staff admirals who have commanded ships may take over a sector that needs a new commander or lead a major fleet.

Fleet Admirals

Fleet admirals command the fleets of the Imperial Navy, as their title suggests. There are three grades of fleet admiral: admiral, vice-admiral and rear-admiral. These are derived from the old Terran naval ranks which originated in the Age of Sail. The best-known fleet admiral position is that of subsector admiral. Unlike sector admiral, which is a rank title, subsector

admiral is a post rather than a rank. It is normally held by a full admiral but lower-ranking flag officers might be assigned at need.

A subsector admiral commands a Numbered Fleet and answers to the sector admiral, whose staff will also include other fleet admirals. These command the various elements of the sector fleet or are in reserve awaiting appointment. The primary difference between these postings is that fleet and squadron commanders are primarily military officers whilst a subsector admiral has to be at least as concerned with the politics of the region as with strategic matters. Staff admirals of equivalent rank to the fleet admirals head the various branches of the navy in that sector.

Fleet admirals holding vice-admiral or rear-admiral rank typically command heavy squadrons or major sub-units of the sector fleet and may sometimes be assigned to lead an important task force. A full admiral commanding a fleet will have a vice-admiral as second in command and usually one or more rear-admirals who can take over detachments as necessary.

Commodores and Staff Officers

A squadron of vessels up to light cruiser class, or a task force, will normally be commanded by a commodore. The rank has a peculiar status as not quite flag/not command, and is generally seen as a stepping stone to either the admiralty or early retirement. Not all command officers can make the transition to flag rank and the post of commodore tends to weed out those who are unsuitable. It is rare for someone who has been formally promoted to commodore to go back to command rank but a period as an acting commodore allows an officer to show their worth or make a graceful transition back to ship command.

The transition from command to flag rank is almost always by way of a period on an admiral's staff. Flag-captains and flag-lieutenants assist their flag officer whilst preparing for their own promotion. Not all of these officers have commanded a ship; it is possible to enter the Admiralty by excelling in a specialist area or as a staff officer. However, the options available to such specialists are relatively narrow.

SQUADRONS AND FLOTILLAS

Formally organised squadrons are usually commanded by a flag officer whose rank matches the squadron type. Flotillas may or may not have a flag officer assigned.

BatRon (Battle Squadron)

Battle squadrons are intended to engage and defeat enemy forces. Primary ship types are dreadnoughts and battleships, normally supported by a number of couriers, escorts and tankers, and possibly one or more cruisers. A BatRon has a nominal strength of four capital ships plus necessary supports and will usually be commanded by a vice-admiral or sometimes a rear-admiral.

CruRon (Cruiser Squadron)

As the most common and versatile squadrons available to the navy, CruRons have several roles. They are intended to support BatRons and not engage enemy capital units directly. Additionally, CruRons support assault forces, form the mainstay of interdiction fleets and operate independently on a variety of missions. CruRons are often supported by fighter carriers, tankers, transports and fleet couriers. A CruRon may be assigned a bulk ordnance carrier which resupplies the squadron with missiles and other munitions. It is always kept well back and assigned its own fighter screen. Typically CruRons are commanded by a rear-admiral, although some are assigned a commodore.

AssaultRon (Assault Squadron)

AssaultRons fall into two types. Transport squadrons are equipped for troop transportation and supply, consisting of transports supported by tankers, fleet couriers and a screen of escort vessels. Invasion squadrons, or assault squadrons, are intended for direct assault on defended worlds. They contain a mix of assault tenders, bombardment cruisers, troop carriers, fleet couriers, tankers and escorts. Typically, an AssaultRon will be led by a rear-admiral or commodore.

DesRon (Destroyer Squadron)

Formally organised DesRons of four destroyers are normally commanded by a commodore. However, where a force has numerous destroyers with differing capabilities they are grouped however seems best. This means the destroyer force might consist of three small squadrons of two to three vessels. This force would be designated a flotilla, with the commanding commodore aboard one of the vessels and directly commanding that squadron. The other squadrons would be commanded by the senior captain when operating away from the flotilla leader.

TankRon (Tanker Squadron)

While most squadrons contain one or more tankers, TankRons are specialist units intended to increase the mobility of the Imperial fleets. A TankRon consists of several tankers, plus a cruiser acting as flagship for a group of escort vessels, transports, couriers and auxiliaries. Typically, a TankRon is commanded by a rear-admiral or commodore.

ScoutRon (Scout Squadron)

ScoutRons are composed of ships on secondment to the navy from the Imperial Interstellar Scout Service. They have a wide variety of vessels and act mainly as a holding unit for scout assets, detached and assigned wherever needed. For example, a scout vessel may leave BatRon 12 for resupply and repairs, during which time it is assigned to ScoutRon 48. It may then carry dispatches to CruRon 9, becoming part of that squadron until sent on a new mission. The size of these squadrons can vary considerably over even a short period, meaning that what is supposedly a small ScoutRon commanded by a commodore might grow to huge size. The expected number of vessels in a ScoutRon dictates the rank of officer assigned to command it – usually a commodore but sometimes a rear-admiral when the formation is expected to contain a large number of vessels. These formations are temporary, so commanders are drawn from the fleet commander's staff.

Flotillas

Flotillas are temporary or relatively small formations, usually with a specialist function such as defending a specific system or providing courier support to the fleets. The commanding officer of a flotilla is usually a commodore when the formation is permanent or semi-permanent, whereas short-term flotillas are generally commanded by the senior captain in the force. Particularly large flotillas may be assigned a flag officer. For example, the courier flotilla of a major naval depot might be commanded by a rear-admiral, whereas a force of five corvettes and a destroyer carrying out patrol operations around a minor base would only rate a commodore.

AVAILABLE ASSETS

A sector fleet is typically assigned one BatRon of four capital ships per subsector, one CruRon of cruiser sized ships per subsector, and sufficient additional vessels to provide specialist functions, logistics, patrol and escort work, and to fulfil additional tasks that arise. This generally comes out at about 1,000 ships per sector, not counting small craft and in-system defence vessels. These assets are kept concentrated as much as possible to allow rapid reaction in force to any crisis and to make defeat in detail unlikely. The capabilities of vessels in the squadrons can vary; most sectors have front-line battleships or dreadnoughts but it is unlikely the whole capital ship strength will be made up of the best vessels. Second- and third-class ships serve in the sector fleet until they are no longer viable combat units, at which point they go to the reserve or are transferred to the Colonial Fleet.

Capital Ships

Exactly what capital ships are available to a sector admiral will vary. Most of the capital ship strength will be battleships or dreadnoughts but a large fleet carrier or battle tender with multiple riders is considered equivalent. A typical sector fleet will contain one to two dreadnought squadrons, nominally of four vessels each plus supports, three to four first-class battleship squadrons, five to six second-class battleship squadrons, two to four battle rider squadrons and two to three fleet carrier squadrons. The exact force mix depends upon availability and perceived requirements.

Cruisers

A sector fleet normally has 16 fleet cruiser squadrons available, each of nominally four ships and a mix of heavy and light cruisers, armoured cruisers, and cruiser-sized carriers. All are considered capable of carrying out the cruiser mission. Additional specialist cruisers such as missile cruisers and bombardment cruisers, which are not well suited to general-purpose operations, are not considered among these squadrons. A typical force would be four to six heavy or armoured cruiser squadrons, six to eight light cruiser squadrons two to four light carrier squadrons, and two to four additional squadrons of specialist vessels. Cruiser squadrons are routinely broken up to create task forces. Only those assigned to assist main battle squadrons are likely to remain intact. This typically represents 30–60% of the sector fleet's cruiser strength plus the specialist vessels.

Destroyers and Escorts

A sector fleet will have roughly 24–30 fleet destroyer squadrons, each nominally of four vessels and a similar number of escort destroyer squadrons. The latter will contain ships with other designations, such as the P.F Sloan fleet escort, which are in the destroyer class. In addition, the force will contain around the same number of small escort and patrol vessels such as the Gazelle close escort. This averages around 200–220 small escorts.

Support Vessels

In addition to the fighting ships, a sector fleet will contain a vast number of support ships, auxiliaries, salvage and repair vessels, couriers and tankers – roughly 600 in total. This does not include small craft and the in-system monitors assigned to defend the depot and bases.

In addition, a sector admiral can call upon the services of the subsector fleets, which can provide additional capability in their area of operations or transfer forces to sector command. Each subsector fleet is assigned a flagship, usually a heavy or light cruiser or a light carrier. In addition there will be one to two fleet destroyer squadrons and one to two escort destroyer squadrons, plus a flotilla of small escorts typically numbering 20–40 vessels. Additional logistics, courier and support vessels are assigned to the subsector fleet but are routinely tasked to assist sector command ships in their area of operations.



NAVAL BASES

Warships can only remain in space for so long, even if they are well supported by logistics vessels. Supplies must be marshalled somewhere and vessels need to be overhauled. The Imperial Navy maintains a network of bases to support these functions, ranging from huge naval depots to small specialist bases. In some cases a naval base might be nothing more than a section of a starport leased by the navy but wherever possible the navy prefers to keep its facilities physically separated from civilian areas. This makes security much simpler and reduces the chance of a surprise attack. A hostile vessel might get close to a starport pretending to be a civilian ship but a purely naval installation will have an exclusion zone around it within which any non-navy vessel will be challenged.

BASE FUNCTIONS

Some naval bases have a single primary function whilst others are full-service installations. However, there are some functions that will always be present in any installation. All can provide support to the navy's warships – though the level of support varies – and have a basic security, intelligence, and resupply role. Most major bases provide all functions to some degree and have a specialist function in addition.

Typically a sector fleet will be supported by a depot plus two or three major bases. Each of these is capable of supporting a large element of the fleet and will in addition be the main centre – outside the depot – for a particular function. So, one major base might be a logistics and supply hub, another the main training centre for the sector. The sector depot typically provides all functions at a greater level of capability than all other bases combined.

Local Security

Even the smallest naval installation contributes to local security, if only by providing for its own. An aggressor might be willing to fight the mainworld's forces but involving any elements of the Imperial Navy whatsoever will result in retaliation. Even a recruiting office staffed by a dozen retirees and reservists is 'navy territory' for this purpose. In addition to the deterrent effect of their presence, small installations usually have defences which contribute to local security. Larger installations can project power throughout the system.

The defences and craft available to an installation vary considerably. A small base supporting a handful of patrol craft will have, at the very least, an armament of missile launchers and other weapons plus fighters and armed utility craft. Internal security will be provided by armed naval personnel and probably a detachment of marines. A larger base is likely to have a force of non-jump-capable warships and gunboats to defend it, whilst the great naval depots have an entire fleet of cruiser-sized monitors capable of repelling all but the most powerful assault.

Resupply

Naval bases maintain stocks of consumables ranging from warheads to ration packs. These must be stored, inventoried and rotated so that older items are used up before newer ones. All bases offer some level of resupply to visiting warships but specialist supply bases support the fleet logistics train. From these huge repositories of equipment and materiel, the logistics ships deliver cargoes of consumables to ships and fleets in the field.

Resupply bases typically have a flotilla of naval auxiliaries and logistics ships, with freighters bringing in bulk cargoes to replace what is marshalled. The process never ends; supplies are brought into the depots and main supply bases, then disseminated among smaller installations and fleets in the field. For this reason, resupply bases have not only a large administrative staff but also specialist procurement officers who liaise with local corporations and world governments to ensure the navy never runs out of anything it needs.

Communications and Intelligence

One of the most important functions of a base, although one often overlooked, is support of communications. Couriers, auxiliaries and other small vessels are constantly on the move, carrying messages between naval bases and fleets. Small bases will not have a dedicated courier pool unless they are a specialist communications support installation but major bases always have a flotilla of couriers available with at least one vessel on instant-departure alert.

All bases have an intelligence gathering function and act as repositories of the most current intelligence data. Updates are made every time a courier or naval vessel passes through the system. In the event a small base comes under attack, its crew have a duty to protect the files or destroy them if capture seems likely. More commonly, the intelligence staff at a base – which might be a single officer in some cases – are responsible for briefing captains of passing naval ships about local conditions and any alerts that have come in.

Repairs and Maintenance

Even the smallest base has a stock of spares and some technicians who can assist with repairs. Maintenance of naval ships is normally carried out at larger bases or the sector depot, though there are specialist maintenance installations. These usually maintain a flotilla of repair and salvage vessels which retrieve wrecked or crippled ships, or provide assistance to those that are temporarily disabled.

The navy does not, for the most part, build its own ships. Most are constructed by corporate or megacorporate yards and turned over to the navy with due ceremony. However, some highly classified vessels are built or modified in yards owned by the navy, usually located at a depot and ostensibly part of the repair and maintenance facility. It is rumoured that some vessels are so secret that they are constructed where even the regular navy will not come into contact with them, in concealed or disguised shipyards located in otherwise uninteresting systems.

Personnel and Training

Naval bases are vital to the personnel component of the navy in a number of ways. They are home to most service personnel when not deployed aboard a ship, and many personnel have families at their home base. The base also provides recreational facilities which are vital to preventing long-term fatigue. Smaller installations cannot maintain a pool of replacement personnel but are ‘combed out’ in time of need. This means any available personnel are transferred to fighting vessels to replace losses. The definition of ‘available’ tends to vary according to how bloody the conflict has been, with some bases reduced to a skeleton staff.



Larger installations and specialist personnel-focused bases will have extra personnel available for immediate transfer along with a ready pool of reservists who can be recalled at need. There may also be training cohorts present, sometimes in large numbers. In times of dire need the more advanced recruits can be rushed into service or specialist training curtailed in order to get experienced crewmembers and officers back into the fighting ships. Long-term, however, the training programme is the future of the navy and will be protected if at all possible.

The navy also maintains recruiting stations at most starports and mainworlds, along with mobile recruiting ships and liaison vessels. Some of these are famous warships of previous eras, lovingly maintained as symbols of the navy's grand traditions. Such vessels are associated with a particular base for a time but tend to move their area of operations every few months to ensure they have the maximum impact across Imperial territory.

Planning, Exercise and Preparedness

All major naval bases have a planning and preparedness staff, who attempt to foresee likely contingencies and ensure the navy is ready to meet them. This can range from ensuring a reliable supply of ration packs from local companies to planning fleet-wide exercises simulating an invasion or civil war. Most major bases have a few training ships, with a whole flotilla based at the sector depot.

In addition, each sector fleet maintains an adversary squadron. As well as crewing specialist 'hare' and 'hunter' vessels, the personnel of the adversary squadron are trained in procedures and tactics of potential foes. These OPFORS (OPposing FORceS) units use converted or custom-built vessels to closely mimic capabilities of foreign warships likely to be encountered. For example, the Ley Sector Adversary Squadron operates K'kree ships plus a mix of corsairs, commerce raiders and unusual designs intended to keep the opposition guessing.

Adversary squadrons provide opposition for almost every exercise. As a result, they are among the most experienced and skilled crews in the entire Imperial Navy and personnel often rotate out as advisors to Colonial and Imperial naval commands. Adversary forces have another function, which is downplayed by the authorities; these vessels could be used for 'false flag' operations intended to sow discord between hostile states.

Research and Development

Some research and development work is undertaken on contract by private corporations and some is performed in secret labs no-one has ever heard of. The majority, however, is done at specialist naval bases or at sector depots. New ship and system prototypes are constantly being built and tested, and research is also carried out into determining the capabilities of foreign equipment.

While the navy uses the resources and skills of many scientists on many worlds, it is only the development teams at naval bases who ever get to see the whole project blueprint. The others are assigned carefully compartmentalised projects. While costly and inefficient, this procedure means that the most sensitive projects are always assembled in the security of the depot, well away from foreign and corporate spies. All researchers are given a position within the Technical Services branch of the navy and are subject to Navy Law. Leaking military secrets is not a sackable offence but High Treason and under Navy Law this is punishable by death. Breaches of security are rather rare.

The 'Mothball Fleet'

As vessels are retired from the Imperial Navy or judged too damaged for repair and reintegration with the fleet, they are brought to the depot or a major naval base for disposal. The term implies that the ships are scrapped, but this is rarely the case; disposal takes several forms. The majority of vessels undergo a minor refit and the removal of sensitive systems before being made available to the Colonial Fleets. Some are converted to other roles, such as experimental testbeds or non-jump-capable monitors, or refitted for sale to the Scout Service or friendly foreign powers.

Some ships would require too much work to be worth transferring, or may be surplus to the requirements of the Colonial Fleet. These vessels are assigned to the 'mothball fleet', given a preservation treatment, and taken to holding berths. In theory, mothballed vessels can be returned to service in a reasonable period, and provide a war reserve which can be called up if a conflict goes beyond its initial weeks. Wars have been won by such measures, though reactivation of mothballed ships can present a few unpleasant surprises. Those vessels too damaged or decrepit for mothballing are slowly stripped of useful parts to provide spares for vessels still in service. Finally, the stripped hulls are expended in weapons tests or as targets in live-fire exercises.

NAVAL DEPOTS

The main regional bases of the Imperial Navy are the depots. These are huge megabases which occupy a whole star system. There may be a mainworld with a civilian starport but most of a depot system is off-limits to non-naval vessels. Depots provide all functions to a greater or lesser degree, and are home to extensive maintenance and repair yards. The main strength of the sector fleet has its home port at the sector depot. Typically this is around 60% of the capital ship and cruiser strength, plus the majority of specialist vessels such as bombardment cruisers. These vessels might be moved to a different base in preparation for an operation but will eventually return to the depot.

The amount of traffic in a depot system is phenomenal. In addition to naval vessels departing on patrol or deployment, or undertaking exercises, security patrols routinely scour every significant body in the system. It is rare to find a foreign intelligence vessel hiding in a depot system but it has happened. There is even a possibility, however remote, that a foreign power might try to seize dignitaries or naval personnel in the most secure of systems. Ensuring there are no surprises waiting in the remoter parts of the system is a full-time job.

In addition to all this naval traffic there are countless freighters and transports coming and going. Access to a depot system is restricted but still necessary to bring in supplies and raw materials. For this reason, permits are issued to civilian ship operators who seem trustworthy and all traffic must be policed and monitored. The most likely scenario for a successful attack on a depot involves suborning or hijacking a trusted civilian vessel. Boardings and inspections are commonplace as a result.

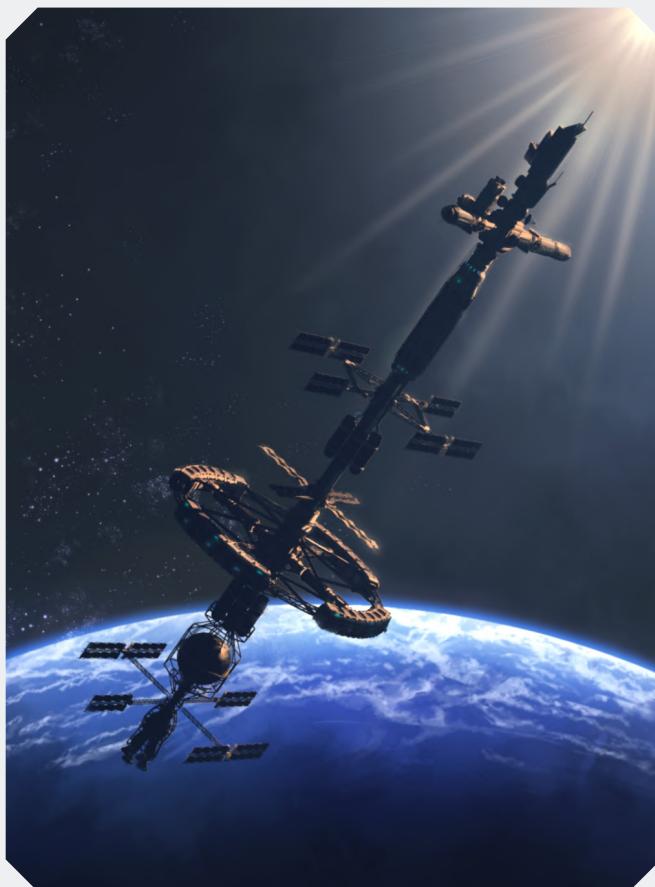
NAVAL BASES

Major bases usually centre on large orbital structures associated with a gas giant or rocky planet but may also be constructed on a large planetoid. Large bases of this sort are rarely a single structure, however; often there is a 'base region' with multiple stations, orbital repair yards and mooring areas for major ships. This region will be off-limits to most civilian traffic. The easiest way to delineate this is also the most convenient: the navy claims a gas giant and considers its gravity well to be the base region. This has the advantage that additional facilities can be constructed and placed in orbit without disturbing operations.

Smaller bases may be orbital or asteroid-surface installations and a few are constructed on planets. There is usually a reason for this, such as to facilitate planetside-operations training. Otherwise, it is far more convenient to build in space. Very minor installations may be located at a system's highport, or share facilities with the Scout Service. Joint local forces and Imperial Navy bases exist in some systems.

Bases have static defences such as missile launchers and some form of local-area force. This might be nothing more than a couple of armed gigs in the case of very minor installations but most have a few fighters and craft for inspections and utility work. The larger bases maintain powerful forces of monitors and system defence boats but not on the scale of a depot.

Bases may be associated primarily with the sector fleet, the subsector fleet, neither, or both. The preferred setup is for the subsector fleet to have its own base away from sector installations but this is not always possible. Shared bases are not uncommon, and pose no real problems since the subsector admiral answers to the sector admiral. Some specialist bases are not really 'fleet' installations and not set up to support major forces but most bases are available to patrolling warships whenever necessary.



SHIPS AND CRAFT

The primary asset of the Imperial Navy is its warships but these are unlikely to be of use without a vast supporting network of supply ships, tankers, transports and bases for them to operate from. Specialist vessels range from salvage and repair units through couriers to intelligence gathering vessels. Vital as these are, they exist only to support the fighting assets of the fleet – without warships, the supports have no role but without the supports the warships cannot function. Getting the balance right is a constant struggle for procurement and budgeting staff, whose work goes unnoticed until there is a shortage of a particular type of vessel.

Some ships are designed for a very specific role but most have to be capable of handling a variety of situations. Communications lag makes it virtually impossible to put exactly the right vessel in the right place at the right time. Instead, the navy must put a good-enough vessel in the vicinity and trust its officers to deal with whatever arises. A warship is designed to fight and is not much good for anything else but will carry a range of weaponry making it

capable of dealing with a variety of threats. Some are more specialised than others – missile cruisers, for example, are poor at anything other than delivering enormous salvos of missiles but they still carry a secondary armament capable of dealing with a destroyer or similar threat at close range.

There are various ways to categorise vessels. Size and fighting capability are one and role is another. Strategic mobility, in terms of jump range and fuel capacity, can define what ships are suitable for a given role and which are not, whilst tactical mobility in terms of thrust and agility can make an enormous difference. When putting together a task force or fleet it is necessary to consider the implications of adding any given vessel. Whilst an old jump-2 battleship might represent a formidable increase in fighting power for a formation that would otherwise only have cruisers available, its low strategic mobility might actually devalue the force. On the other hand, being able to reach the crisis point is no use if the force is then overwhelmed.

Strategic Mobility

Category	Jump	Notes
System	None	This refers to vessels and craft that cannot jump under their own power. Alternate terms include Local and Craft. The latter is generally used for small craft which by definition cannot have a jump drive.
Mobile	1–3	Mobile assets are capable of moving from one system to another under their own power. The standard for a mobile unit is usually jump-2 as this allows a modest degree of strategic mobility. Some patrol and support ships are built to Mobile standards.
Fleet-Mobile	4	Fleet-Mobile assets are capable of moving with a combat fleet. The Imperial Navy requires a 4-parsec jump range. In earlier eras fleet-mobility standards were lower.
Rift-Mobile	5–6	Rift-Mobile assets are named for their ability to cross wide rifts. This is necessary for vessels operating in areas of very low stellar density and also useful for fast-reaction and long-range forces. Naval couriers may also be rift-mobile.
Special	Varies	Some vessels have some other level of mobility which must be further defined. For example, a patrol vessel might be capable of jump-2 but carry fuel for two jumps.

Perhaps the most critical characteristic for a naval ship is strategic mobility. If a vessel cannot get to the target area it cannot be any use there whatsoever – although it can perhaps free another more capable ship by replacing it somewhere strategic mobility is not required. The Imperial Navy has four main categories of mobility, which will define what assets can and cannot be assigned to a given force.

Tactical mobility is rarely indicated, since most warships are designed to the same standards. Front-line warships are expected to possess 6G acceleration. Some vessels, for which tactical agility is not as vital, are constructed to a 4G standard and some support ships may only be able to manoeuvre at 2G. Putting a slower ship in a formation with faster ones can limit the force as a whole or cause it to lose cohesion, which is sufficiently serious that few commanders consider it if they have better options. Fast ships in a slow formation are less of a problem. It is common for high-agility escorts to accompany low-agility support ships or heavy assault units.

CRAFT, SHIPS AND VESSELS

The term ‘vessel’ can be used to describe any naval asset capable of moving under its own power. The term is usually reserved for those above 100 tons displacement but is not incorrect when applied to smaller craft. The Imperial Navy uses the term ‘craft’ for all vessels under 100 tons displacement and also for larger vessels which are not capable of operating far from a parent vessel or base. Thus a 400-ton system defence boat might be considered a craft if it has a short operating radius whereas a non-jump-capable in-system patrol asset capable of spending weeks in the outsystem would be a vessel rather than a craft.

The term ship is only used for vessels that can jump under their own power. A small cruiser is a ship (and also a vessel) but a huge battle rider that needs a tender is a vessel and most definitely not a ship. The tender is a ship whether or not it has battle riders aboard.

VESSEL TYPES

Most Imperial Navy ships, vessels and craft fall into a general type. The names for these have their origins in ancient history and do not always clearly indicate their role.

Capital Vessels

Capital vessels are the biggest and most prestigious in the fleet. The majority are intended for direct combat, crushing heavy enemy units whilst shrugging off everything thrown at them. Most capital ships are built around the biggest spinal mount they can carry, backed up by a powerful secondary armament of bay weapons. Batteries of lasers and sandcasters are carried as tertiary armament, mainly for dealing with fighters and strike craft. Some capital ships carry an organic fighter element and most have large numbers of ship’s troops aboard.

Some capital ships are not direct combat units. These include fleet carriers, intended to support other vessels or utterly dominate a star system with large numbers of fighters and other small craft. Another concept which has occasionally emerged is the multirole capital ship, which combines the functions of carrier, light battleship and troopship. In theory, a vessel of this kind could deal with crises or interdict a powerful world without support. Attempts to put the theory into practice have generally foundered, however.

Capital ships very rarely operate without support, screening and escort vessels. Ships of this type are not usually dispersed on minor errands or guardship duty, although a few very sensitive Red Zones are assigned a single capital vessel to back up the interdiction squadron. Occasionally, a capital ship will be detached to carry out a particularly prestigious function such as transporting a great noble to a major event.

Superdreadnought: The superdreadnought is a concept which has sometimes appears. Essentially a larger and even more powerful version of the standard dreadnought, the superdreadnought is intended to be able to smash two or more enemy dreadnoughts in combat whilst exercising effective command and control over the battle. Superdreadnoughts are phenomenally expensive and subject to diminishing returns, although the trend towards ever larger and more capable ships does mean that today’s front-line battleships would have been considered superdreadnoughts in previous eras.

Dreadnought: The best and newest (and most expensive) line-of-battle ships are designated dreadnoughts. They form the backbone of the front-line battle squadrons and continually evolve to meet new threats or exploit new ideas. As a dreadnought loses its cutting-edge status, it is downgraded to battleship designation.

Battleship: Including both downrated dreadnought classes and purpose-designed second-class line-of-battle ships, the battleship designation covers the bulk of Imperial capital ships. Battleships are designated first-class, second-class and third-class, according to their relative capabilities. Like dreadnoughts, battleships concentrate their firepower in a huge spinal mount and batteries of secondary bay weapons. Defences include thickly armoured hulls and huge sandcaster batteries. Battleships are deployed by preference in massed squadrons but may be encountered detached to show the flag.

Battlecruiser: More lightly protected than a battleship, although mounting similar armament, the battlecruiser is designed for a slightly different role than the line-of-battle. Battlecruisers cannot stand up to their own armament for long but are not intended to. Instead, they undertake fast strike operations against enemy shipping or bases, or chase down enemy cruisers. The Imperial Navy does not favour battlecruisers as a concept, although some of its potential opponents do.

Battle Rider: Battle riders are designed to be an alternative to jump-capable warships. Since a whole squadron can be carried by a huge battle tender, the battle rider need not devote space to jump engines or fuel. The space saved can be used for weaponry and armour, while the money saved pays for the lightly-defended tender. A battle rider is up to 50% more effective in combat than an equivalent jump-4-capable ship but lacks the mobility to break off if the fight goes against it. Tenders are vulnerable to enemy action and since their loss will leave the squadron stranded, resources must be diverted to protecting them. The result is that battle rider squadrons are not always as effective as they might at first seem. The concept is not currently in favour with the Imperial Navy, although many squadrons still exist. Some battle riders have been transferred to the Colonial Fleets, assigned as guardships at depots and strategic worlds, or sold to friendly powers.

A battle tender and its complement of riders is generally considered to be the equivalent of a capital ship, whilst the riders themselves are equivalent to cruisers. One option currently being explored is the deployment of battle riders as system defence vessels, conveyed to a trouble spot by their tender which then withdraws to bring reinforcements. This enables a key system's defences to be considerably beefed up but lacks the responsiveness of a fleet-mobile force.

Cruisers

Cruisers are the workhorse units of the Imperial Navy and can be encountered singly or as part of a task force. Cruisers engage in patrol and flag-showing operations, deterring piracy and unrest by their imposing presence. In wartime, cruisers undertake a variety of roles. Some act as escorts for heavier units and transports, while others raid into enemy territory or chase raiders down.

The armament of a general-purpose 'fleet' cruiser generally consists of a powerful spinal mount and relatively light secondary (bay) armament but this depends upon its intended role. A cruiser of any kind would be gutted by the main armament of a capital ship but its weaponry could inflict severe damage on that capital ship. Against anything smaller than a cruiser, such as a commerce raider, a cruiser is as good as a battleship; effectively invulnerable and devastatingly powerful.

Specialist cruisers provide additional capabilities to a fleet or formation. These are far less likely to be encountered operating singly than a fleet cruiser, as they lack the flexibility to deal with the range of circumstances a solitary cruiser might encounter. Despite this, specialist vessels may be sent out on missions they are not well suited for if there is a lack of generalist cruisers.

Light Cruiser: The most common type of cruiser in the Imperial Navy, light cruisers mass around 30,000 tons and are usually biased more towards manoeuvrability and armament than survivability. A light cruiser is more than enough to deal with most threats short of a major warship and is cheaper to crew and deploy than a more powerful vessel. In peacetime, light cruisers can be encountered anywhere. They may be showing the flag, acting as guardship, or conducting intervention operations. Wartime roles include patrol, escort and protection of the battle line against light enemy vessels.



Heavy Cruiser: Along with light cruisers, heavy cruisers are 'fleet' assets capable of undertaking most operations. Armament is centred around a heavy spinal mount and defences are good. Heavy cruisers protect the line-of-battle and undertake combat against similar enemy units. Many operate detached as single-ship task forces and may carry marines for intervention operations.

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Frontier Cruiser: The frontier cruiser is a high-jump vessel intended for long-distance patrols along and beyond the Imperial frontier. Such a vessel must be capable of dealing with any eventuality from piracy to disaster relief, and this capability is bought at cost of lighter armament and defences. The concept is not currently in favour but has in the past prompted the creation of various ships including the famous *Azhanti High Lightning* class.

Strike Cruiser: Somewhat similar in concept to a battlecruiser but not a capital ship, a strike cruiser is a fast, lightly-defended vessel built around a single weapon system (usually a spinal meson or particle accelerator) and intended for one role only – to carry that weapon system into range of a target. Strike cruisers mount little secondary armament, though a reasonable tertiary armament to defend against light craft is common. Defences are light, meaning that the vessel must get into range, take the shot and withdraw rapidly. This kind of strike operation may be conducted deep into enemy territory, so high jump capability is not uncommon.

Missile Cruiser: Missile cruisers are not currently popular with the Imperial Navy but have found favour from time-to-time. Built with no spinal mount but bristling with missile tubes, the missile cruiser usually carries a few small craft with excellent passive sensors to spot for it. Ideally, the first an enemy vessel knows of the presence of a missile cruiser is the arrival of a huge salvo of nuclear warheads. Typically missile cruiser squadrons provide fire support to a major fleet but occasionally one will be used as the centrepiece of a task force. If so, it will usually be accompanied by a group of destroyers to keep hostiles at a distance where missile salvos will be most effective.

Rift Cruiser: A special vessel designed for operations in the Great Rift, the rift cruiser has reduced armament but jump-6 capability, allowing patrols in the star-sparse area to be maintained. Occasionally, the high jump capability of this vessel is exploited for rapid redeployment or a deep raid into enemy territory but limited numbers are available and costs are high.

Escort Cruiser: Unlike most other classes of cruiser, this variant light cruiser mounts no spinal weapon. Instead, powerful secondary and tertiary batteries are carried. Escort cruisers are designed to stick close to a high-value unit such as a dreadnought or battle tender, protecting it against missiles, fighters and light vessels. Escort cruisers can also be encountered escorting tankers or other vulnerable vessels, and engaging aerospace forces during planetary assaults.

Reconnaissance Cruiser: Another small class, the reconnaissance cruiser is fast but lightly armed. It carries a huge sensor suite and is intended to penetrate hostile space to gather intelligence. While able to fight its way out of trouble, this cruiser ideally will avoid detection or use its high jump capability to escape pursuit.

CARRIERS AND TENDERS

The Imperial Navy is not greatly enamoured of fighters and other sublight craft. However, they do have their uses and jump-capable vessels are required to transport them. Fighters are primarily useful for fleet security and reconnaissance, or engaging aerospace forces during an assault, but at need can make massed attacks on enemy vessels. Casualties are always high in this role and results disappointing. Where carriers excel is in providing dense coverage of an area against light threats. A carrier is arguably more effective in interdiction, anti-piracy and system security roles than a cruiser of equivalent tonnage. A handful of fighters is more than enough to deter or destroy the typical armed-merchant-turned-pirate and the fighter force can cover a greater volume of space than a cruiser and its escorts.

Strike Carrier: Massing around 75,000 tons, strike carriers mount a light spinal armament and are both more agile and better defended than fleet carriers. Despite their name, strike carriers spend more time acting as a mobile patrol force base in threatened areas than undertaking strike operations. However, at need a strike carrier can penetrate a hostile system, launch a swarm of fighters to harass shipping or shoot up facilities, and withdraw before effective resistance can materialise. A typical complement is 80 fighters.

Escort Carrier: The escort (or light) carrier is simply a lighter, cheaper version of the fleet carrier. Typical mass is around 30,000 tons, with no spinal mount and a complement of 80 fighters. While the large number of fighters aboard a fleet carrier might lead to the – incorrect – conclusion that the fighter wing could carry out massed operations against serious opposition, the smaller complement of a light carrier obviously cannot.

Fleet Carrier: Large carriers, massing around 100,000 tons, are designed to support fleet operations. Most do not carry a spinal mount and those that do carry one primarily intended to quickly eliminate destroyer-sized threats. Whilst possessing a large secondary armament, fleet carriers are not intended for close combat. Carrier operations are centred around a large number of heavy fighters – 300 or so – which carry out screening, escort and patrol duties. Extensive repair and maintenance facilities keep the fighter squadrons at high readiness.



Light carriers are generally deployed with a couple of escorting destroyers as mobile patrol platforms or to conduct security operations in advance of a squadron.

Tenders

A tender is a vessel designed to support the operations of smaller craft and provide transportation for them. Battle tenders are huge, open-frame vessels capable of transporting up to five large battle riders. The tender often acts as flagship for the riders and so carries extensive command and communications equipment. A reasonable secondary armament is also shipped for self-defence but tenders are very vulnerable and require escorts. Smaller gunboat tenders have sometimes been put into production, carrying a force of craft in the 200–600 ton range. They are not favoured by the Imperial Navy but considered useful by some smaller navies either as combat assets or a means to move system defence boats from one system to another.

An experimental concept, the interdiction tender, is a cruiser-sized vessel with low mobility – typically jump-2 or 3 – which carries a large number and wide range of subordinate craft. Its mission is to support and maintain forces blockading a Red Zoned world. The tender is armed well enough to take on a destroyer-sized opponent, which is all it is likely to encounter. Its brood of fighters and gunships enable it to cover a lot of space and it can support other vessels (in the escort or destroyer classes) assigned to assist it. To a great extent, interdiction tenders are more mobile bases than warships. The concept never really caught on but some sector fleets have one or two, and find them useful enough to be worth retaining.

DESTROYERS AND ESCORTS

The term ‘destroyer’ is, in and of itself, meaningless. The term originated on Old Earth, describing a class of light combatant intended to prevent attacks by torpedo boats against capital ships. ‘Torpedo boat destroyers’ became just ‘destroyers’, in many cases carrying a torpedo armament of their own and equally capable of offensive or escort duties. Today the term is applied to small combatants of varying capability and role.

Destroyers do not, as a rule, carry a spinal mount. They are thus not considered major combatants by the Imperial Navy, although their armament of bay and turret weapons can be formidable. Sizes range from 1,000–5,000 tons, with a general emphasis on agility and firepower rather than defence. The Imperial Navy recognises two general types of destroyer-class vessel: fleet destroyers and escorts. Fleet destroyers are capable, multi-role ships which can be encountered operating solo or in squadrons. Missions include guardship, flag-showing, patrol and even strikes against relatively soft targets. When operating with a fleet, destroyer squadrons (DesRons) provide screening against light enemy vessels or can launch strikes against vulnerable targets.

Fleet Destroyer: The most powerful destroyer-class vessels are termed fleet destroyers and mount formidable armament for their size. Capable of handling a variety of situations, fleet destroyers are often a bone of contention between sector and subsector fleets. The sector commander will want the best destroyers ready to assist and protect major units whilst the subsector commander wants them out on patrol.

Escort Destroyer: Escort destroyers are, in theory, intended for the patrol and escort role. Where fleet vessels have a modest capability against heavier ships, escorts are not expected to be able to attack a cruiser, even en masse. Instead their armament is optimised for dealing with smaller vessels and craft. In practice, older fleet designs are often redesignated as escorts. They may or may not receive modifications to their armament.

Strike Destroyer: Strike destroyers are designed to attack much larger ships, usually in a group or supported by missile barrages. Armament and mobility are greatly emphasised, with defences tending to be weak as a result. Such ships can overwhelm a target before resistance materialises but in a straight fight they suffer heavy losses. The Imperial Navy does not favour the concept but has experimented with a few classes over the years.

Missile Destroyer: Another specialist class that has never really found favour, the missile destroyer mainly exists to provide missile support to a small task force. Experiments have been carried out with mixed missile and strike destroyer formations but the results have never been promising. Missile destroyers are more likely to be encountered in Colonial formations unable to afford larger missile ships.



Fleet Escort: A specialist vessel in the large destroyer class, fleet escorts are intended to accompany heavier ships and intercept light craft and missiles headed for high-value units. They are lightly armoured and armed for taking out fighters rather than destroyers. The typical escort masses about 5,000 tons. If engaged in combat alone, fleet escorts tend to fare badly.



Frigate: The term ‘frigate’ is occasionally applied to small escort destroyers or patrol ships but is not widely used by the Imperial Navy for its own vessels. Foreign and Colonial ships of 1,000–3,000 tons, set up for patrol or escort work, are sometimes given the designation to differentiate them from Imperial Navy destroyers. The inference is one of lower capabilities; a 3,000 ton patrol vessel of jump-2 performance would likely be termed a frigate whereas a 2,000 ton jump-4 combatant would be considered a destroyer.

CORVETTES

The Imperial Navy considers jump-capable combat vessels under 1,000 tons to be corvettes, and applies the term generally to all its sub-1,000-ton vessels. There is some argument as to whether a corvette is a ‘ship’ or a ‘vessel’ since traditionally a corvette was not considered a ship. Corvettes are generally cramped and not well suited to long independent operations. They tend to be used as patrol and security assets in nearby systems, operating out of a base or local starports, or as close escorts in a task force. In the latter case the corvette will not have much autonomy and be commanded by a very junior officer.

Patrol Corvette: One of the workhorse designs of Imperial and Colonial fleets, the patrol corvette is a small ship, typically around 300–500 tons, which is nevertheless more than capable of dealing with the typical pirate. Patrol vessels are rarely fleet-mobile and tend to undertake short deployments due to a lack of crew facilities.

Missile Corvette: Small missile-armed vessels can represent good value for money so long as their modest capabilities are remembered. When conducting patrol and escort duties, these craft can be effective in deterring piracy or resisting commerce raiding. When committed to open battle, they tend to be slaughtered. Missile corvettes are rarely used by the Imperial Navy.

Strike Corvette: Fast and over-armed for their size, strike corvettes are intended primarily as a deterrent to aggression or a means to inflict damage against heavier ships. They are not favoured by the Imperial Navy but in use with some Colonial forces. Torpedoes or fusion gun barbettes are the favoured armament, enabling a small vessel to pack a considerable punch.

Close Escort: Close escorts are a specialist type of corvette intended primarily for the protection of other vessels. Along with their fleet role, they may be encountered carrying out piracy suppression, patrol of commercial routes and similar tasks. Close escorts are capable of destroying incoming fighters or gunships but their value in open combat is almost negligible. Despite this drawback, shortages of ships result in close escorts being assigned as the sole protection for a convoy. The type has always fared badly in this role.

COURIERS

Couriers are specialist vessels in the corvette class intended to ensure that communications are maintained. Couriers are assigned to a squadron or fleet as a ‘pool’ to be used as needed. Incoming couriers join the pool, outgoing ones may be reassigned wherever they arrive, or may return with message confirmation. Courier vessels are ubiquitous, and can be encountered anywhere. They are sometimes used for patrol or picket work, but are not suited to this role.

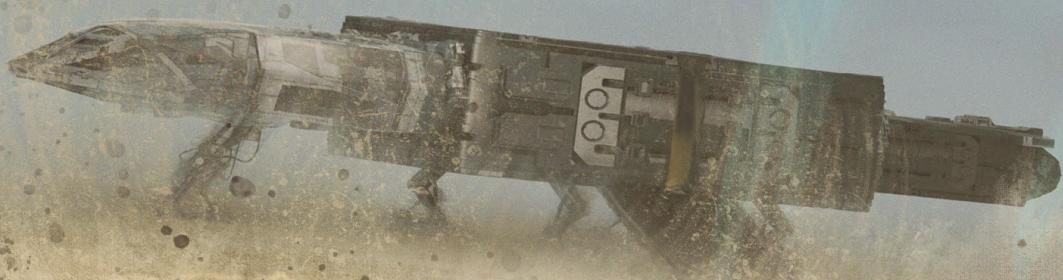
Fleet Courier: The standard navy courier is a jump-6 vessel with a light armament for self-defence. It can be used as a patrol ship for remote systems but is cramped and uncomfortable to operate for any length of time.

LOGISTICS AND SUPPLY VESSELS

Without logistics and supply vessels, the navy would grind to a halt within days. These unglamorous and often-overlooked vessels carry fuel, missiles, spares, tools, food... and everything else the fleet requires. Horribly vulnerable and under-armed, supply ships are regularly sent into dangerous areas with an inadequate escort.

Fleet Logistics Vessel: The fleet logistics vessel is a general-purpose supply and transport ship designed to accompany a task force. Not only capable of transporting a variety of vital supplies, this ship has extensive machine and electronics shops, and is capable of fabricating necessary spares on-site, greatly increasing the fleet’s capability to keep ships on deployment. They are lightly armed for self-defence and carry a number of small craft including specialised repair tugs. These ships are often pressed into service as repair ships, and more recent classes are designed with this capability in mind.

Troop Transport: Troop transports are used to move ground forces between worlds. For routine operations, where combat is not expected immediately upon arrival, it is most efficient to carry troops in low berths and with equipment stowed. Landings are made direct to a planet's surface or via interface lighters.



Tanker/Resupply Ship: Most logistics ships of the Imperial Navy are either tankers – which skim, purify, and transport liquid hydrogen fuel for the line ships – or resupply ships, which carry ‘dry stores’ that can be anything from missiles to boots to coffee beans.

Dromedary: A dromedary is a combination tanker/supply ship. Dromedaries often accompany small task forces where the deployment of several support vessels would be wasteful.

Naval Transport: The Imperial Navy uses vessels equivalent to an armed version of a civilian freighter for routine movement of stores. Transports are not intended to support the fleet in action but instead bring supplies to fleet bases, where they are transferred to armed support vessels if necessary.

Assault Transport: Assault transports carry their troops awake in barracks, or have facilities to revive them well before an attack is to begin. This means that an assault transport carries a smaller force on the same sized hull as a troop transport. Further capacity is sacrificed for armour, weaponry and assault shuttles, sometimes accompanied by a fighter contingent.

Fleet Auxiliary: The term ‘fleet auxiliary’ covers a multitude of small vessels carrying out routine tasks such as personnel transfer, non-urgent courier and mail duty, small cargo shipments and so forth. Such craft tend to be small merchant vessels fitted with a light armament. Many are identical to the far traders and fast traders operated by mercantile concerns, while a few are purpose-built to military specifications.

Reserve Auxiliary: Any shortfall in auxiliary transport capacity is made up by impressing civilian vessels. This is done in a variety of ways. Reserve auxiliaries tend to be small merchant craft whose captain holds a reserve commission, or which have been assigned a liaison officer. Such ‘ships taken up from trade’ (STUFT) are usually assigned short, safe, one-off cargo or personnel delivery runs. However, in wartime the needs of the navy may send an unarmed far trader halfway across the sector or into a dangerous region. These vessels are highly vulnerable to commerce raiding.

PLANETARY ATTACK VESSELS

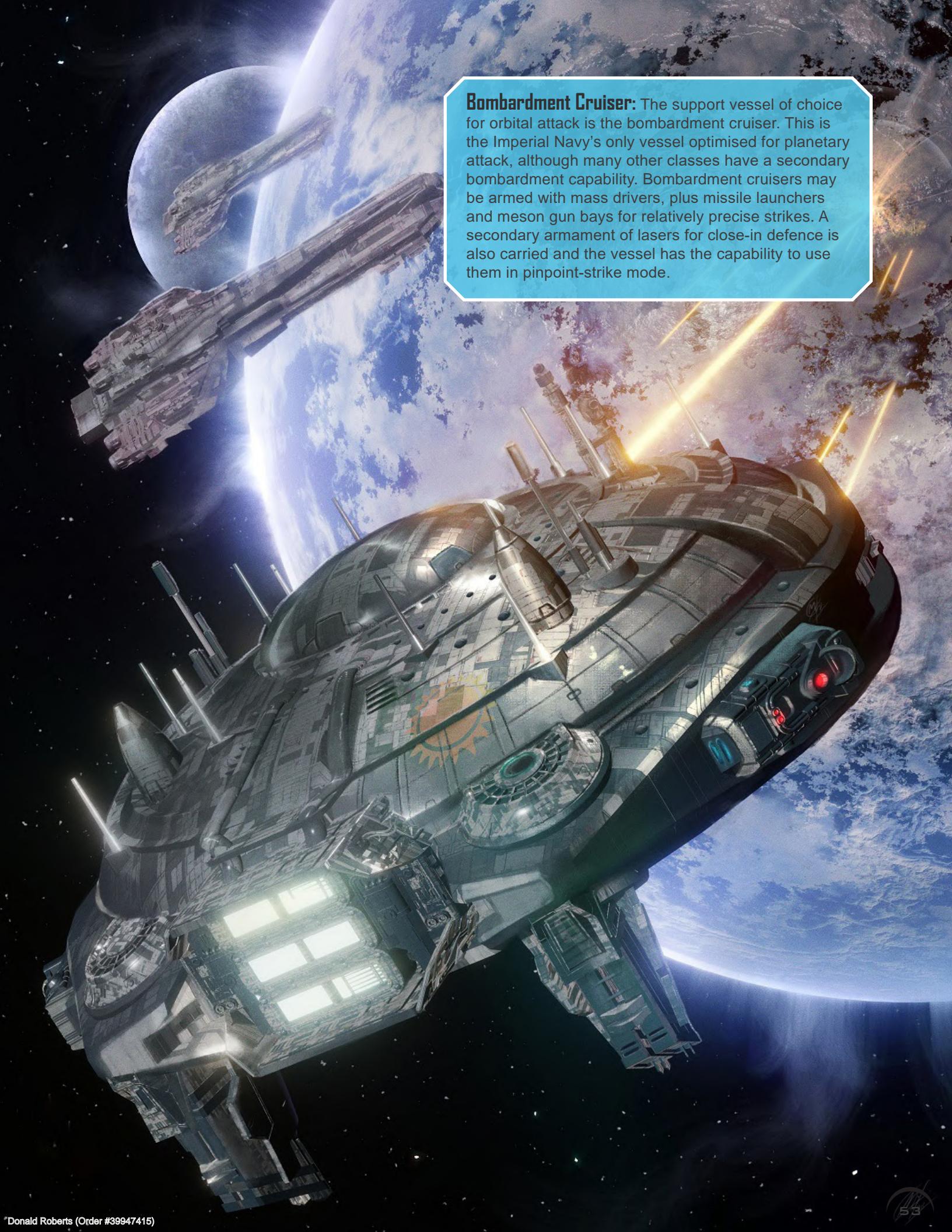
Planetary assaults are always a costly business. Even once the system has been secured, planetary defences and aerospace fighters still pose a threat. Whole brigades can be wiped out without firing a shot if the vessel transporting them is hit. Even once the run-in is complete, troops must deploy into the very hottest of hot zones and the landing ships are still at risk as they climb back to orbit. Imperial planetary attack vessels and tactics are designed to minimise losses taken while maximising the effectiveness of the attacking force.

Assault Tender: Most planetary assaults are undertaken in relatively small non-jump-capable craft launched from large assault tenders. Some tenders carry fighters to escort the attack ships in, but few carry significant planetary-attack armament. Current Imperial thinking prefers to keep tenders at a safe distance and leave artillery (orbital artillery) tasks to specialised vessels, which usually means fire support craft carried aboard the tender.

Marine Carrier: Marine carriers are crewed and commanded by naval personnel but form part of an Imperial Marine task force. Carried aboard is a marine infantry brigade supported by a grav cavalry battalion, plus a fighter wing and assault shuttles. All craft are flown by marine personnel. Extensive command and control facilities are carried aboard, to allow the brigade commander to control and coordinate the operation.

Assault Lander: Assault landers range from small armoured shuttles carrying an infantry squad to large vessels that can deliver an armoured company. They all have certain features in common; notably high speed, good armour and electronic warfare systems, and some form of support or self-defence weapon. Assault landers are high-value targets and almost always escorted or covered by orbital bombardment.

Fire Support Craft: A variety of craft in the 1,000–3,000 ton range are used to give close fire support to an assault, engaging enemy aerospace craft, troop concentrations and ground targets. Their role encompasses defence suppression, assault escort, diversionary attack and a sweeping shoot-everything-on-the-ground role.



Bombardment Cruiser: The support vessel of choice for orbital attack is the bombardment cruiser. This is the Imperial Navy's only vessel optimised for planetary attack, although many other classes have a secondary bombardment capability. Bombardment cruisers may be armed with mass drivers, plus missile launchers and meson gun bays for relatively precise strikes. A secondary armament of lasers for close-in defence is also carried and the vessel has the capability to use them in pinpoint-strike mode.

SPECIALIST VESSELS

The Navy operates a number of specialist ships optimised for various roles. These ships are not intended for combat but may be armed for self-defence. They are often assigned a close escort.

Fleet Picket: The fleet picket is a specialist vessel in the corvette or small destroyer class, with good defences but light armament. Its function is to monitor a region of space or sweep ahead of an advancing fleet, using remote sensor drones and an impressive array of detection equipment to warn of lurking hostiles. Pickets are sometimes pressed into service as search or intelligence-gathering vessels.

Hospital Ship: All navy vessels have a sickbay and assault ships almost always have extensive surgical facilities. However, casualties are transferred to bases or hospital ships as soon as possible. Hospital vessels are traditionally unarmed or fitted only with sandcasters plus a few point-defence turrets. In almost all wars, the non-combatant status of hospital vessels is respected.

Intelligence Ship: Intelligence ships (often referred to as 'spy ships' by the media) are small, stealthy vessels packed with sensors and data-processing equipment. Some operate entirely openly, gathering information from communications, drive signatures and other emissions from passing vessels.

Covert Operations Vessel: Covert operations vessels make extensive use of stealth technology in order to insert and recover teams of covert operatives. They are lightly armed but very fast, with excellent sensors. Their ability to evade detection or escape if spotted makes them useful picket vessels, but this is a waste of their real capabilities.

Repair/Recovery Ship: Specialised repair ships are operated by every fleet. Usually grouped with a light escort and logistics or supply ships, repair ships sometimes accompany a task force, particularly on siege operations. Alternatively, the vessel may stand by on call to attend any ship which has suffered a breakdown or battle damage and cannot make port under its own power. The navy prefers to send out a repair ship than have the public see one of its cruisers limp into a civilian port for emergency assistance. Repair ships are often used to recover wrecks of friendly and enemy ships for intelligence or salvage purposes.

NON-STARSHIPS

The Imperial Navy uses many classes of vessel not intended for jump operations. Most are small craft intended for subordinate craft roles, while others are warships in their own right. A vessel which does not have to devote tonnage to jump drives and fuel can carry far more weaponry for the same mass and cost as an equivalent starship.

Riders and Monitors: The Imperial Navy uses a range of non-jump-capable warships but their primary operators are system defence forces which do not need strategic mobility. Indeed, it can be advantageous for a system flotilla not to be able to retreat; this ensures annihilation in the event of defeat but prevents a force from retreating too early. Similarly, a vessel that cannot jump cannot be redeployed, ensuring that a world's own forces are always available for home defence.

Large non-jump-capable warships intended for the defence of a single star system are usually referred to as monitors. Most are built in shipyards and conveyed to their home system, although some are built in situ. Either way, the majority remain there for the duration of their careers. Some monitors are designed to be redeployed as necessary, with specialist tenders moving them to the new location.

Monitors built as conventional warships, only without jump drives and fuel, typically have reasonable tactical mobility and agility. However, it is often more cost-effective to create a monitor by tunnelling into a suitable planetoid. This creates extremely resilient vessels but they are not mass-efficient. Planetoid monitors usually have low agility and those with only minimal mobility are referred to as planetoid forts. The navy does not use them other than to protect sensitive bases but many system navies have one or two which may act as bases for the defence flotilla.

Battle riders are essentially monitors carried aboard a tender and relocated on a frequent basis. Riders have proven more effective in a defensive role than offensive, as they need time to deploy or be recovered which may pose problems in a contested system. Tenders are also vulnerable. As a result, the Imperial Navy prefers to use battle riders as mobile monitors, transporting them to a threatened system and withdrawing the tenders to safety.

The Imperial Navy primarily uses monitors to defend bases and depots. Most naval bases have a force ranging from a single light monitor to several squadrons of battleship-sized units to back up the more numerous light system defence boats. Although battle riders can just as easily be used, monitors have the advantage that they cannot be ‘poached’ for fleet operations, thus leaving a depot inadequately guarded.

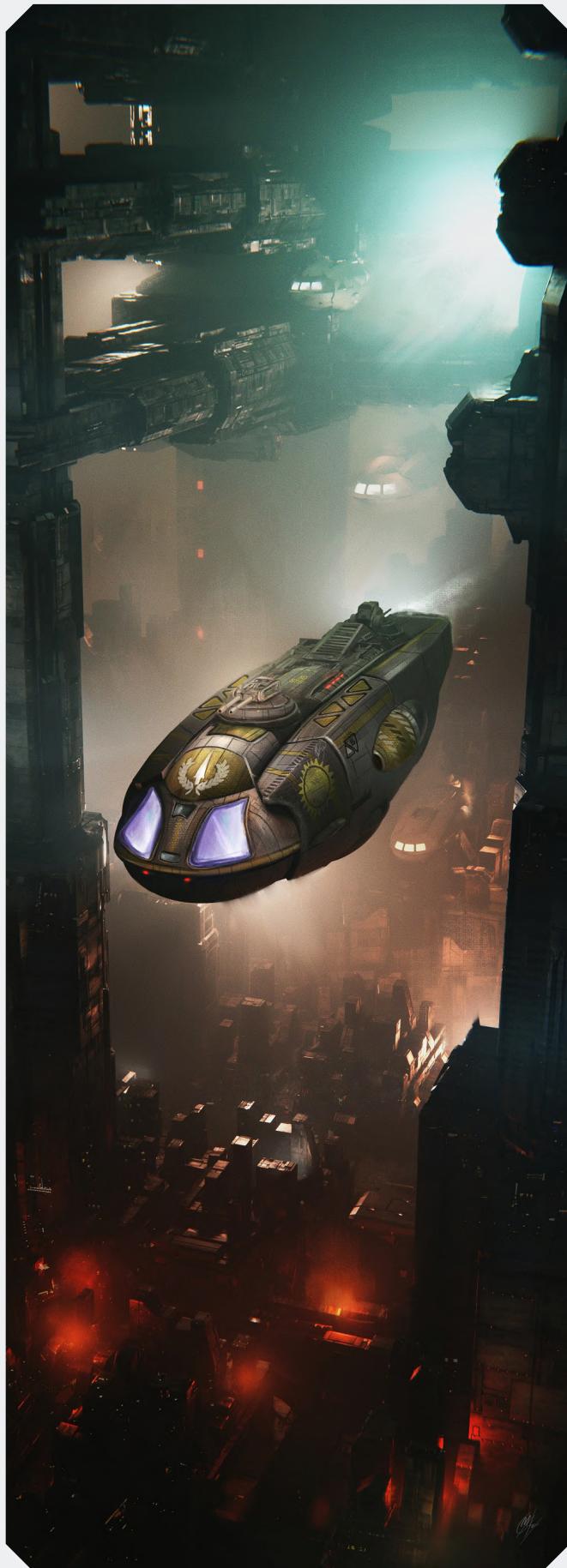
Gunboats and Missile Boats: The navy uses the term ‘boat’ for sub-100 displacement ton craft and also for non-jump-capable warships between 100 and 1,000 tons. Those with a primarily beam armament are termed gunboats, whilst those that use missiles as their main armament are missile boats. Craft with a heavy close-range armament and high agility are usually termed strike boats. None of these craft are widely used by the Imperial Navy but are in service with many system defence flotillas.

Craft of this sort which are intended to protect a star system are collectively known as system defence boats. This term does not give an indication of a vessel’s armament or primary mode of attack but is a useful generalisation. Some designs have short range and are intended to act as interceptors close to a base, inhabited world or supporting tender. Others are optimised for long cruises in the outsystem and have more crew space to reduce fatigue. They often undertake police and customs duty near a mainworld but their main function is to oppose hostile action. That can mean routine patrol sweeps or massed action against an intruder.

Some system defence boats are designed to hide from enemy sensors in hostile environments such as deep water and gas giant atmospheres. Ideally, an invader will be met head-on and repulsed by fleet action but in the case of a siege or overwhelming enemy force, system defence boats can hamstring an invader by sweeping out of their hiding places to strike vulnerable rear-echelon vessels and troop ships, then scatter to hide. Sieges of well-defended worlds are a nightmare of hit-and-run raids of this sort.

FIGHTERS AND UTILITY CRAFT

The small craft of the Imperial Navy are vital to its operations, flitting about their administrative and logistical tasks. Small craft rarely have a permanent crew assigned but are manned from the roster of qualified enlisted personnel aboard ship or at a base. In the interests of standardisation, the navy uses 10, 20 and 50 ton small craft for almost all purposes, allowing common fittings and spaces, and greatly simplifying operations. Some larger than 100 ton craft are used but these are mainly aboard specialist vessels.



Military Gig: The 20-ton military gig is a fast, streamlined utility craft with light armament. It is usually carried as a subordinate craft by small ships, where it is often used to extend sensor coverage or transport personnel to a planetary surface. Boardings take place from a gig, covered by the guns of the parent craft.

Naval Lifeboat: The 20-ton naval lifeboat is not very different from its civilian cousin, except that it is designed to leave a crippled vessel under fire. A single, one-shot sandcaster is carried, along with general hardening of the boat's systems. A modest ECM and auto-evasive system is built into the command and control equipment, increasing survivability in the event of a hostile evacuation.

Naval Cutter: A variant of the 50-ton modular cutter is the workhorse of the Imperial Navy's small craft complement. It is used by large ships, bases and starports as an inspection, liaison and rescue craft and also serves in a cargo and passenger transport niche. Most are constructed with a module semi-permanently in place and serve their entire careers in a particular role. Modules optimising the craft for security work are common, as are cargo modules and a general-purpose 'workhorse' module. Depending on their role or deployment, cutters may or may not be armed.

Troop Shuttle: The 50-ton troop shuttle is designed for a single purpose – getting a force of ground troops onto a planet's surface. They are built tough, with a lightly armoured hull and an armament of a single point-defence laser and sandcaster. The laser can be used in support of ground troops at need, although it is not especially effective in this role. The troop shuttle has a crew of two and is capable of 3G acceleration. It can deploy 50 troops, although the troop bay is cramped with so many aboard and long flights are not recommended.

Large Naval Shuttle: A variety of cargo and passenger shuttles are used by the Imperial Navy. Most displace 100 tons or more and are mainly used for cargo transfer to and from depots and logistics ships. One of the most important variants is the fuel shuttle; this streamlined craft allows an unstreamlined vessel to undertake wilderness refuelling without need for tankers. Many tanker classes replenish themselves using fuel shuttles, a lengthy process but it means that tankers need not carry expensive streamlining, nor expose themselves to the risks of gas-giant skimming.

FIGHTERS AND SMALL COMBAT CRAFT

The Imperial Navy makes extensive use of small combat craft collectively known as fighters. Even en masse, light fighters are little more than a nuisance to any serious warship. However, they do have a useful role as patrol and picket craft operating from a base or starship. Since a fighter can chew up a free trader, they are effective in the policing and security role, and often escort inspection cutters or shuttles carrying important personnel. The main value of light fighters in the 10–20-ton range is in their ability to act as a tripwire and/or screen to intercept enemy strike craft at a safe distance from the parent vessel.

A number of heavy fighter classes, usually of 50-tons, are fielded by the Imperial Navy. With more space for systems and weapons these are either more potent, more versatile, or both, than light fighters but they require much larger launch and recovery systems, as well as more hangar space. For this reason most carriers operate light fighters or mostly light fighters. The heavy fighter is still little more than a target to a warship with decent point defences but a flight of four presents a serious menace to a small vessel.

Heavy fighter designs often emphasise greater utility over fighting power. Additional crew space enables longer patrols to be carried out, whilst additional systems allow heavy fighters to act as mid-course guidance platforms for missile-armed ships. Other variants include 'bombers' equipped with missile or torpedo armament, trainers, electronic warfare platforms, command fighters and support craft for light fighters.

One variant is the strike fighter, mounting a single, powerful weapon, usually a plasma or fusion gun, capable of dealing heavy damage to even a large warship. Strike fighters represent massive overkill against conventional fighters and small merchant craft, and their armament is outranged by most other weaponry. However, if they can get close enough they can do real damage to a warship. Since they are vulnerable to interception, strike squadrons are usually escorted to the target by conventional fighters.

The picket boat is another specialist variant; a heavy fighter with its armament replaced by an extensive sensor suite. Uses include early-warning of approaching enemy craft, detailed sensor sweeps of an area, fighter control and forward missile direction. In the latter role, picket boats are often escorted by conventional fighters.

NAVAL OPERATIONS

With the exception of a few key systems and planetary installations, the Third Imperium does not rule worlds. Instead, the Imperium claims as its domain the space between the stars. This is more important than it might seem; every cargo, every message, every diplomatic envoy travels through the space that is the domain of the Third Imperium. Thus the economic and political affairs of each and every member world can be dominated by the Imperial Navy.

The Imperium not only undertakes to rule the vast reaches of space but also to defend them, and thereby the worlds that lie within Imperial territory. The Imperial rule of space is not a stranglehold upon member worlds but a contract between them and the Imperium. While the navy jealously guards its right to control space, it also guarantees the safety of trade ships and the planetary populations of the member worlds.

Although space is the preserve of the Imperium and its navy, each world is entitled to self-government and defence. This means that there must be some meeting point between Imperial and local jurisdiction. The standard terms of Imperial membership allow for a zone of shared jurisdiction between planetary and Imperial forces. This zone begins 10-diameters out from the world and ends at 100; it is not a coincidence that 100-diameters is the minimum safe jump distance. Under 10 diameters is the sole jurisdiction of the planetary forces, except where Imperial intervention has been requested by the world or imposed by legitimate Imperial authorities, or special areas such as starports, which are considered to be Imperial territory. The 10-diameter zone is patrolled and defended by local COACC (Close Orbit and Aerospace Control Command) forces.

Beyond the 100-diameter limit, Imperial authority is absolute. Local vessels are subject to the same rules and controls as any others moving through that space. However, there are some special considerations. Worlds with holdings elsewhere in the system are allowed 'transit corridors' to and from their offworld holdings, within which local vessels are considered to be in the shared responsibility zone and subject to greatly relaxed restrictions. This is a courtesy in place to avoid pointless hassle for local traffic and

is not extended to out-system ships unless they are proceeding between points on the transit corridor. Foreign ships crossing the corridor are in Imperial space and are the responsibility of the navy.

The second exception concerns the right to enforce customs and local defence. All member worlds have standing permission to meet incoming vessels beyond the 100-diameter limit if necessary and to station system defence assets anywhere in the system not specifically prohibited by, say, the proximity of an Imperial Navy installation in the outsystem. Standing permission can be revoked as part of sanctions against an unruly world.

System defence vessels operating in what is very definitely Imperial space might seem to be a breach of the Imperial Rule of Space but this is not the case. Local defence vessels are not foreign warships intruding into Imperial space but forces of an Imperial member world protecting local Imperial space against pirates, smugglers and hostile forces. They have every right to deploy for defensive purposes anywhere in local space (normally defined as their home star system, including the system of a binary partner star).

Local forces do not have the stop-and-search rights of naval vessels in their own right – as local forces they have no jurisdiction in Imperial space. However, local forces are considered to be part of the Colonial Fleet and as such are required to uphold Imperial (not local) laws wherever they may be. This not only grants the right to conduct searches, anti-piracy sweeps and so on, but also the duty to do so, undertaken not in the name of local government but with the Emperor's authority.

Jump-capable local forces are treated exactly like sublight vessels, even if they leave the home system. If they are acting as units of the Colonial Fleet they will be under orders from the subsector or sector admiral and are treated as regular navy vessels. They must uphold Imperial Law and observe local jurisdiction as if they were visiting fleet units. Colonial vessels often take part in anti-piracy or patrol operations in conjunction with or instead of Imperial Navy ships. However, when not under Imperial orders,

the deployment of locally-owned warships beyond the home system is a matter for the discretion of the planetary government and subject to permission from the Imperial Authorities.

The Imperium retains the right to absolute rule of space, yet acknowledges and welcomes the contribution of local forces to that rule. The various grey areas in this arrangement allow for a variety of diplomatic incidents but this is considered a necessary evil in return for a workable system.

STANDING OPERATIONAL ORDERS

Navy ships are subject to certain standing orders. In general terms, they are required to:

- Defend Imperial Space and Citizens from all threats
- Uphold Imperial High Law
- Render assistance to any vessel in distress
- Protect Commerce and Free Trade
- Extend Courtesy to Member and Allied worlds and vessels
- Preserve the Fleet in Being

During most deployments a vessel is expected to carry out certain actions as the need arises:

- Challenge all suspect vessels
- Investigate and deal with or report all hazards to navigation
- Investigate and deal with all threats to the security and stability of the Imperium

NAVAL DEPLOYMENTS

Life aboard even the largest vessel is rather cramped, which leads to fatigue and a gradual reduction in capabilities. Even the most career-minded spacer can spend only so long away from home and family. Vessels therefore have to return to port every so often. Given the length of time required to reach a different star system, any deployment of naval forces is a balance between endurance on station and time wasted making multiple jumps back and forth. In simple terms, putting a patrol ship into a system one jump away requires a mission of two weeks' duration plus time on station. That ship and its crew then need to spend some time in port before returning to the deployment area. Multiple vessels are required to maintain even one ship on station.

The ships and squadrons of the Imperial Navy normally rotate through three stages of readiness: Stand-down, Readiness and Deployed.

When a ship is on stand-down, leave is granted, personnel attend training schools and maintenance is conducted. New officers and crew come aboard during stand-down. Most such vessels at a base could be space-ready in hours or days but efficiency would be impaired by crewmembers missing or hurriedly replaced. Some vessels, partially dismantled for refit, cannot be quickly made spaceworthy.

The next stage is readiness. Ready ships may have some personnel away training or on leave but are more or less fully capable of combat operations. These ships undertake small-scale exercises, gunnery practice and whole-crew training. They are often dispatched to cover urgent tasks and must be ready for space in a matter of hours at the most.

Ships which have a particular task are 'on deployment' in navy parlance. Usually this takes the form of patrol, flag-showing or escort duty. Smaller ships spend more time on deployment than capital vessels, whose deployments are often major exercises. In some cases a deployment may not actually require leaving dock. Some ships are held at instant readiness at a base and considered deployed even if they do not go anywhere.

The navy is flexible about its deployment procedures but certain practices are followed unless circumstances require a different approach. The complement of a navy ship is warned for deployment according to a time-honoured system. Senior officers are given full details unless the mission is secret or has a sealed orders component. Other personnel are simply warned. No leave can be granted during deployment, so it would be possible to deduce a ship's mission from its leave rosters.

Most deployments are carried out with a specific itinerary and orders. This is particularly true of combat deployments and border-coverage patrols. However, some missions are subject to deliberately vague orders. Patrol operations are the most common case.

PATROL OPERATIONS

There are three kinds of patrol operation. On a system patrol deployment, a vessel proceeds directly to its patrol station and remains there, carrying out anti-piracy and commerce policing duties. Some system patrols are 'standing patrols' which are constantly maintained in troubled areas, while others are intermittent.

The second type of patrol is a multi-system sweep, where a vessel proceeds along a patrol route, stopping along the way for courtesy visits, or jumping to the outsystem to conduct a deep patrol. Duration in a system is usually two to five days, although this varies. Captains can use slack built into their schedule to extend stays if necessary.

The final type is known as discretionary patrol, the preserve of experienced lieutenant-commanders and higher officers. Lesser officers are not given this responsibility. On this deployment, a ship's captain takes the vessel out for a period of several weeks (usually 8–16) without filing a detailed operational plan. A 'list of intentions' is placed in a special safe by the captain before leaving port. Only the captain's immediate superior has access to these intentions and they are normally left undisturbed until the ship comes home.

In the meantime, the vessel's captain has complete discretion about where the ship goes and what it does, providing it remains within a designated area of operations. The concept is simple; there is absolutely no way to tell where a naval ship might turn up. There can be no leaks, since only the captain knows where the ship is going and may alter the plan along the way in reaction to circumstances.

It is an open secret that discretionary patrol is used as a means to measure the capability of a lieutenant-commander or commander under consideration for promotion. Detailed post-mission debriefings are used not only to determine that a commander did something useful with their ship but serve to measure their grasp of the strategic situation. Not only the officer's actions but their reasons for making them come under close scrutiny. In this way, the Admiralty seeks to measure how effectively the officer used their ship.

GUARDSHIP DEPLOYMENT

Guardship can be considered a special case of the patrol mission; a vessel is deployed to protect a specific location and any passing traffic, or to interdict a world. In some cases, the guardship might be a powerful warship intended to deter or repel aggression but minor vessels may also be deployed in this role. For example, the navy might maintain a standing patrol of a single corvette at a minor port troubled by piracy. This is generally sufficient to protect traffic from the most common sort of pirates – converted small merchant ships. A cruiser would be overkill in such circumstances, although one might be deployed to make a point.

Maintaining even a single small ship on guardship deployment requires significant resources. Transit times to and from the target location mean that for every ship deployed, at least one other must also be assigned to the deployment. In some cases the vessel will require additional support, such as where the target system has no suitable starport. This will tie up one or more auxiliaries. Whilst this might seem like a small number of ships, when multiplied by all the places a subsector fleet must protect it is a significant drain on resources.

Guardship deployments are nominally intended to protect a location but in some cases they have other purposes. A world government cannot object to a navy ship 'improving security' in the system even if it is blatantly gathering intelligence or monitoring a volatile political situation. Indeed, this is one of the polite fictions used by the Imperium when a world seems rebellious. Officially, the guardship is there to help and protect but in reality it is a broad hint that intervention will be swift if it becomes necessary.

A guardship has some latitude about where in the system it operates but is expected to remain within a reasonable distance of its assigned location. This is the main difference between a guardship and a warship on standing patrol; the guardship cannot wander about the system. Responding to emergencies is a difficult decision for the guardship's captain; it is not uncommon for pirates and other miscreants to fake a distress call in order to pull the warship off its assigned station.

A variant on the guardship role is the deployment of multiple vessels to bolster a system's defences. The Imperial Navy prefers to use battle riders in this role, freeing true warships for more mobile use. However, in times of crisis a system might receive one or more cruiser or even battleship squadrons. This is most likely in the case of a 'fortress world' likely to be attacked in strength but occasionally a force might be assigned to defend a likely refuelling spot or ambush vessels trying to use it.

ANTI-PIRACY

Anti-piracy work is mostly conducted in a passive manner, with naval ships patrolling the spaceways and responding to attacks as necessary. This absorbs a lot of ships and is more deterrent than solution but quite often is the only available option. There are few 'career pirates' and those careers are usually rather short. More commonly, a vessel's operators will slip

back and forth across the line between legitimate trade and smuggling or piracy. Such opportunists can be effectively deterred, at least whilst the navy is present in force, but may be able to carry out legitimate operations until patrols are reduced. Many of these one-time pirates are never caught, although returning to piracy carries ever-increasing risks.

The main problem in dealing with opportunistic pirates is their nature. They will strike where the navy is not present and are likely to move on or return to legitimate operations before a response materialises. It is sometimes possible to track them down and bring them to justice but even public executions are not a totally effective deterrent. It is better to tackle piracy-in-general by going after receivers of pirated goods or installations that support dubious vessels. These methods also work well against organised pirates.

In some cases, pirates band together or even form an organisation of sorts. Whilst more effective than opportunistic raiding, this is also more dangerous. The occasional attack may stay under the navy's radar but serious problems draw serious responses. Larger numbers means more chances of information leaks that reach the authorities and a greater requirement for support. As a rule, the larger a pirate organisation becomes the sooner its bases will be found and attacked. Operations of this sort straddle the line between defence and law enforcement, and are carried out on a military footing. Potential hostiles are invited to surrender if practicable but the navy goes in prepared to use lethal force at a military level and will not hesitate to do so.

Not all threats to commerce are of a profit-making nature. Even in peacetime there are those whose agendas are served by attacking the economic wellbeing of the Imperium. In such situations it is necessary to deploy significant numbers of vessels to cover likely refuelling or transit points a raider might use and attempt to bring the raider to action. This requires superior force in order to ensure victory and that is not always possible. Upon occasion, a relatively weak vessel or force has confronted a powerful raider whilst the heavy hitters were searching elsewhere. Despite the risks, raider-chasing is an opportunity for an ambitious ship commander to demonstrate their worth and is considered a desirable duty.

INTELLIGENCE GATHERING

Reconnaissance and intelligence missions are often the province of small and unobtrusive vessels, or ships disguised as another type. The Imperial Navy prefers to deploy specialist intelligence ships which make no attempt to hide what they are but which avoid detection altogether by maintaining strict emissions control and staying away from other vessels. Another option is to use a variant of a standard type, such as a patrol corvette or naval courier, and carry out intelligence work under the guise of routine operations. Most warships are capable of obtaining intelligence data and may be sent to do so whilst maintaining the polite fiction they are on a goodwill visit or investigating rumours of piracy.

Intelligence gathering can be carried out by a variety of means. The navy does have an extensive intelligence arm which uses a variety of stealthy and disguised vessels to slip personnel in and out of the target area. Everything from hacking datanets to simply talking to people in starport bars is carried out by intelligence personnel and the raw data sent to naval bases or intelligence ships for collation and analysis. Other data comes from readily available sources such as starport shipping timetables or direct observation of arrivals and departures.

Shipboard intelligence gathering mainly revolves around sensor operations. Direct scans are obvious but a warship can gather data less obtrusively by recording a ship's electromagnetic and thermal emissions, or observing its manoeuvring characteristics. This is done on a constant basis, with data being archived and sent back to base. Some conditions will spark interest aboard a naval ship, such as detecting weapons-related emissions from a supposedly unarmed vessel or noting the performance of a craft is higher than expected. Some situations require an immediate alert, such as a previously undetected vessel which begins accelerating towards the ship. At this point routine intelligence gathering becomes tactical awareness in a potentially lethal situation.

Fleet or task force scouting is different. Lighter vessels, up to cruiser size, undertake reconnaissance of the local area ahead of heavy assets. Detachments may also scout neighbouring systems and deal with enemy reconnaissance assets or minor threats.

Reconnaissance in force is often the only way to obtain reliable information on an enemy's rear area. In this case, fast-moving forces penetrate deeply into enemy territory to scout and attack targets of opportunity. Depending on this mission, assets may be forbidden to make discretionary attacks or have a free hand to cause as much mayhem as possible. Reconnaissance in force is often combined with raiding or strike operations, although in this case the damage caused is of secondary importance compared to the information obtained.

RAIDS AND STRIKES

Raiding and strike operations are generally carried out by highly mobile vessels with good firepower and at least adequate defences. A raider is likely to be far from any assistance and must fend for itself most of the time. Some powers use disguised vessels as raiders, attempting to hide in plain sight by seeming to be an innocent merchant ship. Many of these vessels are in fact merchants and highly vulnerable if confronted by a real warship. Ships of this type rely on deception for survival and can be quite effective. However, the Imperial Navy does not favour this approach; its raiders are mostly fast cruisers.

The primary difference between raiding and strike operations is the nature of the target. Strikes are directed at a specific target, which will usually be an installation or concentration of ships. For example, a deep strike might be targeted at the concentration point of an enemy's logistics fleet in the hope of destroying a significant percentage of their vessels. More commonly, strike missions will be directed at shipyards, maintenance facilities or supply bases. Sometimes a strike is made against a low-value target for political reasons; the intent to send a message without causing massive casualties in the hope of starting or influencing negotiations.

Bombardment missions are a subset of strike operations, targeting planetside installations. Despite the name, which implies an indiscriminate attack, most bombardments are very precisely targeted. Wherever possible, population centres are spared with targets being troop concentrations, military bases and aerospace defence installations. Civilian infrastructure is avoided, and not just for

humanitarian reasons. Destruction of industrial centres and civilian infrastructure requires expensive rebuilding, acceptable in war against an external enemy, but an internal conflict that results in economic self-harm is not in the interests of the Imperium. Sometimes a planetary population will be attacked but strikes against civilian targets are considered to be 'black war' operations and signify desperation or a willingness to commit atrocities. They are normally forbidden.

Raiding operations are more general than strikes. The most common is commerce raiding, also known as 'cruiser warfare'. Commerce raiding is the deliberate destruction of commercial traffic and the infrastructure that supports it, which is not considered 'black war' but is generally distasteful to naval personnel. Commerce raiding is the province of weaker powers. In addition to causing economic damage and perhaps discrediting the enemy government, raiding can weaken an enemy's combat forces. Vessels pulled from fighting fleets to chase raiders are not available elsewhere and given the volume of space a raider can operate in a single cruiser can tie down many times its tonnage in hunters.

Raiding and strike operations can be combined. For example, a penetrator fleet might be assigned to jump deep into enemy territory and attack a major installation, then disperse and conduct general raiding against targets of opportunity. Clever variations are also possible, such as sending a force into enemy territory but conducting raids with only one or two vessels. If the enemy makes a response suitable for the presumed force, each of its hunting ships or groups will be greatly overmatched by the penetrators. It may be possible to ambush one or more hunter groups in this manner before the response is escalated. This in turn can provide an advantage as it draws heavy units away from battle formations to hunt penetrators that might well have left the area.

An oft-overlooked aspect of raiding is support. Ships can refuel from a gas giant in most systems but ammunition cannot be so readily replaced. Support vessels must be provided for a long-term raiding cruise, accompanying the raiding vessel or force, or positioned in a secret rendezvous location. This is a dangerous duty for a lightly equipped vessel and less than glamorous to boot. It is, however, necessary.

INTERVENTION

The navy has standing orders to assist member governments and intervene where it is necessary for the wellbeing of the Imperium. This is a vague mission statement, and deliberately so; a captain may have to explain to a court of inquiry why they chose to take a particular action but cannot have their hands tied by complex legislation.

Intervention operations may be planned, or undertaken in response to a rapidly developing situation encountered whilst carrying out another mission. Most are small scale and undertaken as an aid to civil power at the request of a world government. Ship's troops and vehicles may render assistance in a disaster or help prevent a coup. In the event that the world government is committing a serious transgression such as harbouring pirates or engaging in biochemical warfare, intervention can be made at the discretion of the ship's captain.



SHIPBOARD OPERATIONS

A warship is a huge and complex system, comprising both machinery and people. It is beyond the ability of any one person to completely control all functions of a large ship, even under routine conditions. Those who micromanage everything inevitably overload themselves and prevent subordinates from doing their own jobs. A well-run ship is best thought of as a set of more or less autonomous systems and sub-systems, each carrying out its function and feeding the results back to the officers in command.

BRANCHES AND DEPARTMENTS

A warship has a clear chain of command, with rules for who can give orders to whom and who takes over when no-one more senior is available. This can happen due to loss of internal communications or disablement of personnel. The commanding officer of a warship is known as its captain, whatever rank they may actually hold. Smaller vessels such as destroyers might be commanded by a lieutenant-commander, cruisers by a commander and capital ships are – in theory – always commanded by a full captain. In wartime or other unusual circumstances these rules are subject to expediency but the senior command structure is ironed out as soon as possible, so normally a cruiser will have a commander as its senior officer, or possibly a full captain. These more experienced officers lead task forces and squadrons, eventually moving up to capital ship command or straight to commodore.

The captain of a warship makes big-picture policy decisions, implemented by the crew. The captain may take a look at the details when there is time but for a ship to function properly the officers must give the commander only as much information as necessary. The captain of a cruiser in action does not need to know everything; there is no time for a lengthy lecture about the possibility of power failure on two of the ship's hundred-odd laser turrets and the exact number of reloads available for the missile bays. What the captain needs to know is that the ship is combat-capable but missiles are getting low.

The captain is assisted by the executive officer, or XO, who manages the day-to-day running of the ship. The XO is more concerned with details than the captain and is expected to have up to date information available on all manner of subjects. Large ships typically have a backup command facility far enough from the main bridge that a direct hit will not take both out of action. This is usually the XO's combat station, from where they direct operations such as damage control and take over the ship if the bridge is inoperable.

The crew is divided into departments, each with its own officers, mostly specialists who must know at least a little about the work of other departments in order to co-operate with them. The Imperial Navy divides its personnel into branches, with most officers and crew spending their entire career in one branch.

Flight branch deals with bridge operations such as sensors, astrogation and piloting the ship. Subordinate craft also need a pilot (and often a co-pilot). Personnel who fulfil other functions such as engineering aboard a small craft come from the appropriate department; only those who operate bridge controls belong to Flight.

Gunnery branch includes gunners, missile technicians, electronic warfare specialists, sensor operators and so forth. When the vessel is not in combat, gunnery personnel perform maintenance on equipment and provide support to other departments. Typically, this is basic maintenance and technical tasks – warship crews are set up such that some of the routine work is done by specialists who have no pressing tasks in their own department, rather than having gunners lounging about whilst non-specialists clean the decks and service galley ovens.

Engineering branch operates drives, power systems and heavy machinery. Engineering crew and officers tend to be the busiest of all departments; a ship can coast through space without Flight crew needing to do much but drives and power plants must be constantly monitored.

Technical branch is a large subdivision of Engineering and is responsible for computers and light machinery that is not the property of another department and supports all departments when specialist assistance is required. Technical personnel might be called upon to assist a Gunnery team with a stuck turret traverse, whilst others are working on an upgrade to the ship's cyber-security package. Technical has a very varied workload and is rarely short of things to do.

Crew branch is a non-specialist arm, although there are specialisms within the branch. Crew personnel keep the ship running day-to-day and undertake damage control operations in combat. Some Crew personnel have a specific role which consumes all on-duty hours, such as administrators and chefs, but others are multiskilled at a low level and undertake basic maintenance, security and similar tasks when not called upon to provide labour. A crewmember's day can be varied, involving heavy work bringing supplies aboard for a mission, general cleaning and routine maintenance, then a couple of hours running errands for the officer of the watch.

Line branch is for officers only and is a non-specialist department. Command officers (the captain and XO) transfer to Line when they assume their first position of command and more junior officers may also belong. Some are on their way to command, undertaking a period of general orientation or cross-training to enable better understanding of departments they have not served in. Others fulfil necessary tasks but whilst they might climb the ranks to a high level, will never go to command college and take over a starship. These officers usually transfer to Staff when they reach lieutenant-commander and include administrators, lawyers, chaplains and officers who specialise in areas such as damage control, liaison with planetside governments and shipboard security. Some specialist vessels carry officers who have a very narrow role, such as experts in biochemical warfare or a scientific field. Whilst they are assigned to a ship's company, such officers are in Line and wear its insignia although they are not in the chain of command for the ship.

Support branch provides all manner of services necessary to keeping the navy running. The branch is subdivided, with personnel specialists dealing with recruiting, training, pay and welfare. Many recruiting

personnel are on secondment from other branches, often in the last few months of their service, and may receive a final promotion when beginning this secondment. Others are specialists in their field and there is also a Navy Education Corps whose staff are mostly specialist officers. Another officer-heavy specialist subdivision is Procurement, which handles acquisition of equipment and vessels and deals with in-house research and development. The Administrative Corps handles budgeting, accountancy and similar bureaucratic services, which can be more exciting than it sounds when an audit involves an assault on a suspected pirate haven, followed by a search for evidence.

Medical branch is another subdivision of Support, with its own insignia. It trains medics and medical officers, and provides medical support as necessary. Doctors and surgeons are commissioned officers but not in the ship's chain of command. In the past medical officers have taken over a vessel in the case of catastrophic damage but only as an emergency expedient rather than something that has rules in place. Normally a medical officer, however senior, will defer to any 'fighting' officer if one is available.

Naval Intelligence is another Support subdivision with its own insignia, although personnel routinely wear Support insignia to hide in plain sight. It is difficult to pass as an astrogator or meson screen technician without specialist training but an accountant-lieutenant may pass entirely unnoticed. Naval Intelligence is officer-heavy, like many specialist branches.

Staff branch is open to both enlisted and commissioned personnel. Staff contains most non-fighting personnel of, including administrative personnel who handle recruitment, training, pensions and general support tasks. It also contains some extremely specialised officers such as theoretical gravitics experts, training officers, and accountants. When permanently assigned to a ship's company, specialists and their supporting enlisted personnel are part of Line or Crew but those aboard for a specific mission are not in the ship's chain of command and remain part of Staff. There are several sub-branches within Staff including procurement, intelligence, research and development, training, astrophysics, diplomacy and liaison and some departments with bland sounding names and obscure remits whose personnel are strangely vague about what they do.

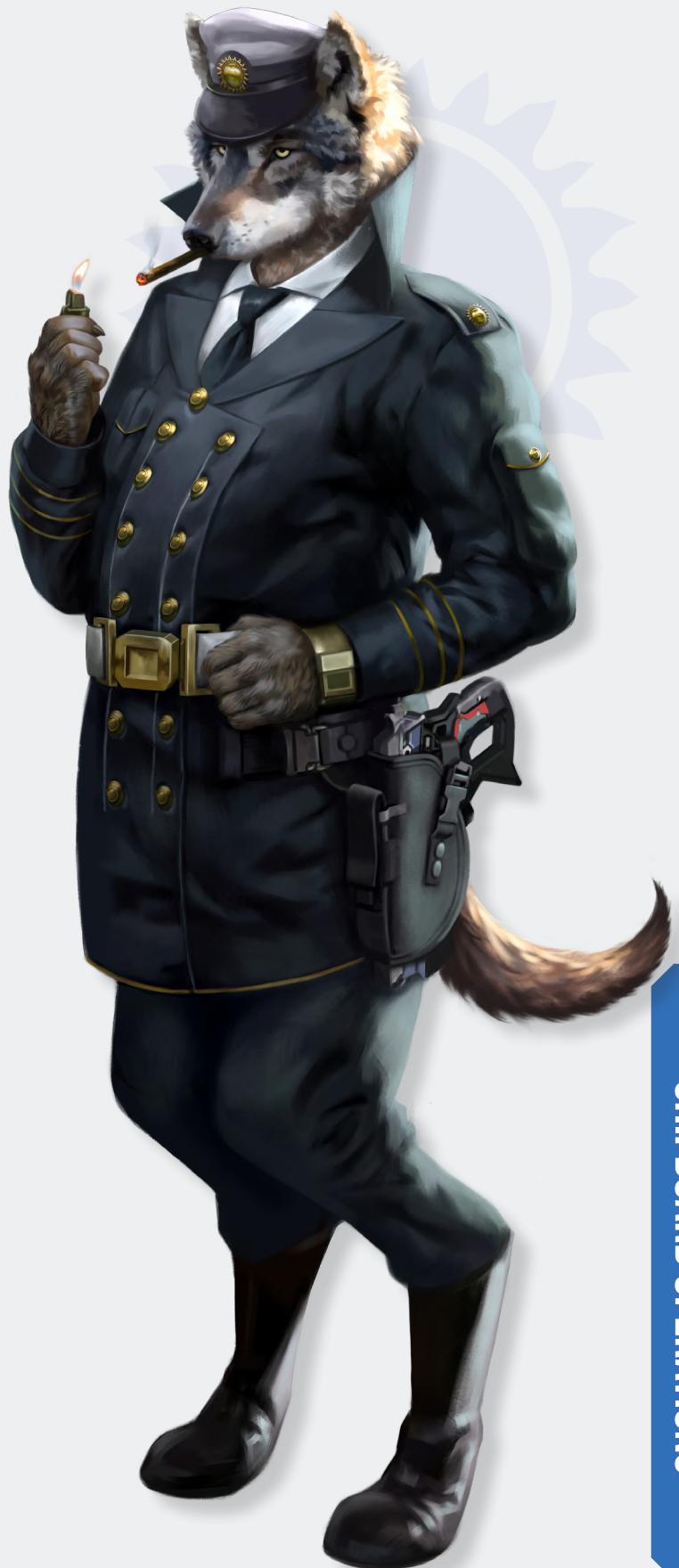
ROLES ABOARD A STARSHIP

The branch of service a crewmember or officer belongs to dictates what training they have received and what experience they have. This in turn provides an indication of what tasks can be undertaken by that individual and therefore what role they might fulfil aboard a ship. There will always be situations where someone has to take on a job they are not really ready for but for the most part a vessel will be provided with a crew capable of operating it competently. This requires an understanding of the needs of a ship. A vessel's major functions are broken down along the same lines as branches of service – or rather, branches of service evolved to meet the needs of those functions. Some posts are always held by officers, although aboard small ships there may be a need for enlisted personnel to carry out certain roles or for one crewmember to fulfil multiple functions.

Command and Administration

A ship must be directed and officers directing it need information. The role of ship's clerks and administrators might not be all that glamorous but it is vital to keeping the vessel operating. On all but the smallest ships command personnel serve in Line. Lower-level leaders and administrators are drawn from Crew.

Commanding Officer: In the case of small craft the commander of a vessel might be a petty officer but this is a role that normally falls upon the pilot and is in any case temporary. Starships and large non-starships – and sometimes groups of small craft – have a commanding officer who is always addressed as the ship's captain even if they do not hold that rank. The commanding officer makes policy decisions to be implemented by the crew. Most starships are commanded by someone holding 'command' rank – a lieutenant-commander, commander or full captain. However, some small vessels may be commanded by a promising lieutenant. These vessels normally operate close to a base or vessel commanded by a more senior officer and under these conditions do not need to exercise the discretion an independent ship captain might. However, if needs must a lowly sublieutenant may have to tackle a major crisis until someone more senior arrives.



Executive Officer: The XO runs the ship for the captain, dealing with details while the captain makes policy based on the big picture. A period as executive officer of a vessel is essential for consideration as a commanding officer. Typically an officer serves as XO of more than one ship before being promoted to command and will usually be given a smaller ship to captain than their last executive officer posting.

Logistics Officer: The role of logistics officer is usually held by a Line officer on their way to becoming XO of a vessel. It is one of the most demanding roles in the navy and at the same time rather dull. The logistics officer is a 'fighting' officer in the chain of command, although they are often referred to as 'combat accountants' with varying degrees of sympathy for the amount of paperwork required. A captain who does not understand the logistics needs of their ship will make serious mistakes and there is no prospect of flag rank for anyone who fails in this role. Aboard a small ship the post is retitled logistics coordinator if held by a petty officer.

Logistics and Administrative Staff: The logistics officer may be assisted by additional personnel. Some will be officers aboard a large ship but most administrative personnel are enlisted and major warships might have specialists in fields such as law, accountancy and general administration. In addition to keeping the ship properly stocked, these personnel will go through the affairs of a suspect ship or installation. 'Admin raids' of this sort have captured more pirates than all the daring ship-to-ship actions that make the headlines. Commissioned personnel serve in Line and are part of the ship's chain of command. They will be assigned odd jobs as necessary and those who prove themselves will move eventually into non-specialist leadership posts. The remainder typically move to Staff.

Officer Cadets: Some ships carry officer cadets and sometimes senior officers undergoing specialist training. These additional officers are made use of according to their skills, either leading small groups or assisting other officers. Some may be attached to the ship's specialist departments, while others are non-specialists in Line.

FLIGHT

Flight personnel operate the ship's bridge systems and pilot some auxiliary craft. Flight is considered the most command-worthy of the specialist department and is very officer-heavy compared to other branches. Smaller ships tend to combine some of these roles or assign them to enlisted personnel.



Senior Bridge Officer: The senior bridge officer heads Flight aboard a large ship. In smaller vessels the XO or the captain is the de facto head. The senior bridge officer is usually the third in command of a vessel and on many ships combines the role with that of astrogator.

Astrogator: Arguably the most important specialist officer aboard a starship, the astrogator is absolutely critical to operations and is kept very busy. No major warship ever leaves base with just one qualified astrogator aboard and often there are several officers who can do the job among the senior crew.

Chief Pilot: Many smaller vessels have enlisted personnel as pilots but ships of destroyer size and above will have at least one officer-rank pilot in charge of all relevant operations. There will always be a qualified pilot on the bridge or on call within moments when the ship is underway. In addition to assistant pilots, small craft pilots are often rotated through bridge watch to gain experience and relieve officers.

Flight Operations Officer: The flight operations officer oversees the maintenance and operations of the ship's craft, and liaises with other vessels in the vicinity. In a complex traffic area such as a major fleet, the flight operations officer is responsible for ensuring there are no close encounters with small craft.

Communications Officer: The comms officer is responsible for both routine communications and ensuring a proper sensor watch is maintained. All bridge-qualified officers can do this but the comms officer is an expert whose main responsibility is reliable communications and effective sensors. The comms officer is assisted by several operators who carry out routine tasks. On larger ships some of these will be commissioned personnel but most operators are enlisted specialists.

ENGINEERING

The drives and power systems of a starship are labour-intensive to operate. Engineering is a highly skilled branch requiring intelligent, educated enlisted personnel. Few engineering officers leave the branch to become ship commanders; most progress to larger and larger vessels, or become the senior engineering officer in a squadron. Occasionally, this means the engineering officer of a 'senior' vessel can outrank a new commanding officer. Engineers often progress to Staff, becoming shipyard supervisors, repair and salvage experts, or vessel designers rather than fighting captains.

Chief Engineering Officer: Sometimes less formally known as the chief engineer, this officer has overall responsibility for the ship's drives, power systems and life support equipment, as well as being an expert in maintenance and damage control.

Engineering Officer: From the chief engineering officer downward, all engineering officers are trained in at least the basics of power, jump and manoeuvre systems, and are specialists in one of them. Ideally, a large ship will have a very knowledgeable officer for each sub-specialism as a shift head, in which case each shift will be biased towards maintenance and calibration of one system.

Engineering Personnel: The ship's engineering personnel are highly skilled and can conduct routine operations without an officer overseeing them. Aboard a well-run ship, most problems are solved before an officer even hears about them. Enlisted engineering personnel are sometimes referred to as drive hands, whilst those specialising in power systems are nicknamed stokers for obscure historical reasons.

TECHNICAL

On a smaller ship, Technical branch is often combined with Engineering and its personnel report to the chief engineering officer. Larger ships maintain a separate department under its own officers. Technical tends to have a low officer-to-enlisted ratio; most personnel are either computers/electronics specialists or electromechanical experts who are referred to as 'soft' and 'hard' technicians respectively, with officers being highly skilled in their own specialism such as cyber-security or fluid transfer systems.

Chief Technical Officer: The chief technical officer of a starship is responsible for all electronic systems that are not the province of the engineers. Their remit ranges from computer issues to maintenance of personal devices and vacc suits. The chief technical officer is responsible for overseeing all of this activity.

Technical Officers: All Technical officers are expected to be problem-solvers able to turn their hand to any task from unjamming machinery or fabricating spares in the ship's workshops, to reprogramming robots or even the entire ship. Each has their own primary area of expertise, with leadership of a task often decided by competence rather than rank. Technical officers very rarely leave their department to become non-specialists and eventually command officers, although some transfer to Engineering or Gunnery.

Technical Personnel: Technical personnel, or technicians, range from programmers to pipe-bashers. Some are simply big, strong crewmembers who can pull on a crowbar harder than anyone else – there is a need for this even in a technologically advanced navy – whilst others have never broken a fingernail. Within Technical sits the cyber-warfare subdepartment. It is not called that, instead using polite euphemisms such as ‘electronics systems oversight’ for its activities but these personnel are often quietly employed to monitor local datanets wherever the ship goes, and occasionally break into a target’s security and cause mayhem. Once in a while, a naval action is won when one side simply switches off the other’s weapons. Preventing this is a critical mission, although one downplayed by the navy.

GUNNERY

A ship’s weapons and defensive systems are operated by the Gunnery crew, under the command of the gunnery officer and their subordinates. Gunnery is less prestigious than Flight but serves as a route into Line and command positions more commonly than Engineering.

Chief Gunnery Officer: A ship’s chief gunnery officer, informally known as ‘guns’, is responsible for directing offensive and defensive systems, including electronic warfare but not usually cyber-warfare operations. The chief gunnery officer is typically the fourth in command of a warship.

Gunnery Officer: Gunnery officers are specialists in the operation and maintenance of their own systems, although always cross-trained in other weapons. As a gunnery officer becomes more senior they see more of the big picture; a battery commander need only optimise fire at targets they are given but the ship’s chief gunnery officer must prioritise targets according to multiple criteria in a rapidly-changing situation. A warship may have multiple posts including Beam weapons officer, spinal weapon officer, screens officer and so forth, depending on how large it is and how complex its weapons fit may be.

Gunnery Personnel: Gunnery personnel, or commonly just ‘gunners’, are specialists with a degree of cross-training. The commander of a multi-crew weapon is usually a petty officer and may be referred to as gun-captain on occasion. Gunnery personnel are sufficiently skilled to assist with general maintenance when not looking after their own systems, indeed, spending more time as general crew than on Gunnery-specific tasks.



CREW

Crew branch is a catch-all for general-duties personnel and a range of specialists without whom the ship or its crew could not function for long. Crew is the most varied of the ship's branches, with several specialist areas all answering to the operations officer.

Operations Officer: The operations officer is in charge of all general-crew functions that keep the crew fed and the ship working. 'Ops' is a Line assignment and can be a stepping-stone to logistics officer and eventually command. It is a demanding and varied post, although often a thankless one. Aboard a large ship the operations officer is typically fifth in command.

Deck Officers: Deck officers are non-specialists who assist with a variety of tasks. In action, their role is shipboard security and damage control but the rest of the time they are assigned as needed to other departments. Deck officers belong to Line, sometimes progressing through the non-specialist route all the way to command. Others achieve the same goal after transferring to Flight, Gunnery or occasionally Engineering.

Specialist Officers: Medical and personnel officers, and the ship's chaplain if it has one, are not part of the chain of command but specialists whose job is the physical and emotional wellbeing of the crew. Chaplains in the navy are secular, although individuals can belong to any faith so long as it does not interfere with their duties.

Deck Personnel: Deck includes a number of non-specialist personnel who carry out whatever tasks are required, typically general maintenance and security of the vessel, but Deck personnel can be loaned to other branches whenever needed. In addition, Deck includes a number of specialists including stewards and medical assistants.

Master-At-Arms: Some ships have a master-at-arms, a senior enlisted crewmember responsible for safeguarding the interests of the crew and acting as their voice in command meetings. If the XO runs the ship, the master-at-arms leads the crew and these two posts – representing officers and crew respectively – are the captain's closest advisors. The master-at-arms is also responsible for overseeing maintenance and issue of personal weaponry and protective equipment and providing on-the-spot leadership during damage control.



THE CHAIN OF COMMAND

Command of a warship and its component parts passes down a chain of command that begins with political direction from the Emperor and the great nobility. The Admiralty decides which ships are to do what and from that point the ship's captain is responsible for getting the job done. The chain of command continues down through the ship's branch heads to junior officers and work teams of enlisted personnel.

Whatever their actual rank, the appointed or acting commanding officer of the vessel has complete authority and responsibility for the ship, its crew and the mission. The captain has the right to overrule any officer under their command but would be well advised to listen to the opinions of specialists such as Engineering or Gunnery officers. The captain is concerned with the 'big picture' and not being bogged down in minutiae.

The captain's orders are implemented by the executive officer. On small vessels this officer may also have other duties but as XO they are responsible for implementing the captain's decisions and having distilled information available at need. When the captain wants a damage report, they do not speak to each department head in turn. Instead, the XO is expected to present a concise version of what the departments have been reporting. Information-filtering is a vital part of the executive officer's duties.

It has been said that the captain deals with the Admiralty on behalf of the ship, while the executive officer deals with the ship on behalf of the captain. The partnership between the two is vital for a well-run ship. The XO also stands in for the captain whenever they are unavailable and takes command if the captain is incapacitated.

The various branch heads are responsible for everything within the branch and for ensuring that the captain is kept up-to-date. Each branch head has complete authority within their own area. Conflicts of interest are resolved by discussion, or referred to the captain – or the executive officer – for a decision. Branch heads are expected to advise the captain if requested to do so and offer information in the interests of the ship. Exactly how much discussion is appropriate is a matter of command style but critical information must always be passed on even if the captain will not want to hear it. For example, a gunnery chief who knows that the ship's fire control systems are down

and not coming back on anytime soon is expected to make it very clear to the captain that the ship is not combatworthy. Branch heads are entitled to protest orders they consider inappropriate but can be overruled by a direct order from the captain.

Officers holding critical positions such as astrogator or the main battery commander, who are not branch heads, are also subject to these procedures within their area of responsibility. If the captain gives an order that would place the ship in jeopardy, officers are required to protest – no matter how fearsome the skipper may be. Those who do not, and survive the result, can expect to face a court of inquiry.

In the event that the captain is incapacitated or unavailable, command devolves to the executive officer, then to the senior surviving bridge officer. The procedure for who takes over after that is deliberately vague, to allow for circumstances. The captain is entitled to appoint any officer to the role of acting captain, whatever their actual rank. The last act of a gravely injured captain should be to place the ship in the hands of the person most likely to get it home, without prejudice or favouritism.

If the captain does not or cannot appoint a successor, the ship's command structure usually indicates a suitable officer. Seniority and rank are the usual criteria, although command tends to devolve upon officers of Line, Flight, then Gunnery. Specialists in other areas are less suited to taking command of a ship and some, like Medical, are not in the chain of command and not trained for the eventuality. A medical officer, even a commander, would be a last choice before getting down to ensigns and petty officers. Any vessel having to make that sort of choice is almost certainly not going to get home anyway.

Occasionally, an officer may decline command, choosing to remain at their station. For example, if the chief gunnery officer is the senior surviving officer when the bridge is blown away by a meson gun hit they must choose between taking over the ship or remaining where they are most effective – fighting the ship out of trouble. This choice is dictated by their opinion of the next officer in the chain of command. Both options fulfil a responsibility to the ship; which is more important is a vital split-second choice. Small vessels have occasionally come home with a petty officer on the bridge giving orders to a lieutenant down in what little is left of engineering. This is an entirely acceptable situation, if both are where they can do the most good.

Very rarely, it is necessary to relieve an officer of duty. For junior officers, this is the decision of the captain or the medical officer – although the action must be ratified by the captain. If a ship's commanding officer has obviously 'cracked' or is behaving in a psychotic manner, they must be removed from command. Not even the ship's medical officer can do this on their sole authority. The established procedure is that three of the ship's senior officers must agree to the necessity and jointly request that the captain stand down. If the request is refused, the captain must be arrested. This sometimes involves violence, or the threat of it, and can result in infighting among the crew.

The line between mutiny and the legal removal of a captain who is unfit for command is a fine one. A Court of Inquiry is always called and the actions of all involved are examined closely. If the officers acted correctly in response to the captain's unfitness for command, they are quietly commended and the former captain will be re-evaluated for command. If their actions were not legal, the officers can expect a trial as mutineers and harsh naval justice. Removal of a ship's commanding officer is always an unpleasant business. It is possible that, while the act was legal, the manner in which it was carried out may result in censure. Future comrades and commanding officers may be suspicious of officers involved in such an incident, however legal or necessary.

In the event of a violent removal, personnel who acted to defend the captain, or to oppose them, will be subject to court-martial. However, they are rarely punished if they can prove that they acted in good faith. Personnel involved in a messy removal are always posted far apart afterwards.

COMMAND PROCEDURES

Even in an era of advanced computers and intelligent interface programs, naval ships are operated by people who cooperate according to well-established procedures. Decisions are made on a big-picture basis, although what constitutes the big picture varies depending on the individual's position within the crew. The 'big picture' for the chief engineering officer is an overall appraisal of the ship's power and drive systems, weighted by general considerations of damage and other ship-wide factors. The captain, on the other hand, must consider the mission, the state of the ship, consequences for this and other vessels, and all manner of factors. Decisions are made in an instant, based upon the expert opinion of

subordinates. For example, if the need is to make a decision as to whether the ship should engage or flee, there is usually no time for lengthy analysis. Instead, the captain must rely on the appraisal of gunnery and engineering officers as to whether their systems are up to the challenge. Generalisations are piled atop generalisations but in a well-run ship the end result is quick and usually correct decision-making.

The standard procedure for ordering a ship to do something begins with the captain, who issues orders as to what is to be done. The executive officer then ensures those orders are obeyed, or finds out why not. If the XO does not inform the captain that an order has not been carried out, the captain will usually assume that it has been obeyed. In situations where these officers are not on the bridge and action needs to be taken, whomever has control of the ship will do what they think best, requesting the captain's presence on the bridge if necessary.

Branch heads make specific decisions as to how to implement the captain's orders and pass those orders down the chain of command to their subordinates. For example, the captain of a cruiser which is currently taking a pounding has to decide between attempting to complete the mission – risking further damage or destruction – or a rapid withdrawal. This decision is based on information presented by displays and repeaters, with reference to the latest information the captain has received from branch heads. This general impression of the ship's status can be refined either by an information request to the relevant officer or a look at data displays. In this case the captain decides the cruiser cannot complete its mission and needs to escape quickly to avoid destruction.

The captain orders the XO to implement an emergency jump procedure. The executive officer has trained in this procedure and knows how to make it happen. Orders are passed to the astrogator and the chief engineering officer to prepare for crash-jump. The astrogator calls up a pre-prepared course plan and would be considered very remiss if they did not have one. The chief engineer orders the power and jump chiefs to implement certain procedures. They do so, using their initiative to deal with glitches or problems. This may require hands-on work, or orders to their team. Meanwhile the chief engineer monitors both procedures, offering advice and guidance to both teams to ensure a fast, efficient procedure that gets the drive ready in minimum time.

Neither the power or the jump chief is totally happy with the setup but the chief engineering officer decides on the best compromise and implements it. They have reservations but the situation is urgent. Having achieved the best jump configuration in the time available, Engineering informs the XO that the drive is ready but that implementing now carries a significant risk of misjump. The XO at this point already has confirmation from the astrogator that the jump is laid in. ‘Emergency jump ready, Captain,’ says the XO. ‘Engineer has reservations.’

This bland phrase indicates to the captain that there are additional considerations but there are ‘reservations’, not ‘grave reservations’ and Engineering did not say ‘not recommended’ or ‘not practicable’. The captain knows enough to weigh up the situation... risk misjump now, or take more time to prepare and suffer more damage? ‘Execute emergency jump!’ says the captain and the astrogator, not waiting for a repeat from the XO, does so.

This is standard command procedure. The captain does not have time for specific details. They must weigh the issues – their own appraisal of the tactical situation, the engineer’s reservations and the fact that the astrogator did not mention any reason why the ship could not jump safely. The decision is based on the overall situation. Subordinates must take care of the details, the XO must filter and distil the information for the captain and captain alone must take responsibility for the final decision.

WATCHES AND DUTIES

The formal procedures of the Imperial Navy apply to larger vessels which have sufficient crew numbers to make them work. Small ships implement these procedure as best they can but generally follow a variant of the basic system. Individual captains might have a different way of doing things but if something goes awry and the standard procedure was not being followed, the ship’s officers will have some explaining to do.

A warship can be called upon to act at any time and may be subject to a near-constant stream of crises. It is not possible for the whole crew to be at their posts at all times just in case something happens, so the ship’s day is divided into three eight-hour watches, with an officer of the watch appointed for each. This

officer deals with whatever minor matters arise during their stint, a duty that can be uneventful or chaotic. The officer of the watch post is rotated through all suitable officers, with the exception of command crew and branch heads.

During routine operations the bridge is always crewed, sensor watch maintained and a pilot is at the helm or close by on call. Point defences are usually crewed, except when in jump, but other weapon systems are not. Routine maintenance takes place on a constant basis, with larger programmes running over many days.

Major events like entering or exiting jumpspace, or entering port, are overseen by the senior crew. Branch heads will be on duty along with the captain and XO during these periods. The rest of the time, exactly who is on duty depends on the captain’s preferred roster. Some captains like to have a ‘senior watch’ or ‘day watch’ with all branch heads on duty at once. Others prefer to have some on, some off at all times so at least one branch has its ‘A’ team on duty if something unexpected happens.

At any given time there will be armed security patrols moving around the ship and sensitive areas such as computer rooms and the captain’s quarters will be carefully monitored from the officer of the watch’s duty station. An armed party is always on call, with security stepped up when the ship is in port.

ROUTINE SECURITY

When anyone comes aboard any Imperial Navy warship they are scanned into the ship’s data systems and assigned a status. The formal reporting-aboard carried out by all personnel automatically informs the ship’s computer of their arrival and confirms their status. A crewmember who has not properly reported aboard, or one relieved of duty for medical or disciplinary reasons, is flagged by the system as ‘invalid’. Depending on what they try to do, they may be passively tracked by the ship’s computer or a security detachment can be dispatched to apprehend and question them.

To be ‘valid’, someone must have formally reported aboard to the officer of the watch or their appointed deputy. This is often done remotely if the crew are in a hurry but tradition requires that officers report to the officer of the watch or the captain either at their office or in the docking bay if a welcoming party is in place. Enlisted personnel report to a junior officer

or senior petty officer who will be physically present in the docking bay. The act of reporting to a live person is not truly necessary for security purposes but is considered a positive factor in maintaining the cohesion of a ship's company.

Upon reporting or being formally returned to duty, a crewmember or visitor gains access to the ship's systems according to their rank, duties aboard ship, and any special considerations applied by the ship's officers. Very few, if any, areas of the ship or its operations are unsecured under any circumstances. Non-essential areas and systems normally operate on an 'any crew' basis, meaning that any member of the ship's complement recognised by the ship's computer as valid can operate systems in that area without setting off security alarms.

The levels of authorisation in force are:

Unsecured: No security is in place and anyone may operate the system or be in the area without attracting the ship's security monitoring systems. Normally there are no unsecured areas aboard a warship, although some crews will alter the settings for the sake of convenience and it is not inconceivable that an Unsecured 'hole' could be made in a ship's monitoring system by a suitably skilled programmer.

Any Valid: Anyone recognised as valid may enter these areas and use these systems, and will not attract security protocols. Normally Any Valid is reserved for guest quarters, mess areas and other locations where there is little a visitor can do to cause harm.

Any Crew: Any member of the crew recognised as valid may use these systems or enter these areas. Living spaces, common areas and briefing rooms are typically set to Any Crew, along with most routine operations of the ship's internal systems. Potentially sensitive areas such as weapon turrets are normally set to Any Crew regarding personnel being in the area but Any Gunnery for operations. Thus a crewmember mopping the floor will not attract a security patrol but if they suddenly decide to fire the ship's weapons they will not be able to operate them and soon find a patrol in attendance.

Any (Branch): Any member of the relevant branch may operate these systems. Some systems require special authorisation whether or not a valid crewmember is trying to use them; for example, the ship's weapons are controlled by the command team. If the weaponry

is set to 'tight' then it cannot be fired no matter who is pounding on the buttons. Likewise, whilst any crewmember can go into the galley to make a sandwich, attempting access to the 'captain's kitchen' annex will attract attention unless the user has been designated as one of the senior officers' stewards.

Any (Rank or Duty): Some systems are accessible only to personnel of a certain rank. For example, whilst any crewmember can break out firefighting equipment, it normally requires a petty officer to grant access to emergency cutting gear. Some designated damage-control personnel are assigned special authorisation as a result of their membership of a damage-control team.

(Branch) (Rank or Duty): Some systems are accessible only to members of a particular department who also hold a certain rank or above, or to members of a particular team. Missile magazines and handling hoists might be accessible to any member of Gunnery but the nuclear warhead storage area is only accessible to missile technicians and Gunnery officers.

(Specific): Some posts aboard ship have specific access to systems other crewmembers do not. The captain and executive officer have blanket access to more or less everything – a commodore or diplomat's private computer systems are the only likely exceptions under normal circumstances – and other posts have specific access to certain systems. Sometimes this is dependent upon duty; for example, a junior officer might be serving as officer of the watch, and during this period will have access to systems normally above their clearance. A sublieutenant would not normally be authorised to declare the ship's weapons free but if they are the senior officer on bridge watch when a raider comes out of jump, they need and will have the authorisation to do so.

Branch heads and their deputies have override access to most areas within their branch's remit and can usually authorise others to handle a task. The ship's computer is set to recognise a valid order and assume authorisation. So, if the damage control officer orders someone to break out a piece of restricted equipment, the computer recognises this as authorisation. This function can be disabled, requiring formal authorisation to be granted to specific individuals, but this is more time-consuming and would normally be done only if the ship is under very secure conditions, such as when infiltration is suspected.

Under normal conditions, this system ensures that crewmembers can go about their duties without needing constant authorisation or setting off alarms but anyone who does something they would not normally be expected to do (such as a chef trying to enter a deployment shuttle in the docking bay) will be locked out and security staff notified. Orders given by someone who can authorise such tasks will remove this prohibition. However, there are workarounds used by most crews that slightly undermine the system. For example, the captain's steward may have access to the flight bay on a permanent basis, so they can bring special packages of luxury food directly to the galley. This is not normally a problem but can lead to a supposedly secure system becoming full of little holes created by special permissions.

In the event that a ship suffers the catastrophic loss of its command staff, there may be no-one aboard who can authorise the use of critical systems. This is clearly not acceptable, so all Imperial Navy ships operate a 'top 10' system which tracks the 10 most senior members of the chain of command at all times. If three of these 10 personnel agree on a nominee as acting commanding officer, then command devolves to that individual and they can assign posts as desired from that point on.

Under more normal circumstances, devolution of command follows a clearly defined path and the ship's computer informs the appointed person when they are in command of the ship. They may decline, in which case the computer moves to the next most senior crewmen. Declining emergency command is a difficult decision but a badly damaged vessel might be better off with her experienced chief engineer at their usual post rather than trying to run the whole ship, even if this means placing a 20-year-old sublieutenant in temporary command.

Protocol requires that a decision to decline command be reviewed every few hours. Once the immediate crisis is over, the senior officer is expected to take command but the system recognises that there is sometimes not time for an officer to make their way to the bridge through a ship that is in the middle of a desperate fight.

Shipboard security and command systems depend heavily on the ship's computer but can still function if disabled. All crewmembers carry a personal identity card which is automatically updated with their valid status when they come aboard a ship. Doors, systems and workstations all have readers for crewmembers'

cards and can recognise an authorised person even if the computer is down. Updating status with authorisation and permission is difficult under such circumstances but there are few occasions under which a ship might have to function without her computer system and all its backups.

Some command decisions, notably freeing weapons to fire and initiating jump, require multiple authorisations. For weapons fire, the captain must authorise 'weapons free' and the gunnery officer must authorise a given battery to fire – and both must be valid at the time the order is given. Command override applies under such circumstances. For example, the executive officer is assumed to speak for the captain at all times unless specifically countermanded, so can directly order a battery to open fire. This is a breach of protocol if the gunnery officer is in place and functioning but a bypass is permitted if necessary.

Ultimately, all authority aboard a ship devolves from its captain and runs down the chain of command. If the captain chooses to remove someone from the chain of command or rescind authorisation to carry out specific tasks then this is their prerogative. However, under most circumstances a legal order is assumed to carry the full weight of the captain's authority, so if the gunnery officer tells the sublieutenant in charge of point defence to open fire and they order the crewmembers operating the system to do so, this order does not need to be confirmed by the captain. Under normal operating conditions a ship's point defences are considered 'free' on the authority of the gunnery officer or senior gunnery department officer on duty, whilst offensive systems need authorisation from the bridge before they can be brought into action.

BOARDING AND INSPECTIONS

The Imperial Navy has the right to stop and search any ship in Imperial space. Vessels using courtesy transit corridors are often allowed to pass without anything more than a friendly greeting but even in a transit corridor the right of stop-and-search exists. This right extends to every vessel not belonging to the Imperial Navy, including Huscarle and mercenary ships, and even the yacht of the sector admiral or the domain archduke. While some nobles are rather difficult about being boarded, most understand that an even-handed application of the rules is necessary and submit without protest. Some are positively delighted to be boarded by the navy and try to make a social occasion of it.

The navy not only has the right but the duty to board and search. It does not make exceptions, although unless there is a blanket search order assigned to a particular system, not every vessel will be searched. Naval ships do not dock with vessels to be boarded; personnel use shuttles or jump across, even when the board-and-search is a cursory routine check of a known friendly ship. Boardings are always conducted by armed parties, in vacc suits. At least some members of the party keep their suits sealed at all times.

Boardings take the form of an examination of the ship's papers, a visual examination of cargo, bridge and drive areas, and a detailed close-range sensor probe of the ship. Logs are downloaded and checked for discrepancies and the ship's complement are questioned in as much depth as necessary. Compliance with safety equipment and navigational laws is verified, and the vessel is either allowed to go on its way or seized for a more detailed search. If necessary, the ship is escorted to the nearest naval base to be more or less dismantled in search of contraband. As an alternative to escorting, a detachment might be put aboard to ensure compliance.

Most boardings are undertaken with an air of polite distance on the part of navy personnel and usually weary resignation from the boarded crew. Gifts and gratuities – of any form – are never accepted by boarding party members. Even once a ship has been declared clear to pass, it is immediately subject to search by the same navy vessel or any other. This right can be used to harass suspected criminals but is rarely abused.

HIGHER-RANKED SUBORDINATES

The captain of a ship is its commanding officer, no matter who else is aboard. Certain Imperial Warrants permit the holder to co-opt any resource but even then the usual procedure would be to give instructions to the captain and allow the normal chain of command to do its work. If the captain proved incompetent or uncooperative they might be removed using a warrant, with command devolving down the chain of command in the usual manner.

This is the only exception to the rule of command. A commodore or admiral aboard a vessel might be in charge of the overall mission but the captain still decides how the ship is to be handled. A more senior command officer, such as a full captain who was for some reason aboard a ship commanded by

a mere lieutenant, has no authority to issue orders. Their advice and suggestions might be useful but an attempt to take over is a hijacking and should be vigorously resisted. Likewise, a powerful Imperial noble might decide to start issuing orders to the crew or the command officers when in fact they have no right to do so. This creates a difficult situation as the noble might cause trouble for the officers but their duty is clear – they answer to the naval chain of command and not to every passing noble, no matter how influential they might be.

There are well-established protocols regarding how to deal with this situation and when respected they work well. However, some senior officers and nobles are used to getting their own way or might be completely convinced theirs is the only possible solution to a serious problem. Ships designed to accommodate a flag officer or noble usually have a flag bridge or at least a chamber that can function as a temporary command centre. Where this is not the case the ship's captain and commodore might end up sharing the same bridge. Even with the best of intentions this can be problematic, so a wise captain will pre-emptively set up command space for an important visitor and ideally it will be positioned well away from the bridge.

Another potentially awkward situation arises when one of the ship's officers outranks its captain. Sometimes a relatively junior officer may take up command of a vessel and find that they are actually outranked by one or more of their subordinates. This tends to happen when a lieutenant-commander takes over a destroyer which has previously been 'senior ship' in its squadron. Despite the chief gunnery officer being a full commander, the person in charge of the ship – its captain – is the lieutenant-commander. The captain's orders must be obeyed, even by specialist officers holding a higher rank.

There is a naval protocol for this situation. The higher-ranking officer must salute the captain, defer to them, and use the non-gender-specific honorific 'Sir' or an acceptable alternative. The captain must salute the subordinate but higher-ranked officer and call *them* Sir. Tact and respect are called for, as the senior subordinate is obviously an experienced and skilled officer despite them not being in the command position. This occurs fairly commonly. On some ships it causes friction, on others it is a matter for strict protocol. Aboard the best it is a fact of life and cause of wry amusement among officers who respect one another and know their jobs.

PERSONAL WEAPONRY

All navy officers other than medical personnel are issued a sidearm, kept in quarters rather than the armoury. Aboard some vessels the officer of the watch is routinely armed while about their duties but this is a matter of preference between individual captains. Sidearms are also issued to personnel on security duties as necessary, although often cutlasses or batons are carried instead or as well. Sidearms are routinely worn by security patrols and the ship's security chief, whatever their respective ranks may be.



All officers (including medical) have a dress-sword for ceremonial occasions. Whether this weapon is sharp or not is a matter of personal preference, although some captains and even admirals make stipulations for all personnel in their command area. The regulations about which swords may be or must be worn at any given occasion are tortuous and fairly pointless. For the average naval officer things are simpler – they wear a regulation dress-sword when in full dress uniform or when a superior specifies 'swords will be worn'.

'Fighting' swords are sometimes issued to security personnel and officers. Rather more plain than a dress-sword, the standard naval cutlass is an intimidating weapon, which is its main use. Boarding parties, for example, are often preceded by two ratings or marines with drawn swords in a mix of ceremony and threat that may make the boarded crew more compliant. If trouble is expected, the party goes with guns ready instead.

Some areas are always guarded and there will be a security detail roving the ship or on alert at all times. The armoury, bridge and engineering control chambers are typically assigned a sentry on larger ships. These may be marines but are more often crewmembers with appropriate training and armed with a baton and snub pistol.

In port, security patrols outside the ship are usually armed with snub pistols or autopistols, although in friendly ports they may wear a cutlass instead for show. An armed 'response party' is always maintained at readiness within the ship, away from the public eye. Snub SMGs and body armour are available, while marines serving as ship's troops have their own equipment. Battle dress is not normally used.

Apart from weapons issued to the security detail and officers' sidearms, most weapons aboard a starship are locked in one or more armouries. In addition, there may be security lockers containing snub pistols situated in strategic areas. All ships have at least a couple of snub pistols in a locked cabinet in engineering and another on the bridge. Access to the armouries is restricted to the captain, XO and the individual in charge of shipboard security, usually the master-at-arms if the vessel has one. Local security lockers have coded keys, with access granted to the senior crewmember in that section of the ship.

SHIP HANDLING

Operations undertaken by the ship as a whole are subject to standard procedures, designed to be tailored to the situation by the officer on the spot. Since a situation can change from routine to lethal in an instant, a qualified officer is always present on the bridge and a constant passive sensor watch maintained.

TRANSPOUNDER OPERATIONS

A ship's transponder broadcasts its presence and identity to any suitably equipped receiver. This is normally desirable, since it prevents traffic incidents and allows vessels to be easily identified. However, it is not always in the interests of a warship to be easily visible. Naval transponders can run in 'overt', 'quiet' and 'silent' modes. The first two are available to civilian traffic as well, although most commercial ships run in overt mode on a constant basis. A 'silent' vessel that is nonetheless detected would be considered very suspicious.

In overt mode, the vessel's transponder is active, as are active sensors. The vessel clearly identifies itself not only as a naval ship but usually by class and name. When on traffic control, escort or similar duties, high visibility is an asset and flag-showing is not possible if ships are sneaking about. A certain amount of deception and obfuscation is possible using overt transponders, with a ship changing codes to make it seem like there are multiple vessels in the area. This is illegal for civilian traffic but a necessary capability for the navy.

In quiet mode, the ship's transponder is off but IFF (Identification Friend-or-Foe) is set to respond to a 'ping'. The IFF system will respond to queries – known as 'pings' – from other ships, navigation beacons and installations. Those squawking the correct codes, which will usually be friendly navy ships, will get full transponder information back by tight beam signal. Other craft receive a response identifying the ship as an Imperial Navy vessel but offering no other information. This response will not be made to a general IFF squawk unless it carries a navy code. Only if the interrogative signal contains the navy ship's co-ordinates, indicating that it has been spotted by sensors will any response be made. Otherwise, it will continue to hide.

Silent mode is used for combat. Emissions are masked to the utmost degree and only navy IFF codes will receive a response and then only by tight beam, if authorised by the captain. A non-naval ship running silent requires investigation. It is likely to be a smuggler or other miscreant, and will face a demand to turn on its transponder and submit to boarding. Those that try to hide or run may trigger a robust response and those that shoot at the navy will be put out of action as efficiently as possible.

IN-SYSTEM MOVEMENT

The most efficient way to get from place-to-place in a star system is to use constant acceleration and deceleration, taking advantage of the system's gravity wells where possible. Reaction drive vessels may coast much of the way but there is simply no need if a standard manoeuvre drive is available. For this reason a civilian vessel operating in overt mode will usually use constant acceleration to reach its destination by the most efficient route. Navy ships, on the other hand, routinely vary acceleration and vector slightly in a manner designed to reduce predictability.

Under combat or alert conditions, vessels usually either 'creep', at low acceleration and with consequently lower emissions, or 'sprint and drift' using short bursts of acceleration with the drive section turned away from the suspected location of hostile vessels and emissions hopefully masked by the bulk of the ship. Both measures are accompanied by quiet or silent transponder modes. Sometimes a naval vessel will lurk just off the main traffic lanes, changing position from time-to-time and observing the passing traffic. Startling local vessels by suddenly turning on the transponder and accelerating hard across the system can be an effective, if counterintuitive, way of 'showing the flag'.

In combat, pseudo-random evasion patterns of thrust and attitude are used to confuse the enemy's firing solution. It is a tactical decision for the captain as to how far off the desired mean vector a ship should thrust. The more radical the evasion, the slower the ship will reach its destination or firing position. Evasion is most effective against weapons fired at

long range, although again it is a matter of judgement at what point to move from sneaking to evading to closing hard and fast with the target.

JUMP PROCEDURES

The normal jump procedure used by the Imperial Navy is lengthy and careful. Jump requires close coordination of power plant output, jump drive calibration and input from the ship's astrogator. Actual initiation is by the astrogator but regulations require that jump only be initiated on the orders of the commanding officer of the vessel. A standard jump moves through several stages of readiness, all subject to confirmation and authorisation.

Stage 1 Readiness: A jump plot is generated and fed to the astrogation computers. This determines the level and pattern of charge in the ship's jumpgrid and the general parameters of jump drive initiation. Several destinations can be held at Stage 1 readiness.

Stage 2 Readiness: Destination is confirmed and locked into the astrogation computers. Specific parameters are generated for the jump drive and grid. This process takes two to three minutes and only one destination can be held at Stage 2 readiness. Vessels entering combat often have an escape jump plotted and held at Stage 2. The jumpgrid is not live at this stage.

Stage 3 Readiness: The jumpgrid is brought up to 30% charge level and the jump drive begins its warm-up cycle. This draws a great deal of power and increases a ship's emissions considerably. It is usually possible to tell if a ship is running at Stage 3.

Stage 1 Initiation: The jump drive, which includes a massively high-output but very inefficient generator, begins to burn liquid-hydrogen fuel at an enormous rate, generating immense power levels. Normally the rate of fuel flow and energy output is gently ramped up over 10–15 minutes – this is referred to as the warming cycle. Gradual power increase imposes little strain on the engines and a very small chance of misjump. Grid power is increased to 80% of maximum. Normally this phase takes one to two minutes during which emissions are greatly increased. Even quite poor sensors can tell if a ship is at Stage 1 initiation. Jump can be aborted at this point, although there is a small risk of power overload and typically about 5% of the jump fuel wasted.

Stage 2 Initiation: The jump drive burns through 90% of the fuel that will be needed for the jump and emissions go off the scale. The jumpgrid is brought to 100% entry power and held there. Jump must be initiated in the next three to five minutes, or an emergency abort begun. If not, the ship will enter jump without proper control and will certainly misjump or be destroyed.

Jump Initiation: With the grid at full power, the vast energy generated by the jump drive is blasted into it, projecting the vessel into jumpspace. Destination is determined by the energy balance and configuration of the grid at the time of jump initiation, and can be affected by gravity wells, damage or power fluctuations. Once in jumpspace, the remaining 10% of fuel is used by the jump drive to maintain the j-field around the ship. Without it, the vessel is instantly destroyed.



Emergency Abort: A ship which suddenly has a pressing reason not to jump, such as sustaining damage just before initiation, can make an emergency abort. From Stage 1–3 Readiness, this is a low-risk procedure, requiring only routine engineering tasks known to all qualified engineering personnel. Mistakes may result in minor system damage from power surges but usually nothing serious.

Aborting from Stage 1 Initiation is more dangerous and will tax most engineering teams. Errors will certainly cause system damage and there is a possibility that sections of the jumpgrid may be distorted by overloading. The ship's power system may also be damaged.

Aborting from Stage 2 Initiation is a desperately dangerous undertaking requiring emergency procedures and (usually) a certain amount of 'seat of the pants engineering' in a very fluid and dangerous situation. An error can result in anything from power overloads that take out various systems to a drive explosion that wrecks the engineering section. In some rare cases the ship enters jump anyway, with a totally random destination and serious damage to the jump and power systems. Few vessels have ever survived this experience.

Crash Jump

Sometimes it is necessary to escape a desperate situation. The normal jump cycle takes 15–20 minutes, assuming course plots are ready. By crash-starting the process and going immediately to full power, jump can be initiated in one to two minutes if a course is ready in the computer. This causes great strain on the system, at the very least shortening the life of the jump drive.

Fleet Jump

Jump mechanics are not properly understood. Two similar vessels can enter jump at the same time and place, with the same destination, and come out two days apart. This is not acceptable for fleet operations and there are two ways to deal with the problem. The first is to accept the variance and allow time to marshal a force. Jumps are made, where possible, into points distant from the projected location of enemy forces. This gives time for the fleet or squadron to reorganise itself upon arrival. However, it is not always practicable.

All navy vessels are fitted with squadron jump systems. These generate jump parameters for a group of ships rather than a single vessel and slave the systems of all ships to a central initiation circuit. The standard unit can cover a squadron of ships, or a convoy and its escorts. Fleet flagships are fitted with an even more complex system which can coordinate the jump of a number of squadrons. Fleet jump systems are no more expensive to create than standard jump governance equipment but the technology is considered highly sensitive. For this reason, few civilian operators are permitted to obtain vessels so equipped.

Using a linked jump reduces variation in time to about an hour either way in most cases and positional variance is minimal. This means that fleets can jump en masse and be ready for combat at the far end but emergence is a tense occasion for all concerned. Vessels emerge in the wrong order, on slightly different vectors and dispersed in time by up to a couple of hours. The variance is greater for large fleets.

Pursuit Jump

The squadron jump computer can be used to analyse a vessel's jump parameters and initiate a pursuit jump to the same destination. If the pursuit jump is initiated soon (two to three minutes) after the first craft jumped, there is an excellent chance that the pursuer will arrive in the same relative position to the pursued. Any delay allows for parameter drift with the result that location or more likely, time of arrival, may be off.

The longer the delay, the more variation. If the pursuer takes more than 15 minutes initiating jump, parameters will have drifted so much that the result is no different to when two ships jump independently to the same system. Emergence location may be offset by millions of kilometres and the usual one day-either-side-of-a-week duration applies. The pursuer will usually arrive within a half day of the target, and somewhere within a few millions of kilometres, but this is of little use in a pursuit. For this reason, pursuit jump is a hurried, fraught situation and rarely used.

TACTICAL MOBILITY AND AGILITY

The tactical mobility and agility of a warship are usually the same thing. Mobility, in terms of acceleration, allows ships to move around a star system quickly. This can still go badly wrong, such as when a warship goes haring off under high acceleration towards a target that turns out to be a false alarm or deception. All that momentum so quickly built up now has to be shed before the vessel can begin accelerating towards the real target. However, high acceleration is considered desirable for tactical mobility within a star system.

Agility is based on the vessel's thrust capability but also its ability to reorient itself for thrust and bring weapons to bear. It is possible to construct a vessel with very high thrust but which is rather ponderous in terms of reorientation, undesirable and therefore rare in warships. Mobility and agility usually go hand-in-hand. This allows a vessel or squadron to be quickly redeployed to counter one threat then another, which in turn creates tactical options. However, good positioning and effective command are necessary to make this work.

No amount of mobility can counter an enemy that possesses near-indestructible mountains of firepower and sends them at a target the navy must defend. Raw fighting power and survivability are necessary in this slugging match. Overall, handling a fleet is a matter of finding the enemy's weaknesses and exploiting them whilst protecting your own, and in some cases that is not possible with the vessels available. On those occasions where an engagement cannot be won, the best decision might be to salvage as much of the fleet as possible. Even then, withdrawal in the face of the enemy is a difficult and usually costly business – and even more so if it is not well handled and conducted in an orderly fashion.

Agility can therefore be considered a force-multiplier in combat, whilst tactical mobility is a similar asset when manoeuvring to seek or avoid engagement. As a rule, the more agile force can dictate the terms of an engagement, closing range if desired or breaking

off if things go badly. The Imperial Navy prefers high agility for its warships, even those that might not seem to need it. For example, missile cruisers can engage at very long range but if the enemy can quickly dash to close range the advantages of the missile force are nullified. An Imperial missile cruiser force should be able to retire ahead of an advancing foe, keeping the range open while maximising the effects of missile salvos.

There is more to this than raw thrust and reorientation speed. A force that has momentum may be unable to cancel its motion quickly enough to avoid passing through a kill-zone. Alternatively, momentum may be such that only a fleeting engagement is possible. For example, it might not be possible to properly intercept an enemy strike squadron headed for the logistics ships but by accelerating hard a defensive force might be able to make a pass. Those ships will then have to slow and return to the battle area, making them unavailable for the duration.

Naval tactics are all about creating such situations, in which part of the enemy force is nullified for a time and good agility gives a commander options. More importantly, it allows quicker recovery from a poorly judged manoeuvre. Whilst firepower and armour are the primary indicators of a warship's capabilities, it is agility that allows them to be wielded effectively. Nothing has changed in millennia of warfare; a well-handled knife can be more effective than a clumsily swung sledgehammer.

MOUNTS, TURRETS AND BATTERIES

Most Imperial warships have a balanced armament including different types of weapon, although the smallest classes cannot mount sufficient systems to make this practicable. Weapon systems are normally considered to fall into four categories: Primary, Secondary, Tertiary and Defensive.

Primary Weapon System

A vessel's primary weapon system is usually a spinal mount in the case of cruisers and larger vessels, and a bay weapon for destroyers. In smaller ships there may be no mounts heavier than turrets or barbettes, with the vessel's primary system being the most powerful or most numerous.

The primary weapon system of a vessel determines its general role and preferred mode of engagement. Vessels with long-range primary weapon systems, such as particle accelerators and missiles, generally prefer to remain at longer ranges, using their agility to prevent the enemy from closing. Conversely those with short-range weapons or an offence/defence balance biased towards offensive action will usually attempt to close and deal with opponents quickly.

SECONDARY WEAPON SYSTEMS

A vessel might have just one secondary system or a variety. Secondaries may be selected to support the primary weapon system in the same engagement or, more commonly, give a broader range of capabilities. Vessels with a spinal mount often have one or more weapon bays as secondaries, whilst those whose main armament is carried in bays will normally use barbette-mounted weapons. Typically, a vessel with a long-range primary weapon system such as a particle accelerator spinal mount will carry a close-range secondary system either for use in finishing off a crippled opponent or getting rid of smaller enemy combatants that have managed to close.

It is not uncommon for a vessel to have two or more secondary weapon systems. For example, a large warship might back up a spinal mount with bays containing fusion guns for close-range work and other bays of missile launchers. This gives the vessel an all-round capability without compromising the primary mission.

TERTIARY WEAPON SYSTEMS

Turret-mounted weapons such as pulse lasers are generally considered to be tertiary armament aboard all but the smallest warships. They are not intended to engage other major warships, as they cannot do enough damage to matter, but instead provide additional capabilities. These include fighter defence, missile interception, and engagement of smaller enemy vessels that larger weapons might struggle to track. Tertiary weapon systems are typically grouped into batteries of two to six turrets, all controlled by the same gunner. This somewhat enhances their capabilities but nonetheless these weapons are capable of damaging small targets only.

DEFENSIVE WEAPON SYSTEMS

The same weapons might be mounted as defensive systems, along with specialist defensive weapons such as sandcasters and point defence arrays. Defensive weapons are usually mounted singly rather than in batteries and may even be in mixed turrets. For example a ship might have multiple turrets each containing two sandcasters and a laser, dedicated to defensive operations against incoming missiles and torpedoes. The exception is the use of massed sandcasters aboard a large vessel. Even in this case, some naval vessels mount their sandcaster armament in mixed turrets and can switch some or all to defensive laser fire at need.

WEAPON READINESS STATES

A ship's weapon systems are normally powered down. Weapons status determines how quickly the system can be brought into action.

Weapons Safe: Weapon systems are powered down and controls are locked. A scan of the vessel will indicate this, perhaps reassuring other vessels there is no hostile intent. However, it may take some time to bring the weapon into action.

Weapons Tight: Weapons are powered or loaded but cannot fire.

Defence Free: Weapons are powered but only point defence lasers, screens and defensive systems can operate.

Weapons Free: All weapons can fire but only under the central direction of the gunnery officer. Point defence can operate independently.

Local Control: All weapons are released to operate independently. This mode is used when main fire control is out of action. In the event of serious damage or loss of the bridge, all weapons automatically revert to local control. This is less efficient than central fire direction and friendly-fire incidents are more likely.

In the event that a vessel is caught in a weapons safe state, the time to bring weaponry into action might be highly significant. The times on the Weapon Readiness table assume crew can reach their stations quickly but weapons must be charged or loaded.

Weapon Readiness

System	Time to Full Readiness
Turret or Barbette	1D minutes
Small Bay	1D+6 minutes
Medium Bay	2D+6 minutes
Large Bay	2D+12 minutes
Spinal Mount	4D+12 minutes
Unloaded Sandcaster, Missile or Torpedo System	Time doubled
Plasma or Fusion Gun System	Time increased 25%
Particle Weapon or Meson Gun System	Time increased 50%

Which mode the ship's weapons are in depends upon the captain's appraisal of the situation. Additionally, weapons use is affected by orders from squadron or fleet command. These place no physical restriction on the use of weapons but advise the captain as to whether they are allowed to initiate combat. This is particularly important when undertaking delicate operations in a cold war, where provocation can be expected. The threat warning issued by higher command helps a ship's captain decide what response to make. Their instinct may be to blast that harassing gunship in case it suddenly opens fire at close range but orders may not allow it.

Threat Warning Green: No threats expected. The vessel is not authorised to initiate combat but may defend itself.

Threat Warning White: A possible threat exists. The vessel may respond to an attack but may not initiate offensive action. If fired upon, a limited response to remove the threat is authorised.

Threat Warning Red: A significant threat of attack exists. The vessel is free to engage potential threats before they open fire but not to actively seek combat.

Threat Warning Black: A war, or war-like situation exists. The vessel is free to seek out and engage enemy vessels at best opportunity, subject to operational orders.

Special conditions may exist. For example, a vessel operating in a condition of Green/Weapons Tight, may still engage a known pirate vessel since standing orders permit this.

RULES OF ENGAGEMENT

Naval vessels are subject to strict rules of engagement. Under normal circumstances, suspect vessels must be challenged three times and a warning shot fired before any attempt is made to damage the vessel. However, there are occasions when naval ships may fire with minimal, or no, warning. In time of war, vessels identified as belonging to hostile states may be attacked without any warning. Indeed, this is the preferred mode of attack. Such vessels are usually identified by passive sensor data picked up by picket craft.

One axiom of naval combat is that it is best to 'break the kill chain' early, by eliminating the enemy's ability to use weapons. This might mean taking out a forward-deployed sensor picket or crippling the weaponry of a warship. It does not necessarily mean destroying enemy vessels, although that tends to be a result. All naval officers in a hostile situation know that the advantage lies with whoever attacks effectively first. The 'effectively' is important here; delivering slight damage to an enemy resulting from an ineffectual attack may be worse than doing no damage at all. Sometimes waiting for a good shot can pay dividends; on other occasions it is best to engage first. However, a captain may not be in a position to open fire at the most tactically advantageous moment. Rules of engagement or orders from above may preclude this. For example, a destroyer captain might have to pass up a perfect shot because the admiral thinks a salvo from the battleship squadron is a better opening gambit – and rightly so, more than likely.

There are some areas where the general rules of engagement are altered or replaced. Free-fire zones exist around sensitive sites and vessels. Flagships, naval depots and the entire Imperial Bodyguard squadron exert a ‘free-fire zone’ around them, wherever they may be. Intruder craft will be warned if they are outside the zone, or just inside it. A craft that manages to slip deep into the free-fire area without being detected is almost certainly up to no good and policy is to destroy it with overwhelming fire immediately upon detection. A craft not destroyed will be boarded and stripped down to its frame – and the crew interrogated – to find out what the ship was up to.

In the event that a vessel fires upon a navy ship, a civilian vessel, or installation belonging to the Imperium or its member worlds, it is subject to retaliation with lethal force. Vessels may be challenged to stand down at discretion but the captain of a navy vessel is quite within their rights to blast anyone who shoots at their ship into sub-atomic particles. In all other cases, subject to the captain’s judgment of the situation, vessels must be challenged and fire should be directed to disable rather than destroy. Clear target identification is essential, especially when dealing with what looks like a corsair but just possibly could be a nervous merchant vessel.

ACTION STATIONS

When action stations is sounded, all crew must immediately suit up and proceed to their battle station. Those manning essential systems remain at their post until relieved and only then don their suits. Obviously, this is subject to circumstances – crew in a holed compartment will suit up as quickly as possible. As sections report suit readiness, atmosphere can be evacuated to prevent explosive decompression. This is not always done, however. In some cases it is considered better to operate at suit-readiness, with helmets close by or donned with faceplates open, than to go ‘full-suit’. As always, the commanding officer has discretion.

Non-combatants are restricted to their quarters, or may be directed to holding areas if they are not able to get to their cabins. Internal security is heightened as well, with security patrols moving around the ship and sentries on hatches into sensitive areas. It is rare for sabotage to be attempted aboard a navy ship but it has happened in the past, and occasionally crewmembers might engage in illicit activity whilst everyone is busy. The navy considers prevention and deterrence to be more useful than reaction.

When a ship is closed up at action stations, all personnel not involved in running combat-necessary systems, or waiting in reserve to replace casualties, are assigned to damage control teams. These include Engineering and Technical personnel, plus the ship’s cooks, clerks and other general Crew members. Everyone receives training in basic damage control procedures and teams drill constantly.

Damage control is normally coordinated by the ship’s executive officer, who dispatches response teams to deal with gross damage such as hull penetration, and technical teams to repair command pathways and other more delicate systems. There is a brutally simple rule to damage control operations – Save the Ship. Individuals are irrelevant beside the need to preserve the entire ship’s company. The ship must retain the capability to support life, to move and to fight. Everything else is secondary. Leaders of damage control teams must often make critical decisions in an instant, and must be able to be callous about the fate of individual crewmates in the interest of saving the ship.



TACTICS

Naval combat is governed by three factors; gravity, alignment and momentum. A ship's crew has direct control over two of those and can sometimes create a situation where the third works to its advantage. However, gravity is an outside factor. A body exerts a gravitational attraction based on mass and there is nothing anyone can do about that except factor it into their plans. The simplest option would be to stay away from massive bodies but this is rarely possible due to the nature of space combat. One volume of empty space is pretty much the same as any other, give or take a few gas molecules and some cometary dust. There is quite simply nothing to fight over in deep space.

The only reason for combat to occur in deep space is where one force is the target of the other. This might occur due to an intercept as a fleet tries to prevent another from getting into bombardment range of a planet or to deny an enemy force the opportunity to refuel. Even here, the final objective is in a gravity well even if the battle takes place in deep space. This is the reality of space combat; everything worth fighting over involves gravity.

Gravity wells have complex effects on space combat. The most obvious is the easiest to avoid; getting too close to a high gravity planet might result in ships becoming trapped in the gravity well or even being pulled in and destroyed. This is unlikely for any vessel that can manoeuvre; even if the ship's thrust is less than the gravitational force it should be able to accelerate enough to reach orbital or escape speed. A ship with a crippled drive or power plant is in real trouble close to a gas giant or similar large body but most vessels can escape. However, this is not the whole story. The presence of a planetary body narrows options for ship commanders. As a vessel gets closer to a body there is a point where manoeuvres become predictable.

A clever opponent can use a gravity well to neutralise part of a force. By manipulating the enemy into a position where some of their ships have to make different manoeuvres to avoid a gravity well – or a collision with something solid – the opponent can break up the force and tackle its components

sequentially. Even if this is not possible the threat it could happen will limit the enemy's options and might make it possible to avoid engagement or conduct one on favourable terms. Similarly, a gravity well might make it harder for one engaged force to escape.

In addition to interfering with jump drive operations, the physical body and its surrounding gravitational field might put a commander in the position of having to choose between abandoning part of their force and breaking off with the rest or fighting on under worsening conditions. This is an application of the ancient principle of fighting on deadly ground – terrain where defeat will have the worst consequences for the enemy. However, space engagements are fluid. A commander who thinks they have cleverly sprung a 'gravity trap' may end up becoming trapped themselves.

The problems associated with gravity are worsened when carrying out gas giant operations. This is usually refuelling or searching for intruders hidden in the sensor-limiting murk of the giant's atmosphere. Vessels deep in the atmosphere may not be able to detect incoming threats early enough to avoid engagement, or may have to engage on unfavourable terms. The solution to this is to keep part of the force in a 'high guard' position, placing them where gravitational interference is minimal. Units deeper in the gravity well are still limited in terms of what vectors they can come out on but at least part of the force is free to manoeuvre.

Momentum is the great decisive factor in most engagements. A vessel travelling in a given direction must cancel or alter its momentum in order to change heading. This can take considerable time, which translates to covering a great deal of distance. For example, a force has been accelerating towards a planned intercept point for some time when it receives word that its support vessels are under attack. The ships must turn around and begin thrusting in that direction but for a while they will still have considerable momentum in the original direction. During this period they are getting further away from their supports.

The question of how long it will take to reach a given point is not a simple one. The commander must consider how much momentum they want to have when they get there. Full thrust all the way means the force will reach the target point in minimal time but will hurtle past and be out of weapons range again very shortly. Arriving at a speed where the ships can slow down and fight a protracted engagement means taking much longer to reach the target point. Which is desirable depends on circumstances; a missile-heavy force might choose to zip through the engagement envelope and away again, leaving a salvo of missiles to engage the enemy.

Momentum can be a killer. A force can only change its vector so much in a given time. If it is moving fast, with a lot of momentum, it may be impossible to make or avoid an intercept. It is also possible to run headlong into an ambush. For example, an enemy force makes a token strike and falls back, drawing the squadron in pursuit. Both sides build up considerable momentum before the second enemy force becomes apparent. After lying powered-down during the early phase of the engagement this force is sitting right across the pursuers' course. They may be able to change course somewhat but will not be able to avoid contact. Of course, this engagement will be short if the pursuers are moving at high speed and one common tactic is to accelerate even more towards the ambushers. To create a longer engagement time the ambushers will usually begin accelerating in the same direction as their intended prey.

Information on all these considerations is available to starship commanders, along with predictions of every possible vector change on their own part and that of the enemy. More thrust means more options but all the same an impulsive commander might start a manoeuvre that nullifies their advantages or even hands victory to the enemy. On the other hand, excessive caution means missed opportunities. The art of the ship commander is to find a balance between what needs doing right now and the options that will be closed off by that action. A single-ship action is a little like chess, in which it is possible to predict which early moves will make later ones possible, or not. A multi-ship action cannot be compared to chess; it is simply too complex.

Alignment is the third critical factor and the one over which a commander has the most immediate control. Most Imperial Navy ships are constructed such that when their main armament is aligned with an enemy their critical engineering section is protected by the

bulk of the vessel. A ship can pitch, roll and yaw to bring different batteries to bear or to shield a damaged section. This assumes the enemy is fairly distant and all their vessels are in one direction. It is possible to split a force in order to bring a strike group into position to fire on the enemy from an unfavourable direction but this requires an effective manipulation of momentum. A mistake may result in part of the force being out of contact or overwhelmed by enemy fire.

In short, commanders must juggle these three factors not merely in the moment but also in the future, ensuring they have the right options available. Naval tactics are sometimes about gaining an advantage immediately but in many cases a commander will try to get their opponent to choose an option that looks good at the time but leads to reduced effectiveness or even disaster.

Gravity: A commander cannot do anything about gravity wells in the engagement area but can decide how to make use of them and how much to risk by going close to one.

Momentum: Momentum determines where a vessel will be in the future. It can be changed but not immediately, ensuring that every manoeuvre has consequences for future options.

Alignment: Alignment can be changed almost immediately, unmasking batteries or protecting damaged areas. It is a form of fine-tuning for the situation created by momentum.

ENGAGEMENT TYPES

A vessel's preferred style of combat is determined by armament and protection. Whether or not it is possible to fight in that style is determined by momentum which in turn is governed by available thrust. In general, there are three combat styles, characterised by range. All weapons have an engagement envelope, within which they are effective, and all have ranges at which they are less useful. Lighter and faster ships have an advantage in terms of getting to their chosen engagement range but the weaponry mounted by a vessel dictates what ranges are best for it. The armament of the opposition will also be an important factor; if your best weapon is effective at close range but the enemy has much heavier close-range armament it may be better to engage in a sub-optimal manner than to take a hammering in order to deliver a relatively weaker attack.

For larger forces with multiple ship types, the overall engagement is determined by the actions of the heaviest vessels present. In a fleet action this will almost certainly be battleships or dreadnoughts. Supporting roles are played by groups of cruisers, light forces and escorts. This model scales according to the vessels available; if cruisers are the heaviest ships present they will take the primary role with the 'cruiser' slot filled by the lightest cruisers and more likely destroyers.

Close Combat

Close combat is sometimes referred to as 'strike' as it is favoured by fast, heavily armed, but lightly protected vessels. It emphasises speed and agility to get as close to the enemy as possible and either stay at the decisive range or break off as necessary. Favoured weapons for close combat are plasma and fusion guns, whilst the lasers used by many small craft are only capable of engaging at close range which dictates the options available to these vessels. Typically, close combat is a matter of smaller craft swarming a larger one, although a battleship or cruiser commander might decide to close with the enemy and get the fight over quickly. Close action produces the most decisive results, bought at the price of taking damage and losing craft.

The ability to change alignment quickly can be critical in close combat. For a large ship being swarmed it may not make much difference as there will be fire coming in from all directions. Changes in alignment might allow an attacker to be swatted as it strays into a firing arc covered by multiple weapons. For the craft doing the swarming the ability to keep weapons on target is vital. This is also true of close engagements between evenly matched combatants, where the difference between landing a main weapon hit and plinking away with lighter armament mounted on the flanks can be enormous.

Boarding is a special case of close combat, which is only used by the Imperial Navy when crippled vessels are targeted for capture. Navies that hope to get boarding parties onto enemy ships that can still put up a fight generally find the tactic unviable and extremely costly. Normally, boarding attempts are accompanied by attacks made by fighters and other small craft which can get very close to the target. Most of this is simply distraction but fighters can sometimes take out a particular turret or even blast a hole in the hull for boarders to use.

Standard Engagement

The standard engagement tactic is to get to the range best suited to the ship's main weapon and stay there. If a ship has a functional spinal mount there are few reasons not to use it, even if this means not firing secondaries at all. Favoured weapons are meson guns and particle accelerators of varying sizes carried as a spinal mount by cruisers and battleships. Fleet destroyers are often built around a bay weapon in a similar configuration whereas escort types normally have a larger complement of lesser weaponry.

Whilst the concept is straightforward, a standard engagement can quickly become a puzzle for the commander to solve. The situation is governed by changes in momentum, reacting to the enemy's actions or, better still, dictating what they can and cannot do. There is an element of bluff and trickery to this, made possible by the delay inherent in changes of momentum. It is possible to make an enemy think the commander wants to open range, causing them to accelerate towards the target, or vice versa. By the time the enemy realise the target has not changed vector as much as expected the tactical situation has been altered. Making this happen is part of the shiphandling art.

Standoff Engagement

Standoff engagements are typically fought with missiles or long-range shots from weapons such as particle accelerators. The latter are not particularly effective but sometimes it is not desirable or possible to engage more closely. Nibbling at the enemy fleet from a safe distance is not the stuff of legend but commanders have a responsibility to keep their ships in fighting order. It may be that making a few hits and preserving the fleet in being is more useful in the long term than closing in and winning a costly victory.

The ability to maintain standoff range is largely a function of momentum before the action begins and changes once the fighting has begun. The Imperial Navy considers that missile-heavy vessels still need high agility, otherwise the enemy will be able to close with them or escape from the large engagement envelope. Missiles are the main armament of only a few classes in service but many battleships and cruisers carry at least some. One reason for this is the ability of standoff weapons to influence the engagement type; an enemy that lacks good missile defences or the ability to strike at standoff ranges must close, which brings their ships into range of main weapons. In this case, standoff weapons have forced the enemy to accept a closer engagement.

THE LINE OF BATTLE

Modern naval combat has much in common with sailing-ship warfare, despite taking place in a three-dimensional battlespace. A melee, with ships engaging whatever targets they can hit, is generally considered undesirable. Combat operations revolve for the most part around keeping the main combat ships – traditionally known as the line of battle – organised and capable of mutual support. Vessels alter their position within a formation a little to evade enemy fire but must remain not only within physical proximity of their squadron mates but also within the capability of the ship's drives to stay with the rest of the force.

It is generally agreed that an enemy warship not under fire is more of a threat than one that is. Once a commander realises they do not have to worry too much about evasion and defence, greater concentration on hitting the enemy is possible. For this reason, capital ship battles tend to be one-on-one, more or less, if numbers are approximately equal. If outnumbered, it is considered better to shift fire between designated targets to ensure they remain defensive rather than concentrating on one. Superiority in numbers allows two or more capital ships to pound a single target. Keeping this fire focused and directed at the correct targets requires good communications with the flagship and careful manoeuvring by all vessels.

The line of battle in a fleet engagement will be composed of capital ships, perhaps with some heavy cruisers added to reduce an inequality in numbers. Cruisers always suffer badly in this situation but there may be no alternative. The 'line' might actually be several squadrons, engaging several others at slightly varying ranges, creating a highly complex situation. This is further complicated by the activities of escorts and cruisers.

SMALL CRAFT AND ESCORT TACTICS

The use of small craft can be considered standoff combat from the point of view of the launching carrier, although from the small craft perspective theirs is a close engagement. Small craft are not much of a threat to a major warship but can be quite the nuisance, especially if it has damaged areas that can be precisely attacked from close range. Small craft can also provide mid-course guidance for missile salvos and interfere with attempts to intercept them. Carriers typically have a decent missile armament as they strongly favour

standoff engagements, and the combination of a fighter swarm plus missile salvos can be highly effective. More commonly, this tactic works well against medium-sized and smaller vessels and is not considered an optimal mode of combat. The fact that the navy uses cruisers and battleships rather than carriers as its main striking arm is evidence of this.

On the other hand, the small craft and missile threat is sufficient that the Imperial Navy provides its major warships with significant tertiary and point-defence armament and rarely sends them out without an escort. Fleet destroyers are sometimes pressed into this role but wherever possible the navy prefers to use purpose-built escort vessels. These can be subdivided into close escorts and more general escorts. Close escorts are small and agile, intended to act as a last-but-one line of defence against missiles and fighters, a sort of spacegoing goalkeeper. They stick close to the vessel they are assigned to protect and intercept incoming attacks. Close escorts are rarely targeted by major weapons as they are difficult to pinpoint against the greater emissions of the ship they protect. In any case, a powerful weapon would be more usefully directed against a major target. Close escorts typically find themselves fighting their own battle within a battle, racing around a major warship to intercept attacks and trying to stay out of its main weapon firing arc. Proper IFF operations should prevent a friendly fire incident but 'should' is an unpleasant word to navy officers. A slight error in positioning or a transponder glitch could result in the close escort being annihilated.

Close escorts may be attacked by enemy fighters and small craft, and possibly by some of the missiles coming in. This is usually antiradiation weapons designed to attack jammers and electronic warfare platforms, whilst conventional missiles head for the main target. An escort that is drawing fire is doing its job; ideally it defeats the incoming craft and weapons but even if it is destroyed it has protected its charge.

Larger escorts do not operate this way. Instead, they are positioned in the expected direction of attack – known as the threat axis – to intercept a strike. Their forward position makes them vulnerable but permits early detection and counter, providing the escort group has been correctly deployed. Attacking escorts to clear the way for a strike is a tactic known as 'rollback' but not generally favoured. Weapons and shots expended against escorts do not reduce the fighting power of the main force and it is that which creates a decisive outcome.

When the threat is fighters and missiles, escort destroyers and fleet escorts are the favoured counter – with close escorts and the target's own defences dealing with 'leakers' that get past the escorts. Escort operations might also be carried out to prevent a destroyer or cruiser attack. In this case, fleet destroyers and cruisers are the favoured counter. The principle is the same in both cases; the enemy wants to get powerful weapons close to main combat assets and escorts are there to prevent it. Losing some destroyers or light cruisers to protect battleships while they smash the enemy fleet is a fair bargain.

LIGHT FORCE TACTICS

The term light forces is usually applied to fleet destroyers and possibly light cruisers. It is not uncommon for a destroyer group to be assigned a light cruiser as flotilla leader. This is expensive but gives the force a significant firepower advantage over an all-destroyer group. Where possible, light vessels operate as pairs. These may be formal half-squadrons – known as divisions – or an impromptu team-up in the middle of a 'furball' engagement. Either way, the intent is to smother a single enemy craft with fire and take it out of action, then move on to another. This is another situation in which the Imperial Navy does not favour dispersal.

The exception to this occurs when light forces are sent to intercept a strike headed for a vulnerable target such as a crippled battleship, tanker squadron, or defenceless installation. In this case the aim is to take the enemy under fire as soon as possible and, ideally, draw their attention away from the target. Efficient destruction of the threat may still be achieved but the overriding aim is protection of intended victims. A light force expended to save a critical strategic asset such as a tanker group is an unpalatable bargain but a necessary one.

Light forces are also tasked with making the same strikes they deploy to counter. Destroyers might be able to bring down a capital ship or cruiser by harrying it from all sides, but for the most part they are best directed against support assets such as tankers or carriers. Light forces might also precede a fighter and missile attack with the intent of sweeping

aside any forward-positioned escorts. In a major engagement the light forces will dash about, flitting from one role to another as the situation requires. They might fight another light force group sent to protect the escorts they were to have been attacking, then race back to intercept an unexpected strike against the supporting fleet carrier, before helping finish off a crippled enemy capital ship. Light forces are the place to establish a reputation that will carry an officer all the way to flag rank.

CRUISER TACTICS

There is a need for some cruisers in a major engagement but little in the way of cruiser tactics as such. Service with the fleet tends to be a workhorse assignment with few opportunities to display the sort of initiative that makes careers. Instead, the cruiser force is more of a general fleet asset used to plug holes and do jobs that other ships are not well suited to. For this reason cruiser captains who have undertaken detached assignments tend to be promoted faster than those who took on all the odd jobs with a battle fleet.

Light cruisers might be included among the light forces but their possession of a spinal weapon creates additional possibilities. A group of cruisers can, in theory, cripple a capital ship. However, there is a real chance the heavier vessel will smash them one-by-one as they make the attempt. For this reason cruisers generally support and protect the battle line rather than trying to be part of it. It is common for a supporting cruiser force to be held close to the capital ships, moving out to intercept a strike by lighter forces or add their firepower once the enemy's main ships are already engaged.

Cruisers can be useful in this role but their real strength lies elsewhere. A cruiser force might be sent to attack enemy logistics ships, tankers and carriers. Its firepower is entirely sufficient for this role and protection good enough to take out escorts without suffering significant damage. Cruiser forces might conversely be assigned to intercept such a strike or detached to fulfil some other objective such as harrying damaged ships or preventing the enemy from refuelling at a gas giant. Cruisers are often deployed for 'flank security' which is a catch-all term for an array of supporting actions intended to ensure the battle force can do its job without interference.

The greatest influence a cruiser can have on a major fleet engagement is indirect. A vessel engaging in a raiding cruise behind the battle zone might draw off multiple enemy ships or apply pressure to supply lines. Reconnaissance in force is also an option, with cruisers attacking targets of opportunity whilst scouting. The balance of fighting power, protection and cost-effectiveness possessed by cruisers makes them a good choice for such missions as they can usually outfight anything they cannot outrun. Cruisers are also often used as the centrepiece for a task force, taking the role of capital ships against lesser opponents. The same model applies as to fleet actions, only here the role of the line of battle is played by a single cruiser, destroyers take over the 'cruiser' role and so forth.

OTHER VESSELS

Most other vessels have no place in a direct engagement and are usually held back where they are as safe as possible. 'Back' in this context usually means on the far side of the battle force relative to the enemy, and far enough away to be out of range. It is also possible to conceal such vessels, perhaps by hiding in low orbit around a planetary body. The latter may be an option for ships that will not be needed until after the engagement, such as resupply ships, tankers and repair vessels, although it runs the risk that the enemy might discover these forces and attack them whilst the fleet is out of support range. Preventing this is one of many flank security roles assigned to cruiser and destroyer forces.

Vessels that may be needed in an engagement cannot be off somewhere hiding. Instead, they are positioned behind the line of battle with their own escorts and protected by the flank security force. These formations must manoeuvre carefully to avoid losing contact with the main force or getting out of support range. They may close up in order to carry out their function then fall back for safety. Supports of this kind are likely to be missile cruisers and carriers, although specialist vessels such as assault and bombardment forces might follow a breakthrough force at a suitable interval.

Locating concealed enemy supports and striking against groups behind the battle line is a task for light forces and/or cruisers. This can be the most important part of an engagement, whether deliberately or otherwise. A force that takes some battleship losses but cripples the mobility of the enemy by destroying their tankers has arguably achieved more than their opponents.

USE OF RESERVES

One concept drilled endlessly into naval commanders is this: keep a reserve. However bad things are, committing everything is unwise. Commitment of reserves might be a part of the battle plan, such as holding a fast squadron ready to exploit the disruption of the enemy battle line, but even so there needs to be a contingency reserve. Reserves can be committed to prevent a bad situation from getting worse or exploit an opportunity. This use is not pre-planned but executed according to the commander's interpretation of the situation. Once there are no reserves left the situation has gone beyond the commander's control.

Reserves, in this context, may be ships doing nothing but waiting for instructions but this is not always an effective use of resources. The mobile flank security elements may be considered reserves in this manner, and even part of the battle line might be earmarked for reallocation at a moment's notice. Additional reserves can be generated by stripping escorts from the fighting squadrons or supports, creating scratch task forces to operate independently or to be led by a detached cruiser. As a long battle continues, reserve forces get smaller and weaker. Often victory – or the avoidance of catastrophic defeat – goes to whoever can keep scraping a force together to deal with the latest setback.

Another source of reserves is disrupted or dispersed squadrons. The default option in the event of severe disruption is to find another friendly ship and put yours alongside it. Command goes to the senior captain and this provisional task group can either engage targets of opportunity or seek further friendlies. History presents numerous examples of an apparently defeated fleet dragging itself back together as scratch task forces and fighting on – sometimes but not always successfully. Doing so requires a high level of discipline, morale and confidence that others will do the same.

FLEET MISSILE DEFENCE ★



CAPITAL SHIP



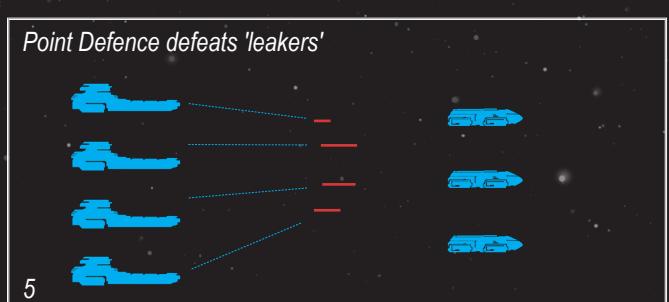
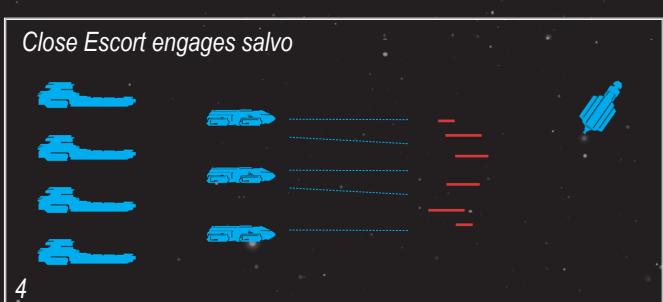
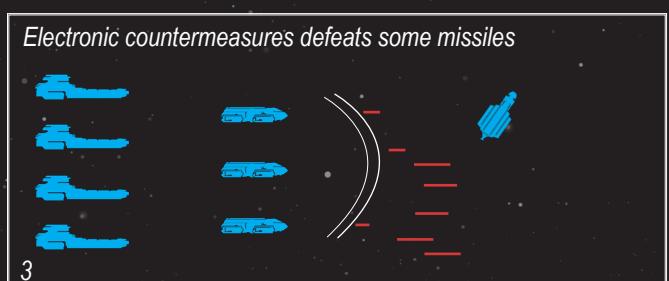
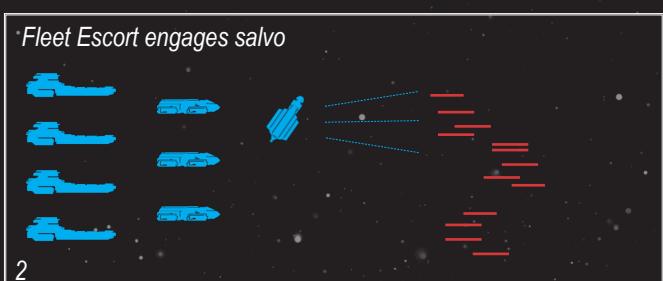
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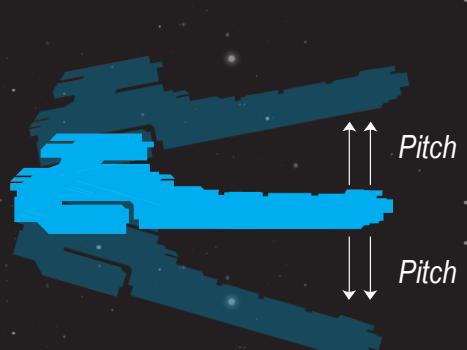
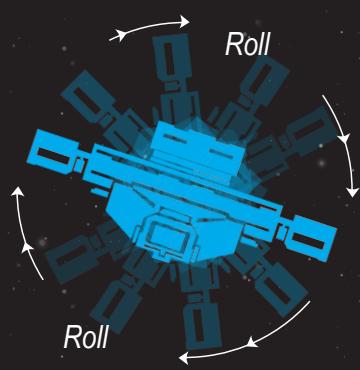
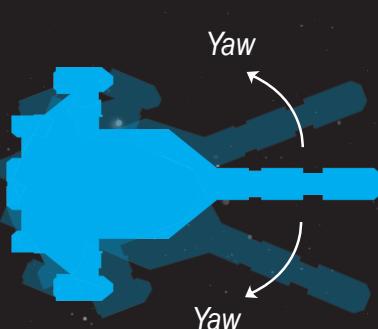
FLEET ESCORT



HOSTILE SHIP



THREE AXIS CONTROL ★

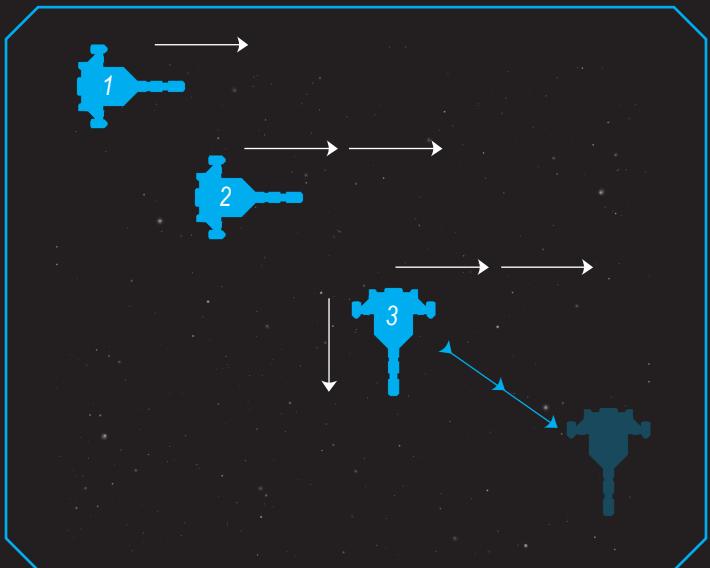


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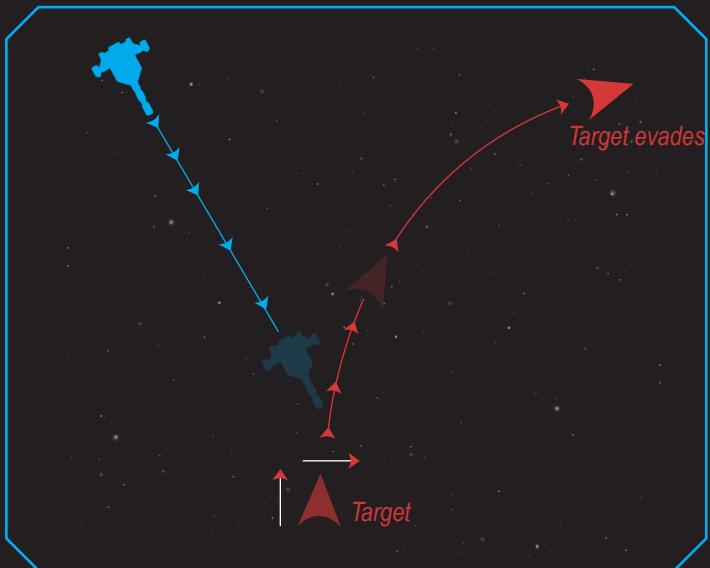
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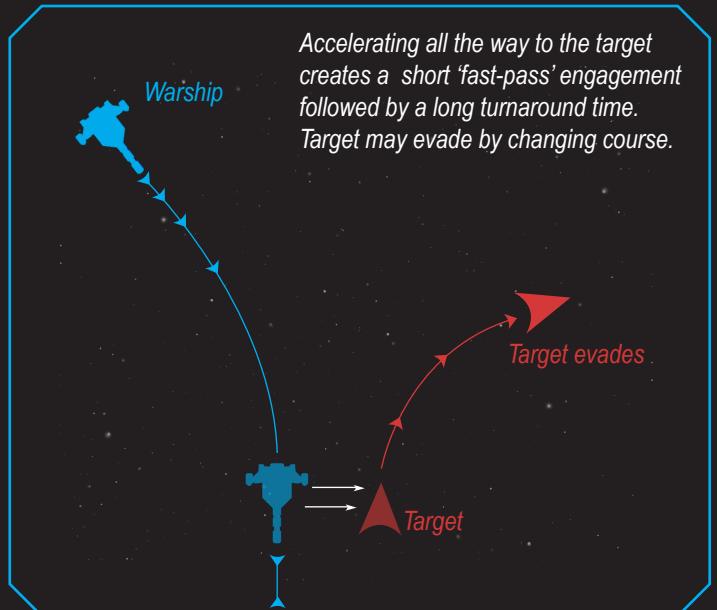
VECTORS ★



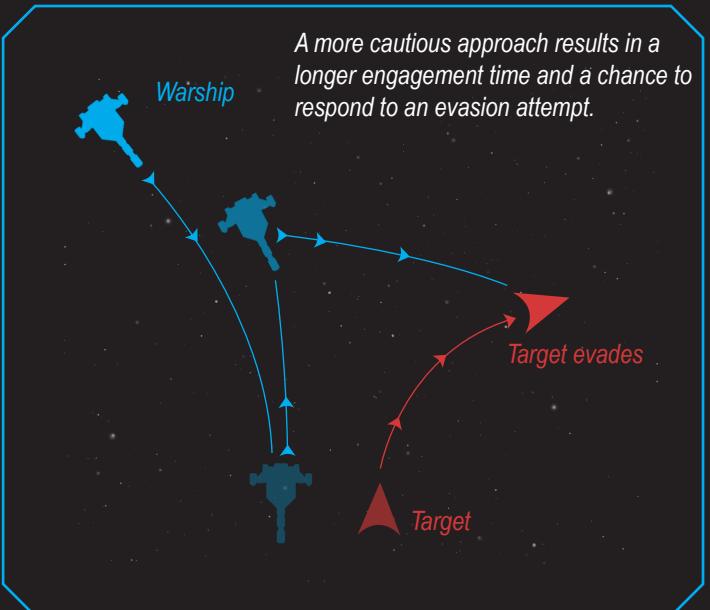
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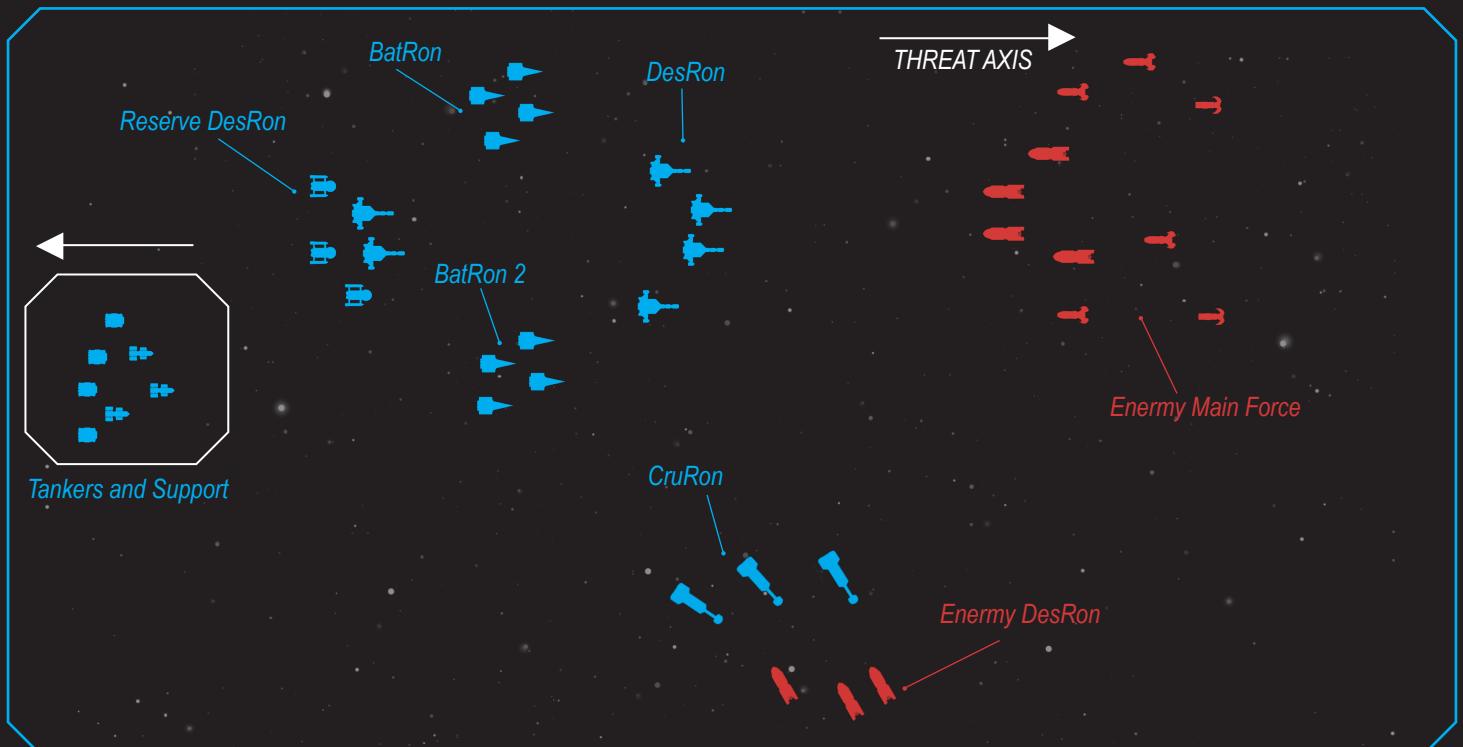
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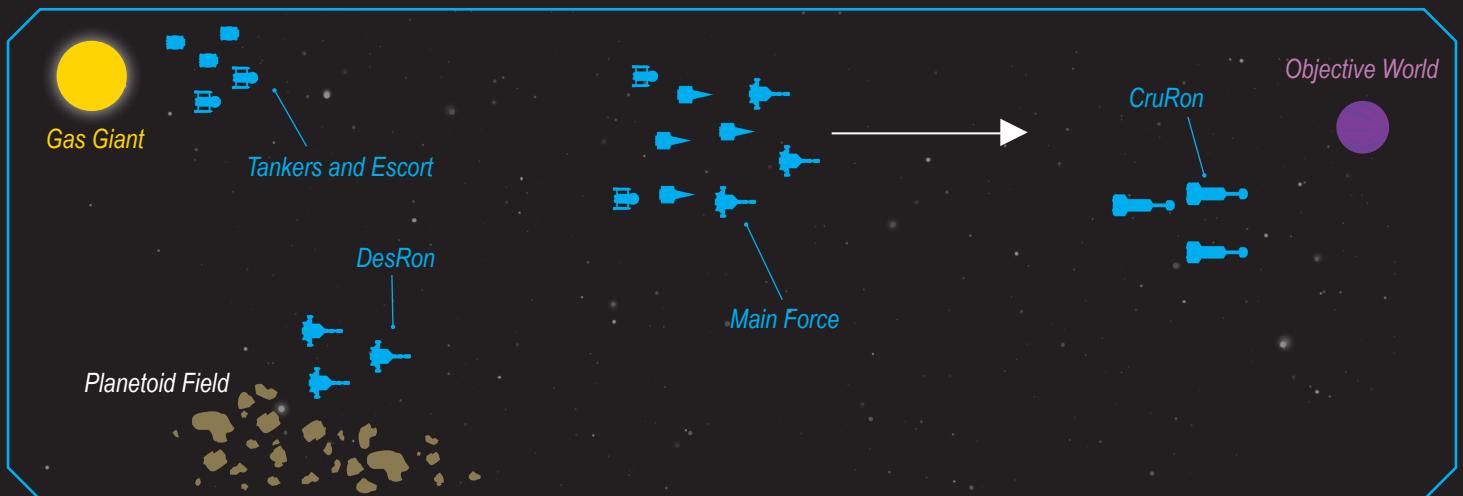
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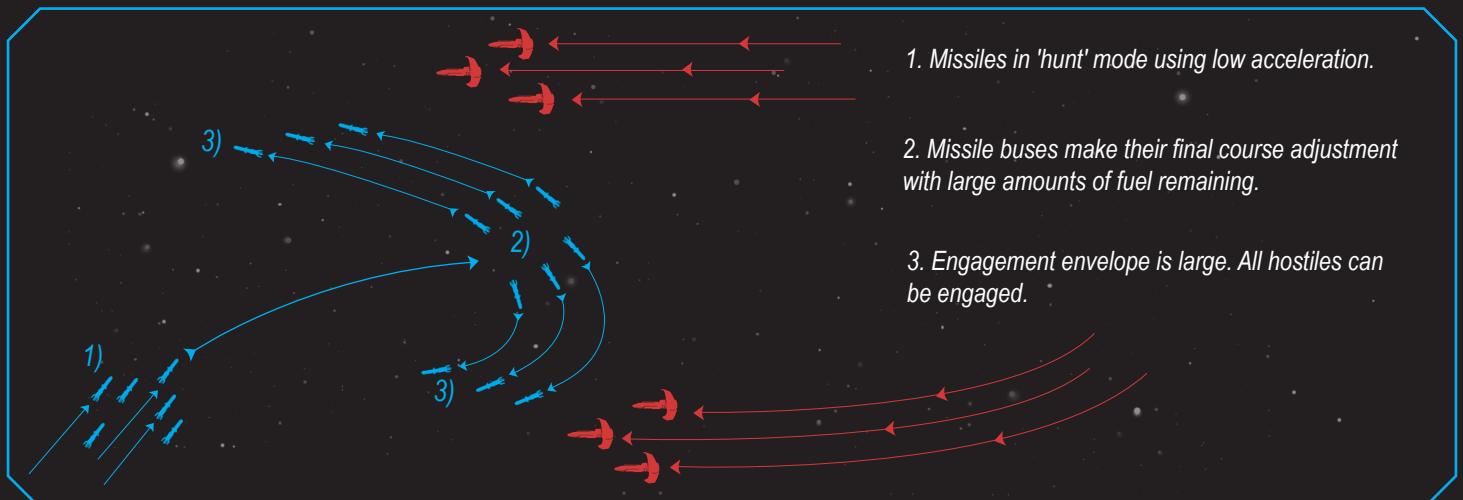
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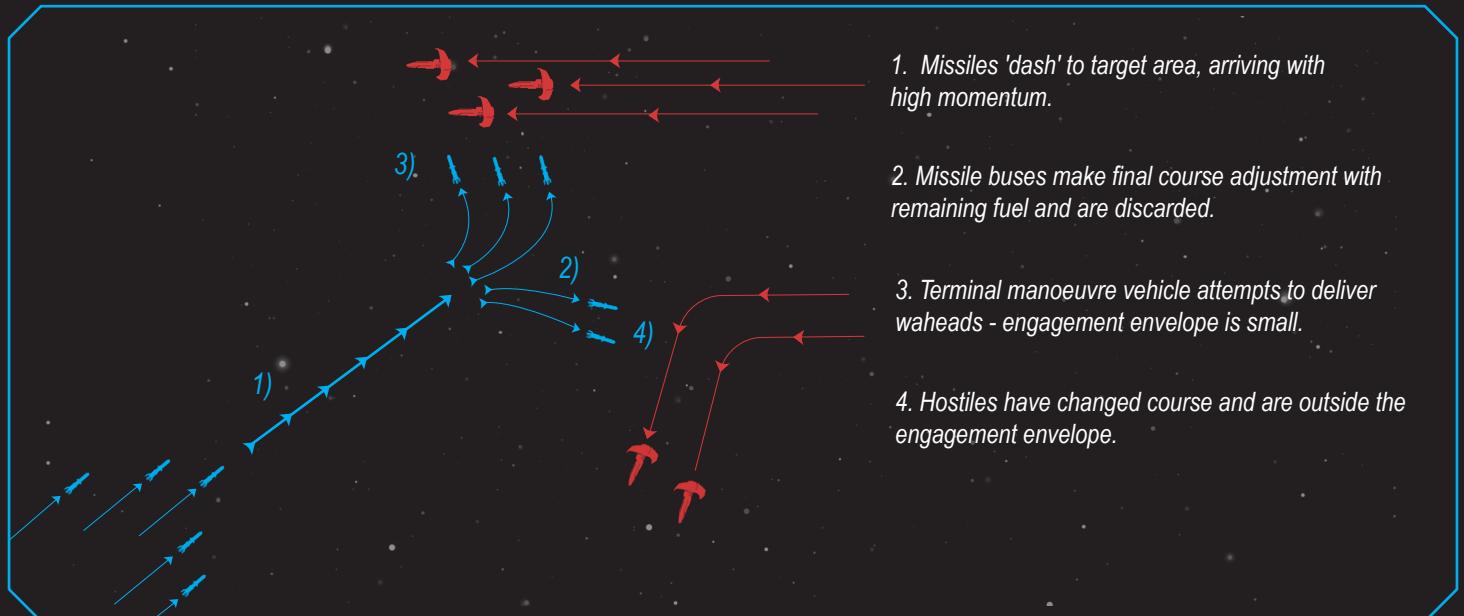
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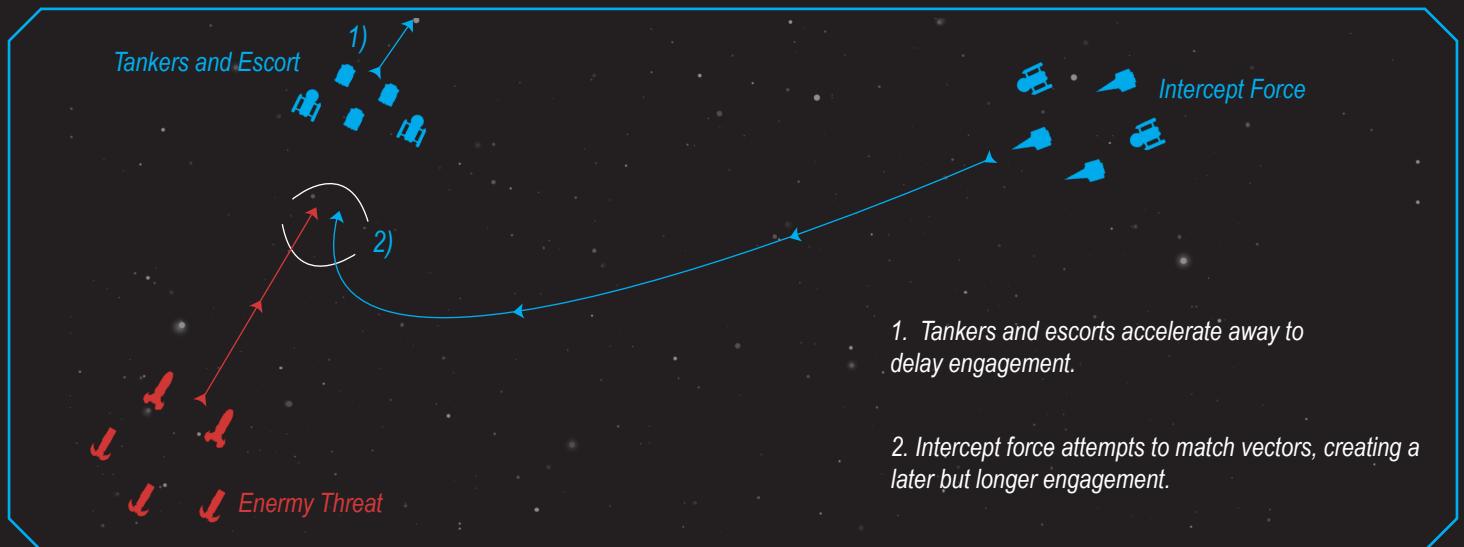
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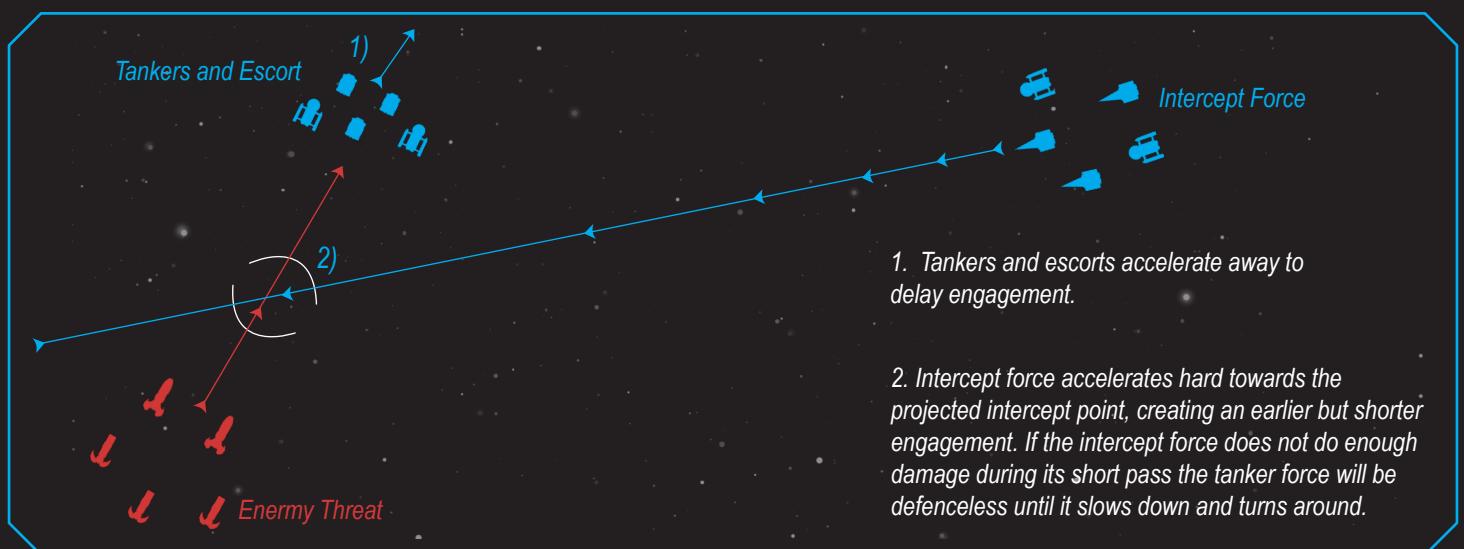
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MATCHED-VECTOR INTERCEPT ★



FAST-PASS INTERCEPT ★



EQUIPMENT AND WEAPONRY

The Imperial Navy sources most of its equipment by way of contracts with various corporate and megacorporate organisations. Very little is produced in-house; typically this is highly sensitive systems or short-run specialist items. The process begins with a series of meetings that produce a set of requirements, essentially a statement of what the navy wants a device to do and what additional features might be desirable. There will usually be a statement of expected cost per unit.

Some requirements could be expected to go without saying but the navy is careful to be explicit about everything. Lives might be lost if equipment fails and the best way to ensure quality workmanship is to have a clear statement of what is required. That way the producer knows they can be held responsible for failures. Sometimes corners are still cut but overall the procurement process is designed to ensure the offers received are honest and that standards are maintained.

Preferences change over time. Sometimes the requirement is for expensive but extremely capable equipment; a few years later there might be a move to less expensive multirole items. Likewise, the navy usually prefers to have equipment specific to the species expected to use it but exactly how this is implemented can vary. Some species are represented by only a handful of individuals, making it impossibly expensive to provide equipment tailored to them. The usual solution is for equipment that absolutely has to be specific, such as vacc suits, to be provided at whatever the cost and for minority species to make do with generic items designed for a range of users. The majority of weaponry and other gear is human-oriented, as humans are by far the most prevalent species in the Imperial Navy. Stocks of such items are readily available whereas gear for a less common species must be sent to their service area as required.

In many cases routine-use equipment of the navy is either a 'navalised' variant of a commonly available item or incorporates Commercial-Off-The-Shelf (COTS) components in order to keep costs down. A spanner or electronic multisensor is unlikely to be very different to one bought in a civilian store. However, some items are made to

naval specifications and not available to the public except through sell-offs of surplus equipment. The differences are usually small and often merely cosmetic but the navy likes to be able to tell its equipment apart. Unauthorised possession of naval equipment carries severe penalties.

Actual production tends to be regional. The navy buys a lot of its equipment from the megacorporation Instellarms, which is present across the Imperium but many items are locally produced to a central standard. Some equipment is 'regional', in that it is only issued in certain parts of the Imperium and therefore only manufactured there. Navy contracts are hugely lucrative and hotly competed for. As a result former naval officers familiar with the procurement process often land well-paid jobs with corporations seeking contracts.

HULL AND PROTECTION

The Imperial Navy follows various standard practices for most of its vessels. By convention, command spaces are located at the fore end of the ship and engineering chambers at the rear. Between the two is the 'operations area' which contains most of the other systems including most of the mundane equipment needed for the ship to function such as galleys, cargo handling systems, and so forth. Some vessels vary from this setup, especially highly specialised ones, but for the most part the general layout is followed.

Most front-line warships are built at TL15 using bonded superdense for armour and structural components. Some TL12 and TL10 vessels are in use, primarily as transports and support ships. This allows construction to be spread out among multiple contractors, providing economic benefits in regions without advanced manufacturing capabilities. The Imperium prefers not to build hybrid vessels with some advanced systems installed in a lower-tech base. However, hybrids often occur when a ship is passed from regular service into the mothball fleet or is handed over to a Colonial Fleet. Sensitive systems are removed in the latter case and it is always possible components will have to be replaced with whatever is available.

Starship armour is not really a separate component but an extension of the hull. Without suitable bracing and supports, armour is worthless. Altering a vessel's armour can be hazardous; removing armour might reduce hull integrity, whilst adding it may overload some parts of the vessel. Stability must also be considered; when a ship is designed its armour influences the location and strength of drive components. Altering the armour might render the ship prone to warping or make high-G manoeuvres hazardous due to reduced stability.

Hull armour is not solid matter but a series of layers, some with vacuum spacing in between to inhibit transmission of energy. Layers use different materials – or superdense versions of different materials – which may be angled, shaped or have differing molecular alignment. The outer and innermost layers of armour are thick and solid, creating a brute-force barrier which may be sufficient to deflect or absorb a weapon discharge. The philosophy behind this approach is that minor threats simply bounce off or fail to penetrate the outer layer, which makes repairs cheaper and those that penetrate this are mitigated by various measures before the final layer is encountered. A threat that has been weakened might fail to penetrate the inner layer or be deflected so as to remain within the armour. This might cause an expensive mess inside the armour layers but the ship is protected. Anything that gets through enters the hull but hopefully in a greatly attenuated state.

Armouring philosophy has varied over the years. There are two main schools of thought. The first is to armour the whole vessel evenly. This ensures the vessel is more or less impervious to weapons below a certain power level, the primary advantage being to keep repair costs low after minor actions. A ship that is not penetrated will suffer damage only to its armour and surface components such as antennae, which are easier and cheaper to replace than internal components or systems embedded in a heavily armoured hull. In short, overall-armouring keeps vessels out of the repair yards when they face relatively minor threats and is best suited to a force intended for internal security work.

The all-or-nothing school of thought takes a different approach. Critical areas of the ship are given heavy protection whereas parts the ship can function without are armoured only against minor threats. 'Minor' in the case of a battleship is still a great deal of firepower but this philosophy accepts that

in an engagement with heavy ships some damage is inevitable. Trying to armour the whole hull to withstand capital ship weapons is not feasible and evenly spreading armour virtually ensures the ship will be put out of action by an equivalent vessel. All-or-nothing, on the other hand, creates a situation where a battleship could be heavily damaged but will continue to function as a fighting unit.

The question is one of intended role and likely opponents. In very simple terms: does the navy want a battleship impervious to cruisers but beatable by a weaker battleship, or does it accept that a cruiser could damage its capital ships but even an equivalent battleship cannot put them out of action? There is only one answer to this question as far as the navy is concerned; capital ships must be able to withstand a moderately powerful attack to any part of the hull and remain in action even if hit hard by capital ship weapons. All-or-nothing is the only way, although 'nothing' refers to protection against spinal mount weapons. Survivability is paramount.

Survivability in the event of a penetrating hit is enhanced by attention to internal compartmentalisation. All but the most basic interplanetary craft are designed to survive a hull breach or other disaster by sealing off the damaged area but for naval ships the need is much greater. Compartmentalisation is more than just bulkheads and hatches; power, life support and control pathways all need to be redundant so that crew in a sealed part of the ship can do more than wait for rescue. The usual system is to have a set of heavy internal bulkheads around each major subdivision of the ship and at strategic locations throughout. In some cases these are augmented with a layer of hull-grade armour but this is not always the case. Bulkheads are pierced by iris valves and, in some cases, have internal airlocks to provide additional security. Between these main subdivisions are smaller compartments whose walls are not as robust but will remain airtight for an extended period. These are usually pierced by hatches and doors rather than iris valves.

Pathways for power, life support and controls run through the internal walls or under the decks. They are trunked in lightly protected boxes, where possible with an outer shell containing all pipes and pathways running through that area. To damage these systems it is necessary to penetrate the deck or wall, get through the outer housing and finally punch a hole into the pathway or system. This can and does happen but

the ship's nervous system is as well protected as cost and mass considerations will allow. Compartments also contain firefighting equipment and emergency tools for removal of wreckage as well as emergency suits for crewmembers.

POWER AND PROPULSION

It is standard practice to group the power and propulsion systems together in the aft portion of the vessel. In some cases a ship may have more than one power plant, which increases survivability. However, it also complicates maintenance and can make repairs difficult. The possibility of having the ship taken out of action by an engineering hit must be balanced against the ability to heavily armour a relatively small section of the ship and deal with malfunctions or damage quickly.

The ship's power plant provides energy which is distributed through the ship according to a system of priorities ordered by the captain. Most systems have batteries which are kept fully charged during routine operations. This allows a short period of operation if power flow is interrupted, either by damage or diversion elsewhere.

Fuel tanks are fitted wherever there is space. It is most efficient to use large tanks but compartmentalisation will save a ship in the event of an explosion or catastrophic tank rupture. The usual practice is to place one or more small fuel tanks deep within the ship or in the main armour belt, so the power plant can continue to function even if the main tanks are ruptured. A ship that loses too much fuel may become incapable of jumping but will retain power to fight on.

Propulsion elements have to be placed around the vessel in order to provide orientation and minor movement but the main drive is usually located aft. This permits grouping of components and eliminates the need to run long high-capacity power conduits from the power plant. There is also a defensive benefit to grouping propulsion systems; so long as the vessel is facing the enemy its entire bulk is between their weapons and the engineering section.

Primary life support is also usually grouped with the main power system, although it has nodes and nexus points throughout the whole vessel. The most complex and sensitive systems are usually centralised with a backup somewhere else, whilst routine equipment is placed close to where it is most useful. In a well-

designed ship the life support system fails slowly rather than collapsing when a critical component is destroyed. Commonly, areas of the ship can remain liveable for days or even weeks after the engineering section is shot away. 'Citadels' are sometimes built into a vessel, areas designed to survive catastrophic damage to the hull and provide refuge in the event of decompression or contamination. Rescue and survival equipment is normally stored in these areas.

The jump drive is almost always a self-contained unit. It requires a considerable amount of power to operate so is usually located close to the main power plant. The main consideration with a jump drive is fuel flow; an interruption during preparations to jump can doom a warship. For this reason, fuel tanks are usually close to the drive. The decision of how far to jump when attempting to escape an engagement is a difficult one. Using full capability might allow the ship to reach a rendezvous point or safe location more quickly but any loss of fuel from holed tanks will result in a misjump. It is therefore common to jump less than the ship's full capacity and accept the need to make another jump to reach the rendezvous.

COMMAND, CONTROL AND INTELLIGENCE

A warship is useless without direction and to direct the ship its officers need information. Most of this arrives in real time through the ship's sensors or is relayed from other platforms. Some data is already known, such as star charts or the capabilities of foreign warships, but this is updated and its usefulness triggered by current information. For example, there is little need to know what an enemy ship is capable of until one is present or thought to be present. Detection and identification of the vessel's signature triggers a data feed to the captain and command officers.

Information overload can be a real problem and for this reason the commander of a warship deals in generalisations for the most part. The captain needs to know generally what a hostile ship can and cannot do – is it jump capable? Does it carry a spinal weapon? Is it capable of outmanoeuvring the captain's vessel? – whilst subordinates might find it useful to have more specifics such as where known weak points in its armour might be or how many missile reloads are carried. Information is thus subject to a constant filtering process intended to ensure everyone has what they need and can obtain more data if they need it.

Aboard Imperial vessels the control centre for a ship is usually a single location which for traditional reasons is termed a bridge. The commanding officer, senior bridge officer and personnel who directly control the attitude and motion of the ship are on the bridge. The executive officer may have a duty station elsewhere, typically at the damage control centre or a secondary conning position. Some ships have an entire second bridge; others have a more basic provision. This ensures the command crew cannot be wiped out by anything short of annihilation of the vessel.

Computer cores and flight electronics – traditionally called ‘avionics’ – are manyfold redundant and dispersed throughout the hull, although there is usually a central computer chamber. This is mainly for security. Attempts to reprogramme or alter certain critical functions made from outside the chamber are subject to extra levels of authorisation, allowing physical security to replace some of the cyber-precautions in place elsewhere.

Some ships have a secondary command position, sometimes referred to as the Command Information Centre or CIC. When the ship is functioning normally this chamber acts as a source of advice and information for the captain. Its personnel have time to process and collate data, whereas the ship’s commander and main bridge crew are constantly acting. If the main bridge is disabled, the CIC takes over. For this reason a pilot is always at the secondary controls and a ‘shadow’ bridge crew stands ready to continue the fight or get the ship out of danger. If the ship is damaged but the bridge remains intact, CIC coordinates damage control operations. The available facilities vary considerably; some ships have an entire spare bridge whereas others make do with a secondary conning position in engineering.

Larger vessels may also have a flight operations centre, which coordinates activities of small craft launched from the vessel and/or a flag bridge. A flag bridge is a command station for an officer leading a task force, flotilla or an entire fleet. It is normally located well away from the main command spaces and surrounded by briefing rooms, working spaces for analysts and supporting officers, and usually accommodation for these personnel. Whilst a flag bridge is optimised for commanding other ships it will have backup controls for the vessel and can take over in an emergency. When a ship with a flag bridge does not have a flag officer aboard, its capabilities are utilised as the captain sees fit. Some simply close it up, whilst the most egotistical command from it rather than the main bridge. More commonly, the flag bridge is used for planning and intelligence work.

FLIGHT SYSTEMS

The smallest Imperial Navy ships are capable of landing directly on a planet but the vast majority are built for space operations only. For this reason, the navy relies upon countless interface craft to ferry personnel and equipment to and from the surface or into and out of orbital installations. Other craft perform specialist tasks from combat to logistics or search and rescue. Where a vessel has only a few subordinate craft these are normally coordinated from a workstation on the bridge, but ships that deploy large numbers of small craft need a specialist team to keep them operating efficiently and avoid incidents.

The flight operations team is headed by an officer who is usually an experienced small craft pilot given additional training. Aboard a large carrier this may be a lieutenant-commander or even a full commander, but more commonly the post is held by a lieutenant. Assisted by a staff of craft control officers, technicians and experts, the flight operations officer is responsible not only for controlling craft and assigning them priority in launch and recovery, but also maintenance and repairs.

Vessels with only a few craft house them in docking space and/or hangars. There is no room to conduct maintenance in a docking space, requiring a return to base in order to service the craft. For this reason some craft may be carried in docking bays with hangar space for others. This allows craft to be rotated through the hangars for inspection and minor repairs, and increases availability. Few vessels have 100% of their small craft available at any one time, and over the course of a long deployment the flight team must sometimes make difficult decisions. A craft considered borderline serviceable on day 20 of deployment and pulled from the roster might be returned to ‘serviceable’ status on day 45 after serious damage to or losses of other boats.

Launch tubes are favoured for combat craft as they permit multiple fighters to be launched either simultaneously or in a pattern designed to protect them from enemy fire as they clear the ship. It is common for a warship to launch fighters from the side facing away from the enemy if possible, rolling the ship to bring other tubes into alignment. However, when fighter cover is urgently needed craft might be launched directly into the path of hostiles or missiles. Imperial Navy tubes are standardised at 10, 20 and 50 tons, with custom tubes used aboard a few specialist vessels.

Recovery decks are favoured aboard vessels operating large numbers of craft or where small craft might have to recover aboard in a hurry. Some diplomatic vessels have recovery decks dedicated to getting a VIP shuttle under cover of armour as quickly as possible, and most have a workshop area close to facilitate emergency repairs. A 'quarantine hangar' is also sometimes provided close to the recovery deck, allowing a dangerously unstable craft to be quickly evaluated. If necessary, it can be ejected back into space whilst any fires or minor explosions are contained safely away from stocks of fuel and munitions.

WEAPON SYSTEMS

Where possible, weapons are grouped into batteries to maximise effectiveness. Larger warships have a fire direction centre which is the combat duty station of the gunnery officer. Sensor technicians are also stationed here, along with operators for screens and similar dispersed systems. Whilst the gunnery officer directs the weapons and defensive systems of the whole ship, each battery or major weapon system has its own commander. This may be a petty officer aboard small ships, whilst a capital ship's major weapon systems merit officers in command.

In most cases a battery, bay or spinal mount will be controlled from a station close to it but can be switched to control from the main gunnery chamber or another designated site. A hit on the fore direction centre will not put the weapons out of action but will reduce overall effectiveness. In an extreme emergency most turret and barbette weapons can be locally controlled by entering the turret and using the manual controls there.

Spinal Mounts

The only weapons powerful enough to reliably damage capital ships are the spinal mounts carried by cruisers and battleships. By definition these weapons are the heart of a warship, which is built around them. They are aimed by pointing the whole ship, with minimal aiming corrections possible by manipulating electromagnetic fields around the weapon beam. Spinal mounts usually have either a dedicated power plant or huge batteries – most commonly both. Charging the spinal mount takes time and firing it is a decision to be made carefully.

The Imperial Navy has experimented with various spinal weapons including truly colossal lasers but the standard weapons are based on the acceleration of subatomic particles to relativistic speeds. Particle accelerators have a long effective range and a secondary radiation effect which interferes with electronics and can cause crew casualties. Their main mode of effect is quite simple; high-energy particles collide with the molecules of the target and dump vast quantities of energy. The result is extremely rapid heating that turns whatever is hit into an expanding cloud of high-energy fragments – effectively an explosion. This imparts energy to whatever is nearby until the strike is dissipated. The radiation flare from a particle accelerator strike is unmistakable and can cause sensor distortion or even secondary malfunctions aboard nearby ships.

Some navy ships use a specialist variant of the particle accelerator named meson guns. This is a misnomer as they are not guns in the conventional sense and do not use mesons. It is presumed that the term was used as a cover name when the weapons were being developed by the Terrans during the Interstellar Wars. Whilst incorrect, the term has stuck in the same way that armoured fighting vehicles are termed 'tanks' after their original cover name of 'water tanks'.

Whatever the origins of the term, meson guns accelerate exotic particles to extreme speeds in a manner that causes them to decay at a precise point. If this is calculated correctly, decay occurs inside the target and bypasses armour. Meson guns are known to be able to shoot through solid matter, although again this analogy is slightly misleading. It might be better to say that they cause their particles to bypass intervening matter and decay at the target point no matter what is in between – with the exception of specialist meson screens.

Calculating meson weapon decay points is a specialist branch of mathematics which is only taught to officers expected to be working with these weapons. Likewise, their construction is a closely guarded secret. Meson weapons are generally removed from decommissioned warships and sometimes replaced with a particle accelerator. On other occasions the vessel is left with a large hollow space running along its spine. Structural bracing is left in place, and the area might be plated over for aesthetic purposes, but the navy is extremely keen to keep meson weapons out of the hands of 'unofficial' operators.

Few other types of spinal mount are in service, although bombardment cruisers might have a spinal mass driver. These weapons are not effective in ship-to-ship combat but could in theory destroy an immobile ship or installation. They are used to deliver large projectiles against ground targets. Sometimes, these are custom-made metallic slugs but most mass drivers can launch anything that will fit in the bore. A ferrometallic 'sabot' is used to propel non-metallic objects, which might be nothing more sophisticated than a chunk of asteroid. The navy has experimented with bombardment support tenders that can convert wreckage to slugs or sabots – the morale effect of being bombarded with the remains of your own system defence squadron cannot be overstated.

In theory, any vessel could be built around a spinal mount but the power and space requirements are such that they are not suitable for smaller craft. Occasionally a destroyer or patrol ship-sized vessel is encountered carrying one as a deterrent and a sort of 'varmint gun' to take out small corsairs and minor strike craft with a single blow. Such minor spinal armament also allows small ships to present a credible threat against a major warship but trying to use it amounts to suicide. Experiments with double or even quadruple spinal mounts, or with split mounts facing fore-and-back, have been tried. Such systems never seem to work as well as their inventors hope.

BAY WEAPONS

A bay is simply an area within the hull dedicated to serve a particular weapon system, missiles and particle accelerators being the most common. A large ship may carry multiple weapons bays, which may or may not be organised as batteries. A smaller vessel might be built around a single bay as the equivalent of a spinal mount.

Typically, a warship's bay weapons are of a different type to its spinal weapon. It is common to have missile or torpedo bays along the flanks of the ship, giving an additional capability which does not need the vessel to be aligned broadside to the target. Other bays may be intended for specific applications. For example, a ship mounting a spinal meson gun might have fusion gun bays along its flanks, short-range, powerful weapons which can smash up a smaller vessel but cannot compare to the destructive power of the spinal mount. They come into play during a close pass or, more commonly, when enemy ships try to close and attack.

Sometimes a ship is built with bay spaces not yet outfitted. These can be later used to install weapon systems or converted to other uses such as hangars or fuel tanks. Whilst this is not an ideal way to create a top-end warship it does allow the same basic design to be outfitted for a number of different roles. Unused weapon bays can also be used as missile magazines, troop ready rooms or cargo areas.

BARBETTES

A barbette is an oversized turret mounting a single large weapon such as a particle accelerator. While barbettes cannot mount the powerful weapons that can be fitted in a bay, they are capable of bringing fire to bear in a wider arc. Barbettes are fitted as part of the battery armament of large ships and also allow a couple of powerful weapons to be fitted to a small vessel.

TURRETS

Most smaller weapons are mounted in turrets to give good all-round coverage. The Imperial Navy does not favour single-mount turrets for the most part, using either dual or triple mounts. It is common to dual-mount lasers intended for close-range work such as fighter and small craft defence or to mount two sandcasters and a defensive laser in a triple turret. Even grouped as batteries, turret weapons are inconsequential in a capital ship action, except as a way of keeping nuisances like strike boats away from the warships.

DEFENSIVE SYSTEMS

Defensive systems are intended to prevent damage to the vessel and fall into three categories. Active hard-kill systems are designed to intercept and destroy incoming missiles and torpedoes, and often referred to as defensive weapons. Sandcasters are also defensive weapons but are termed passive hard-kill systems as they create a physical barrier to incoming laser fire.

Soft-kill systems include decoys and electronic warfare equipment intended to confuse or distract incoming guided weapons. The exact mode of operation varies; a distraction decoy makes itself more attractive as a target than the parent ship whereas a confusion decoy makes targeting more difficult. A decoy system fit will usually contain more

than one type, creating layers of defence which work with electronic warfare measures to prevent missiles from accurately targeting naval vessels. Lower-tech systems are easily confused or seduced away from the target, whilst advanced targeting systems are better able to discern what is a decoy and what is a real target. The defensive systems officer must finely judge measures to be taken, balancing the need to deal with the present threat against the possibility of a high-tech missile salvo sometime in the future.

Decoy launches are part of the electronic warfare operations of a warship. Since hostile weapons may be able to home in on jamming signals, these are often emitted by disposable decoys rather than the ship itself. This form of defence is termed offboard soft-kill and can thin out a missile salvo or even make all weapons miss. However, missile defence is best conducted as a series of layers. The first line of defence is escorting fighters or ships which fire on the incoming weapons, then some of the missiles are distracted or lose their targeting lock due to decoys and electronic warfare. Finally, 'leakers' are engaged with defensive weapons such as point defence lasers or perhaps an electromagnetic pulse intended to scramble their electronics at the last second.

Active hard-kill weapons might include small countermissile launchers but more commonly clusters of small lasers or turreted laser weapons are used. Fast-slewing turrets are required for point defence work, making these weapons suitable for anti-small craft work as well as missile defence. Sometimes active hard-kill is attempted using the ship's main laser batteries. This can work, but dedicated weapons are more effective.

Devices collectively known as screens are also defensive systems but their mode of operation varies considerably. Repulsors create a focused gravitic field which can deflect or destroy incoming missiles and objects. This is not an even field but more commonly a pattern of nodes and antinodes that drag weapons off course, fling them away, or rip them apart. It is sometimes possible to target a bank of repulsors quite precisely against a relatively slow moving object but typically they are used to create a defensive zone of twisted gravity which can be considered a screen. Repulsors could also be used to deflect kinetic-energy projectiles, artillery shells and such like, if the vessel were in the unusual position of being their target. They have no effect on plasma, fusion, particle or laser weapons, or relativistic objects.

Meson screen generators are fitted to all major warships and many smaller ones. Their function is to disrupt incoming meson streams and prevent the decay of the particles from occurring at the intended moment. This can reduce damage from meson weapons or cause them to miss entirely. Meson screens have no value against any other weapons. Nuclear dampers are listed among the 'screens' used by warships but operate differently. Dampers prevent the high-energy interactions that produce nuclear explosions and need to be closely focused to function; dampers can be considered an active defensive system rather than a passive screen, although the effect of a well-handled system is to create a zone in which warheads are rendered inert.

The most potent screen system available to the Imperial Navy is known as a black globe, a somewhat unreliable technology developed from relics left over from the Ancients. It is not known how black globes actually work but what they do is to create a shell which absorbs all energy striking it. Physical objects impacting the screen experience a different effect; those travelling fast may be annihilated as their kinetic energy is absorbed but slower objects are simply brought to a stop.

The energy absorbed by a black globe has to go somewhere, so is shunted into large capacitors which store it for use in the ship's systems. If these capacitors are overloaded, the energy begins to escape. In the case of a slight overload this is a dangerous leak which can cause personnel casualties and destroy electrical systems. In most cases where weapons fire is involved, the overload becomes catastrophic in an instant and the capacitors explode. This usually destroys the vessel instantly.

Since no energy can penetrate the globe, a ship inside one cannot manoeuvre and is blind and deaf. It does not show on enemy sensors except as a 'black gap' in sensor readings which is difficult to detect with active sensors and almost impossible with passive ones. A ship can use dead reckoning to drift along a known vector into a firing position or past enemy pickets, then drop its black globe for a surprise attack. Black globes can also be set to 'flicker' on and off many times a second. In this mode, they absorb a percentage of the incoming energy equal to the flicker rate. This does not confer any stealth advantages but reduces the damage from weapons fire while allowing the vessel to see, move and shoot in synchronisation with the flicker.

Sandcasters

Sandcasters are considered to be defensive weapons rather than passive screens but are usually placed under the command of the officer in charge of screens. Their function is to place a cloud of particles, known as 'sand' between the ship and incoming weapons fire and so reduce its effectiveness. Sandcasters are usually mounted in turrets grouped into batteries to maximise their effectiveness. The sandcasters used by the Imperial Navy are entirely standard and almost identical to those fitted to small merchant craft. However, since they are operated as batteries in close conjunction with other systems and supported by sophisticated electronics they tend to be much more effective.

Point Defence Systems

Another defensive weapon system, point defences are intended as the last line of defence against an incoming missile or torpedo attack. They are usually made up of small lasers in fast-slewing mini-turrets, placed so multiple turrets can engage the same missile. Often a point defence hit will burn a hole in the incoming missile and destroy its warhead but at a point when the missile is on final approach. Debris or large chunks of the weapon may still clatter against the armour and sometimes a missile's rear section is shot off leaving the warhead to crash into the target. Point defence can be overwhelmed so in general it is paired with other systems such as electronic warfare or decoys to create a layered defence.

WEAPON SYSTEMS

The Imperial Navy makes use of a number of weapon systems. Some are more effective than others in different circumstances. What weapon systems are selected for a given vessel will to a great extent depend on its intended role.

Energy Weapons

The energy weapon fit of a warship is typically referred to as 'beams', although this term is not entirely accurate. Even beam lasers, a weapon not preferred by the Imperial Navy, do not put out a continuous beam and might better be described as long-pulse lasers. The distances at which space combat is fought mean that even the tiniest movement of target or firing vessel could take a beam off target in an instant. The same amount of energy delivered in a short pulse is likely to do more damage – assuming it hits at all.

Most energy weapons cause damage to the target by heating a segment of its hull. This is extremely rapid, sometimes causing hull materials to become vapour. A laser hit can produce what looks like an explosion, and the blossoming of a cloud of superheated metallic vapour might cause crew casualties or internal damage even if the hull is not penetrated. More commonly, the outer layer of armour is burned and scorched, gradually damaging it to the point where sections need replacing.



The most powerful of the Imperial Navy's energy weapons is the meson gun. It is no more a beam weapon than a gun, and is included among 'beam weapons' only when someone is speaking very generally in terms of energy versus missile weapons. Most are based upon a design patented by Instellarms, which spent a colossal amount of money developing the weapon. Only a handful of specialist manufacturers produce meson guns and these are not used by the Imperial Navy. Most are destined for planetside defence installations.

Particle accelerators are the most common heavy energy weapon in use with the navy, and can also be mounted as bay or barbette weapons. Various designs are in use, with Instellarms, Delgado and Ling-Standard Products hotly competing for contracts. At present, Instellarms designs are favoured for spinal mounts and LSP has a slightly larger share of the medium (bay-mounted) marketplace than its competitors. Delgado is very much a minor player in the directed-energy market and is trying to increase its share by creating novel applications rather than taking on established giants in their main fields of expertise.

Particle accelerators create a stream of charged or neutral particles, depending upon type. They can be considered beam weapons although the popular image of a particle beam hose piping the enemy is wildly incorrect. A particle accelerator pulse is typically of nanoseconds duration, and even so requires a large amount of energy; particle weapons spend a lot more time charging than firing. When they strike a target, particle accelerators produce a super-rapid-heating effect similar lasers along with a radiation burst that can inflict crew casualties even if armour is not breached. They are poor weapons for ground bombardment of any world with a significant magnetic field and even a thin atmosphere will attenuate the particle stream. This does produce an incredible light show and some radiation, which can be used as a broad hint to the population that resistance is a poor choice.

Laser weapons are the mainstay of armament for small vessels and provide a useful tertiary capability for ships needing protection against missiles and small craft. Accurate and versatile, lasers can be used for point defence and in batteries for ship-to-ship action at quite long ranges. They are effective up to a point but against a major combatant there is a limit to what can be achieved with laser armament. If a vessel is intended to do more than defend itself against raiders or police the spacelanes, it will be equipped with something heavier than a laser as its main armament.

The lasers used by the Imperial Navy are produced by a range of manufacturers and not restricted in terms of end users. Indeed, navy-specification laser weapons are the most popular choice for civilian ship-operators desiring a measure of self-protection capability. They are overbuilt, designed for emergency repairs and sustained fire. Non-navy specification weapons might be cheaper but cost reduction does not outweigh the reliability benefits.

Plasma and fusion guns are sometimes referred to as high-energy weapons, launching a stream of superheated plasma which in the case of the fusion gun undergoes nuclear fusion. The plasma stream dissipates quickly, creating a short effective range, but within that distance the capacity for damage is high. Plasma and fusion weapons are not precise and have no point defence application, but can smash a ship in a few shots. As a result, these weapons are typically carried aboard large ships for close-range defence against destroyers and the like, and as the main armament of smaller vessels intended for strikes against larger ones. The primary manufacturer of plasma weaponry in the Imperium is Ling-Standard Products, although Instellarms has an edge in the fusion gun marketplace.

MISSILES AND TORPEDOES

Missiles are a preferred weapon for medium to long-range engagements, allowing the delivery of a warhead or other payload without risk to the launching vessel. Ideally, missile-armed vessels keep their distance from the target as they generally have only light direct-fire armament for self-defence. In the case of a large missile cruiser this can still be a powerful weapons fit but a cruiser that is fending off hordes of small attackers is inefficient in its primary role – and one that is under direct fire from a powerful vessel is doomed.

Missiles are launched in salvos for the most part. Smaller vessels engaging a minor target might use a single missile but for the most part if it is worth launching one it is worth launching dozens. Massed missile salvos may be necessary to overcome the defences of a target, a technique known as saturation attack, and it is possible to time launches so multiple salvos arrive simultaneously, although this produces diminishing returns due to fratricide and overkill. Finding the right balance between saturation of defences and wasting missiles is a fine art, and missile direction officers generally err on the side of overkill. Too many missiles wastes some but too few might waste all.

Where possible, missiles are launched in support of direct-combat vessels which are close to the enemy and can provide mid-course guidance. Alternatively, small craft or ships can be used to scout for the salvo and provide targeting updates. Another favoured tactic of the Imperial Navy is the ‘missile ambush’ where a light force gets the attention of the enemy and begins to retire. Its drive signatures and electronic warfare emissions will interfere with the enemy’s attempts to scan beyond the retreating force, ensuring the missile salvo is undetected until it is close, and the enemy force is travelling towards it at a high velocity. As a bonus, the enemy may have become disordered and unable to provide mutually supporting defensive fire. Even once the surprise is sprung the enemy still has a problem; their ships cannot quickly change velocity to move out of range.

Missile systems are commonly referred to as ‘racks’. The actual launcher is a simple tube but getting a missile into position to be launched is a more complex process. The Imperial Navy uses a system common throughout Charted Space, with three missiles held ready on an autoloader. This is the ‘rack’ referred to in the system’s nickname. In preparation for launch a missile is electronically activated on the rack but remains inert due to a physical safeguard in the form of remove-before-launch pins. Once these are out the missile can activate its drive or detonate, so standard practice requires the pins are left until the weapon is ready to be loaded into its launcher. It is rare for a missile to be held at readiness in the launcher unless action is imminent.

Three missiles are held in a standard rack, with more stored on the other side of a bulkhead in a magazine. ‘Ready’ missiles are fully assembled and require only activation codes plus removal of the pins, whilst additional missiles are stored efficiently as their component parts. A system of hoists and conveyors moves the missile components to the assembly point, then to the ready storage area, and finally through a set of armoured gates into the launch area where it waits on the rack for final activation.

Missiles may be launched in a variety of ways such as a small electromagnetic catapult or cold-launching using compressed gas. The latter is favoured as it produces almost no signature, possibly allowing the launching vessel and missile salvo to evade detection until the strike is close to the target. Activating the missile’s drive in the launch tube is possible, using low-power thrust to move the missile out, but this increases wear on the launch system.

Once clear of the launching ship, missiles can operate in a variety of ways. They can accelerate directly towards the target under full thrust, which is standard once an engagement has begun, or can be set to drift slowly under minimal power to a point where the enemy is predicted to approach. Once launched, guidance is automatic but course corrections or targeting updates can be delivered by the launching vessel or other authorised platform. Experiments with ‘forward missile direction craft’ capable of coordinating multiple salvos from several launching platforms have at times been conducted. Whilst promising, the concept produces an overly-specialised vessel and was deemed not to be cost-effective. Prototypes were usually sold to planetary navies which found uses for them.

Naval missiles are built around a common ‘bus’ component which holds the drives and guidance electronics, and contains space for the payload. The bus is intended to get the missile close to the target and is ejected once its fuel runs out or the final approach location is reached. The bus can be set up to ‘dash’ or to ‘hunt’. In dash configuration the missile accelerates hard to reach the target point as quickly as possible. Whilst this shortens engagement times the drawback is that the enemy may change course sufficiently to place their vessels outside the engagement envelope of the payload. Missiles set to hunt reserve fuel for manoeuvres along the way, increasing time to target but widening the engagement envelope. A perfect balance between ‘dash fuel’ and ‘hunt fuel’ can be struck but finding it requires great skill even with computer assistance.

The bus serves no purpose but to get the payload within engagement distance of the target. It may be left behind by a slowly hunting payload, or the payload might be launched just as a missile streaks through its optimum attack position. Either way, it is the Terminal Manoeuvre Vehicle (TMV) that makes the final attack. The TMV contains a short-duration high-thrust manoeuvring system, a seeker head and the payload itself. Most payloads are intended to cause destruction, although some assist the rest of the salvo in getting through the enemy’s defences or provide some other capability.

The most common payload is a multimode anti-ship warhead. This takes the form of a conical penetrator surrounding a powerful plasma warhead. If a direct hit can be achieved the warhead may penetrate armour before detonating, in which case damage is likely to be extensive. A non-penetrating close detonation will

still harm even a well-protected vessel. However, it is the nature of ship-to-ship combat that many missiles in a salvo will not achieve contact. These will align themselves for a proximity detonation that flings fragments of the casing in a cone directed at the target. Effects on a heavily armoured battleship are likely to be minimal, although even a dreadnought can be 'mission killed' if enough of its sensor antennae are put out of action. Proximity detonation can be lethal to smaller and more lightly protected ships.

Nuclear warheads are not commonly used by the Imperial Navy but a modest number are routinely shipped aboard missile-armed cruisers and capital ships. Contact detonation with a nuclear warhead can be catastrophic, but they are more commonly used for proximity attacks. The electromagnetic pulse and radiation can fry electronics, cause crew casualties and deal structural damage by induction heating. Nuclear warheads are strictly controlled by the Imperium, permitted to Colonial Fleets and system defence units for use in a war situation against foreign hostiles but their use, even in space combat, against the forces of an Imperial member world is prohibited.

Some specialist missiles carry advanced sensors and missile control packs instead of a warhead. These automated systems direct other missiles in a salvo, supplying target information from a position beyond the enemy's point defence range. Another specialist missile carries electronic warfare systems, launched with a salvo to jam enemy communications and reduce point defence effectiveness, or used as decoys close to the launching ship to apply ECM against incoming fire while the missile ship remains stealthy, greatly complicating fire control problems for the enemy.

The Imperial Navy is not enamoured of torpedoes, however some of its potential enemies favour them. Torpedoes are larger and heavier missile-like weapons, usually optimised for short-range attacks. The Imperium sees them as a means for weaker navies to obtain a capability to harm large warships, which comes at the price of high casualties among the attacking vessels. The Imperial Navy would rather build more conventional, survivable ships and fit them with good defences against the desperate torpedo attacks of its enemies.

PROJECTILE WEAPONS

The Imperial Navy has at times experimented with projectile weapons. While useful in some circumstances, rail guns and mass drivers have never achieved any degree of popularity other than for planetary bombardment. By convention, the term rail gun is used to refer to smaller weapons firing very light projectiles, while mass driver implies a large weapon capable of launching a significant mass, albeit at lower velocity. Both use electromagnetic effects to accelerate an object to immense speeds. Since the kinetic energy of an object is determined by the square of its speed, a tiny particle should (hypothetically) be capable of devastating a starship. However, this is not the case.

The fire control problems associated with hitting an evading vessel at one or more light-seconds range are immense. Sensor data, crawling along at lightspeed, is out of date by the time it reaches the firing ship. A similar lag applies to laser or meson gun fire going the other way, making a hit difficult to achieve. A rail gun particle moving at about 30% of lightspeed requires a miraculously good target motion prediction to actually hit anything. Missiles can home in once they reach the target area but railgun projectiles are unguided and therefore only useful at shorter ranges. Imperial vessels are never armed with rail guns.

Mass driver launched projectiles are large enough to cause catastrophic damage to a vessel and carry enough kinetic energy to punch through armour. However, they move more slowly than rail gun projectiles and are even less likely to achieve a hit. Large mass drivers, often fitted as a spinal mount in a specialist vessel, are useful for planetary bombardment where widespread devastation is the aim. Orbital rock-dropping can be used to shatter bunkers and defence installations, although it is only a little less environmentally damaging than nuclear bombardment. The mass driver market is a relatively small one, in which the three main players are Instellarms, Delgado and Ling-Standard Products. Little development work is done by anyone but Delgado, which is rumoured to be working on a range of projectile weapon projects for export beyond the Imperium.

UNIFORMS AND VACC SUITS

Each of the Imperial services is associated with a colour, and in the case of the navy it is yellow. However, this does not mean that all naval equipment is bright yellow, nor that the primary uniform colour is yellow. The base colour for formal uniforms is black, whilst dark grey is favoured for working dress. Naval personnel wear a basic vacc suit as their working uniform aboard ship but the cost of issuing sufficient suits is enormous. For this reason more conventional clothing is worn whenever possible.

The navy has grades of uniform to be worn on different occasions. The most basic is working dress, worn when doing work that might be dirty or wear out clothing, but where environmental protection is not required. Working dress consists of a tunic and trousers, with a little reinforcement at the knees and elbows. It is accompanied by a forage cap and, usually, a belt with attachment points for tools or other small items. Other than bearing rank insignia, working dress is little different to the coveralls or work clothes worn by civilian and military personnel who have physical jobs.

Working dress differs for enlisted personnel and officers. Enlisted personnel and most petty officers wear dark grey, with a panel on the left side of the chest displaying branch and qualification badges. Rank insignia are worn on the upper arm. For officers, the duty suit is black and worn with a peaked 'navy cap' with varying amounts of 'scrambled egg' around the brim denoting rank. Rank insignia are worn at the cuff. The navy does not normally need to worry about hostiles identifying officers in the same way ground forces do but on occasions where an officer needs to be unobtrusive a grey duty suit can be worn, allowing the officer to blend in with a groundside or boarding party.

The shipboard equivalent to working dress is a duty suit. It is designed to provide protection from decompression or toxic gases during a shipboard emergency, and mimics some of the functions of a true vacc suit. Visually the duty suit is not very different from working dress but takes the form of a one-piece coverall rather than tunic and trousers. The legs are made vacuum-tight by a seal to the boots and the rest of the suit can be prepared for vacuum in seconds by donning the gloves and a transparent 'beachball' helmet, constantly carried at the belt. This is intended to allow personnel to survive for a time in the event of sudden decompression. As soon as practicable, the wearer will swap their soft helmet for a rigid and far more robust one.

The suit is manufactured at TL14 by a range of contractors and includes a basic communicator. A soft, flexible gel pack is carried at the belt which, when activated, provides oxygen for about 15 minutes of modest activity. It is standard practice for crewmembers to connect their duty suits to a workstation life support outlet if remaining static, or to grab an air bottle from one of the many emergency lockers situated around the ship. These contain a two-hour supply and can be positioned at the thigh or small of the back.

The duty suit is not considered to be personal armour but a body protector can be worn over it if necessary. A duty suit offers little protection against radiation and does not maintain pressure well. This is not a problem when plugged into a life-support console at a duty station but for extended independent operations a more substantial suit is needed. A 'ship-jacket' is often worn over a duty suit or working dress, a sleeveless light jacket, rarely fastened, with pockets to hold whatever the user needs. Ship-jackets are used by crews throughout Imperial space, and are normally high-visibility orange. The navy, however, uses a distinctive yellow jacket.

For more formal occasions, there are various degrees of uniform with increasing ostentation. The base colour for formal uniforms is black, with most decoration in yellow or gold, or the wearer's branch colour. Number Three Uniform, otherwise known as general duty uniform, is worn whenever personnel need to look smart. It consists of black trousers and a white shirt, with rank and branch insignia positioned similarly to those on working dress. A black single-breasted jacket, cut differently for officers and enlisted personnel, is worn over the shirt when appropriate. Medal ribbons and badges are worn on the left side, and noble insignia may be worn with the jacket. An Imperial knight would not wear their actual regalia on duty but may display a miniature version of their knight's star or other insignia.

Number Two Uniform, otherwise known as mess dress, is similar to Number Three but with additional ostentation. Medals and awards are displayed by ribbons, with the exception of certain awards such as the Starburst for Extreme Heroism. Noble insignia are displayed but not actual regalia. Mess dress may or may not include a sword, depending on the occasion. Number One Uniform, also known as ceremonial dress, includes actual medals and noble regalia, plus a sword.

DUTY SUIT WITH BODY PROTECTOR**DUTY SUIT**

Armour Type	Protection	TL	Rad	Kg	Cost	Required Skill
Duty Suit	+4	14	50	4	Cr9000	Vacc Suit 0
Duty Suit with Body Protector	+8	14	50	6	Cr11000	Vacc Suit 0
Naval Vacc Suit	+12	14	100	6	Cr25000	Vacc Suit 0
Naval Vacc Suit with Body Protector	+16	14	100	8	Cr27000	Vacc Suit 0



Naval Vacc Suit

The Navy uses a standard TL14 vacc suit, made by navy contractors to the highest standards but functionally identical to the vacc suits used by civilian merchant and spacer crews.



Engineering Suit

Damage control teams and engineers working outside the hull use a specialist form of light battle dress known as an engineering suit. The suit has no weaponry, although there is no reason why personnel cannot carry small arms, and is armoured more lightly than combat battle dress. It is fitted with a range of engineering sensors and tools powered from the suit's supply, including multi-spectrum sensors, magnification equipment, electronic and ultrasound scanners, a densitometer, various power tools and a welding/cutting unit.



Body Armour

For situations where personal armour is needed in non-vacuum situations, security personnel wear a semi-rigid back-and-chest clamshell body protector and a full-face visored helmet with gas filters of the same material. The body armour kit is designed to go over a duty suit or vacc suit, and will seal to the suit almost perfectly. The torso protector has clips and attachment points for magazines, handgun holsters and sundry other accessories.

Armour Type	Protection	TL	Rad	STR	DEX	Slots	Kg	Cost	Required Skill
Engineering Suit	+18	14	350	+4	+6	16	4	Cr500000	Vacc Suit 2

Armour Type	Protection	TL	Rad	Kg	Cost	Required Skill
Body Armour	+10	10	—	6	Cr2000	—

PERSONAL WEAPONS AND EQUIPMENT

The Imperial Navy has access to the standard small arms used by the Imperial Army, including light support weapons for defence of ground installations. 'Navy' versions of some weapon systems are produced, usually optimised for operations within the confines of an installation or ship, or for use with a vacc suit. In most cases these weapons are available on the open market with only cosmetic alterations.

Handgun, 9mm, Navy Model

Naval bases maintain large stocks of handguns to equip security patrols, and other personnel may be temporarily issued a weapon if the situation merits it. The 'Navy Nine' is visually little different from its army sibling but closer inspection reveals a few additional features. The weapon has virtually no projections, reducing the chance of snagging on a vacc suit, and features an enlarged trigger guard for use with gloves. There is a belt lanyard which prevents the weapon being lost in low-gravity situations. A yellow Sunburst on the grips and a navy serial number further identify the weapon.

The Navy Nine uses a conventional double-stacked detachable box magazine holding 14 rounds. There is no manual safety catch but the weapon has grip, trigger and magazine safeties, and a de-cocking lever. The first shot can be fired double-action, allowing the weapon to be brought instantly into action, and specialist lubricants are used. This ensures function even in vacuum. The weapon does have an accessory rail under the barrel but this is rarely used other than to clip a spare magazine to the weapon when it is stored as a 'grab gun' in shipboard security lockers.

4mm Gauss Pistol, Navy Model

The standard sidearm for naval officers is the 4mm gauss pistol. All officers, other than medical personnel, are assigned one. The weapon is a symbol of rank but may see occasional use to enforce discipline or in self-defence while on active duty. Senior petty officers may also be assigned a gauss pistol if their duties require one. The main difference between a navy model gauss pistol and the army equivalent is barrel length. The navy version has an overlong barrel which does not greatly affect performance, more an allusion to the navy's preference for elegant combat at standoff ranges than a practical combat feature, and also a reference to the fact that naval officers, in general, find handgun fights a little beneath them.



*Handgun, 9mm, Navy Model
'Navy Nine'*



4mm Gauss Pistol, Navy Model

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Navy Nine	10	10	3D-3	0.9	Cr200	14	Cr10	—

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Navy Model Gauss Pistol	14	20	3D	1.1	Cr500	40	Cr20	AP3, Auto 2

Snub Weapons

The standard shipboard sidearm is the combat snub pistol. Held in armouries and issued only at need, the snub pistol is the one weapon that all naval personnel (other than those exempted by beliefs or duties) must be qualified on. All snub pistols have a large trigger guard to accommodate vacc suit gloves and a securing lanyard to prevent the weapon being lost in low-g conditions. An integral laser sight is standard. Other features are similar to the 9mm semi-automatic pistol used for non-low-g applications.

Snub weapons are so named for their relatively short barrel which, combined with a large calibre, creates the impression of shortness. The centre of recoil is low to reduce muzzle flip and the tendency to overbalance the shooter in low gravity situations. Combined with training in low-g shooting positions and bracing techniques, snub weapons can help personnel avoid rendering themselves useless by tumbling across a compartment or down a corridor.

Navy snubs are exclusively semi-automatic weapons. Snub revolvers are used by various civilian agencies and merchant crews but the navy favours the high-capacity magazine-fed weapon for obvious reasons. Various ammunition types are available for snub weapons, including ball and high-explosive armour-piercing (HEAP) ammunition. Most weapons in navy service are loaded with ‘ball’ – a low-penetration plastic round intended to produce quick knockdown on unarmoured targets without danger of penetrating sensitive systems or ricochets.

The submachinegun uses the same ammunition as the handgun. The weapon is a bullpup configuration, placing the feed mechanism close to the user’s body and permitting a very short overall length. Standard loading is a 26-round combat magazine but snub pistol magazines can also be used at need. Capable of burst or full-automatic fire, snub SMGs have short range but good hitting power. Their small size makes them handy for cramped-space and low-g operations.



Naval Snub Pistol



Naval Snub Submachinegun

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Naval Snub Pistol (Ball)	12	5	3D-3	1	Cr150	12	Cr10	Zero-G
Naval Snub Pistol (HEAP)	12	5	3D-1	1	Cr150	12	Cr30	AP 2, Zero-G
Naval Snub Submachinegun (Ball)	12	10	3D-3	3.2	Cr250	26	Cr25	Auto 3, Zero-G
Naval Snub Pistol Submachinegun (HEAP)	12	10	3D-1	3.2	Cr250	26	Cr30	AP 2, Auto 3, Zero-G

Advanced Combat Rifle and Carbine

The navy uses the standard Advanced Combat Rifle to equip personnel for ground operations. A variant, the Advanced Combat Carbine, is identical but for a shorter barrel and pistol-type assault grip. This weapon is currently under evaluation for widespread deployment and likely to be encountered only in the hands of formations taking part in the evaluation process.

Navy Cutlass

The navy cutlass is a ceremonial weapon rather than a serious combat tool. However, cutlasses are kept sharp and personnel drill with them, just in case. The standard enlisted personnel cutlass is rather plain and utilitarian, while petty officers' weapons are decorative and officers' even more so. Slightly different patterns of cutlass are issued to officers of various grades but all are variations on the theme of a relatively short, heavy curved blade with a semi-basket handguard. Cutlasses can be used to thrust but this is a little awkward. By ancient tradition, the enlisted personnel cutlass is known as a 'butcher's blade'.

Like its Imperial Marine equivalent, the navy cutlass comes in a scabbard which places a thin protective strip over the cutting edge of the weapon when sheathed. If drawn without engaging the 'sharp catch', the weapon is drawn with this strip in place. This makes the weapon safe for practice or use as what is effectively a metal baton. Engaging the catch causes the strip to fall away or remain in the scabbard, instantly turning the weapon into a lethal cutting implement. The command to 'draw swords!' tells personnel to deploy their weapons with the strip in place, whereas 'make sharp!' or 'draw sharps!' is a lot more intimidating to those who understand what it means.



Advanced Combat Rifle



Advanced Combat Carbine



Enlisted Cutlass



Officer's Cutlass

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Advanced Combat Rifle	10	450	3D	3	Cr1000	40	Cr15	Auto 3, Scope
Advanced Combat Carbine	10	350	3D	2.6	Cr1000	40	Cr15	Auto 3, Scope

Weapon	TL	Range	Damage	Kg	Cost	Traits
Enlisted Cutlass	10	Melee	3D	0.8	Cr250	—
Officer's Cutlass	10	Melee	3D	0.8	Cr450	—



Naval Officer's Dress Sword

Naval officers are issued an officer's cutlass for emergencies and – more commonly – ceremonial occasions. Some officers are awarded a dress sword, and are entitled to wear it instead of their cutlass on any occasion where swords are required. The dress sword is straight, and longer than a cutlass, making it easy to tell who has achieved something meriting the award at a ball or other formal occasion. The weapon has the same safe/sharp catch as a cutlass, although it is likely to spend its entire career in safe configuration.

With a small handguard and knuckle bow the dress sword is reasonably practical – if any sword can be said to be that in an age of gauss weapons. The blade has a single primary cutting edge but is too light for wild, hacking cuts – those are the preserve of the cutlass-armed enlisted person. Naval officers who choose to learn how to use their swords are taught to rely on the thrust as their primary mode of attack, yet in reality their best option would be to use the weapon to point out who their boarding party should be shooting at.

HIGH GUARD: IMPERIAL NAVY

The Imperial Navy is the baseline starting point for many assumptions made in *High Guard* but many additional options have been added which may create confusion about how Imperial Navy ships are built. It is permissible to use all standard technologies for power plants, hulls and the like. Most Imperial Navy ships are built at TL15, with the best equipment available. Where an item is available at a lower Tech Level, advanced variants with advantages may be used. It is highly unlikely a fighting vessel would be built with anything but the most effective – or most cost-effective – systems aboard. Alternate technologies such as those found in the High Technology chapter of *High Guard* are not used. Reaction drives might be used on a specialist vessel but the Imperium does not favour them.

Weapon	TL	Range	Damage	Kg	Cost	Traits
Officer's Dress Sword	10	Melee	2D	0.95	Cr500+	—

BATTERIES

On small ships it is customary to mount weapons independently, but this is ineffective for larger vessels. Turret and barbette weapons of the same type can be grouped into batteries which all fire at the same target. Not all weapons aboard a large ship can bear on the same target at once. Some manoeuvring can be undertaken to unmask batteries but there is still a limit on how many can attack. Most commonly, weapons in a battery are grouped close together which allows them all to be aligned with a target. The maximum number of turrets or barbettes in a battery positioned in this manner depends on hull size but the rule of thumb on the Maximum Batteries table is useful.

It is standard practice to group turret and barbette weapons in threes or fours even on very large ships, although huge batteries are sometimes used. In this case some of the weapons may be dispersed. So long as they can all bear at once it does not really matter if some are on the forward flanks of the ship and some on the rear. At typical space combat distances the difference in aim points is trivial and will be compensated for by the ship's gunnery assistance software.

Maximum Batteries

Ship Tonnage	Turrets or Barbettes per Battery
Under 100	—
100–999	4
1000–9999	8
10,000–99,999	16
Over 100,000	32

All weapons in a battery must fire on the same target, however the gunner might choose to only fire some of them. The advantage of grouping weapons into batteries is a large reduction in crew requirements, although it comes at the price of reduced flexibility.

Battery fire can be conducted in various ways. The usual is to make a separate attack roll for each turret or barbette and apply damage separately. Alternatively, the weapons can be harmonised or focused.

Harmonising the guns causes each to aim at a point slightly off the target point. This creates a beaten zone around the aim point, increasing the chance of a hit but ensuring some or all weapons will miss.

Harmonised weapons gain DM+1 to attack rolls per four turrets or barbettes involved but only apply damage from one turret or barbette. The rest is wasted. Focusing weapons creates a very tight aim point which might assist in armour penetration but can result in overkill. Again, a single attack roll is made and damage from one turret or barbette is applied, with DM+2 per damage dice for every four turrets involved in the attack.

CREW SIZES

When calculating crew sizes, *High Guard* permits the Referee to reduce crew numbers by up to two-thirds for large ships. This should not be done on a straight 'numbers' basis but tailored to the needs of the vessel and factored into the ship description.

Command Crew and Officers: All vessels need a command crew and some specialist positions require an officer. In addition, specialist departments need a leader and often deputies. On small ships these may be petty officers but *High Guard* is not making that distinction – in *High Guard*, an 'officer' is someone holding a leadership position. Whether this is a full naval captain or an acting petty officer third class they count as an officer for the purposes of satisfying crew requirements. The number of such individuals required can be reduced but the designer must ensure there are sufficient leaders to oversee the crew. Specialist officers can satisfy both requirements, so the chief engineer counts towards the officer requirement and also the engineer requirement. Non-specialist command officers fulfil only the officer requirement. Officer slots should be assigned according to the ship's capabilities. It is possible this could end up being more than indicated by *High Guard*.

Flight Crew: Flight crews cannot be usefully reduced. A ship needs a pilot – and an astrogator if it is to jump – and should have one or more backups. Naval personnel are shown the rudiments of piloting during their basic training but this is more about understanding what the ship does than actually operating it. However, anyone who remembers their training can interpret some of the displays and input commands which might be enough to save a stricken ship. For proper operation there must be a dedicated pilot and additional flight personnel will be needed as well. Some can also fulfil officer roles, such as the senior bridge officer or flight operations officer.

Engineering Crew: The engineering and maintenance requirements produced by *High Guard* can be reduced by up to 70% for large ships providing they have centralised systems and decent automation. As always, reductions must be guided by common sense and the needs of the vessel. Maintenance work can be done or at least assisted by people from the Crew branch, so the number of qualified engineers aboard a vessel could in fact be quite small.

Gunnery Crew: *High Guard* specifies two crew per turret, bay, or screen, and one per 100 tons of spinal weaponry. This assumes that every weapon is manually operated, which is rarely the case. Spinal weapons need their full complement as specified. Other weapons may vary. Turrets and barbettes grouped into batteries require one gunner per battery, plus a few additional gunners or gunnery officers to replace casualties or perform supporting tasks. Bay weapons need only one gunner, however some additional personnel may also be required.

One technician is needed for each missile-based system and one for every 250 tons of bay weapons. For missile bays, both requirements must be fulfilled. In this case, a missile-based system means each bay or battery comprising missile or torpedo launchers. A ship with four large missile bays requires a missile technician for each bay plus eight technicians to keep the electronics and feed systems running. A single gunner can control the missiles from each bay but without these additional technicians the flow of missiles will soon end.

Medical Crew: It is rarely possible to reduce the amount of Medical crewmembers required.

Other Crew: Administrators, stewards and 'general' crewmembers can be reduced by up to 70% aboard a large ship. This assumes that some deck crew are assisting with maintenance tasks when not cooking, filing paperwork or polishing the elegant brass stanchions. The reduction in crew numbers will also reduce the number of officers required but as a rule a smaller crew will have a higher proportion of officers to enlisted personnel.



PERSONNEL

For all the technology and weaponry at its disposal, the Imperial Navy's most important asset, and one of its largest costs, is personnel. Even the lowest ranking enlisted crewmember has to be trained for a lengthy period else they will be nothing but a liability. In order to be assigned deck-scrubbing duty aboard a supply ship an individual must demonstrate competence in vacc suit operations, shipboard procedures, communications protocols, emergency measures and a range of other fields. A naval officer represents an investment of millions of Credits and makes decisions that could cost billions as well as countless lives.

The personnel of the navy are divided into two broad types – those who hold an officer's commission and those who do not. Enlisted personnel are further subdivided into ordinary crewmembers, who may be specialists in some narrow field, and petty officers who oversee the running of most low-level tasks. Officers are subdivided into junior officers, command officers and flag officers, with increasing levels of authority and responsibility.

ENLISTED RANKS

The majority of personnel in the Imperial Navy are enlisted; that is, they do not hold the Emperor's Commission and are sometimes referred to as ratings. Technically, anything done by navy personnel must have the authorisation of someone who holds that commission. Essentially, an officer takes responsibility for the actions of personnel by issuing orders or giving permission, with the Emperor the ultimate source of that authority. Enlisted personnel for the most part have a narrow view of the situation and a specific job to do. At higher petty officer ranks this changes considerably; the top petty officers know more about everything than junior lieutenants.

Spacehands

The lowest ranks in the Imperial Navy are termed spacehands, although in some branches a specialist term might be substituted. Other services might use similar terms such as 'crewmember' or 'starman', and these terms are sometimes informally substituted for spacehand.

Spacehand-Recruit: Someone who has just joined the service is termed a spacehand-recruit, usually shortened to recruit. Since this rank indicates the individual has not completed – and might not even have started – basic training they will not be given responsibility for anything more complex than their personal hygiene.

Spacehand Apprentice: Those who successfully complete their orientation training are usually awarded the rank of spacehand-apprentice in a mass ceremony. In the direst of emergencies these personnel might be sent to fighting ships or bulk out the crews of reactivated vessels but they are capable only of the most basic tasks. Most personnel with this rank are simply referred to as apprentice. At the completion of orientation training, apprentices will be qualified in basic vacc suit operations and firearms safety, and more physically adept than when they arrived, signified by level 0 in Vacc Suit, Gun Combat and Athletics.

Able Spacehand: Upon completing their basic training, navy spacers are awarded the rank of Able Spacehand in a grave and often very emotional ceremony, denoting they are now a fully functional member of the Imperial Navy. Having completed basic training, the spacehand is familiar with starship and small craft controls, and basic bridge operations, maintenance procedures and the operation of starship weapons, signified by level 0 in Pilot, Gunner and Mechanic.

UNIFORM TRAINING

Uniformity of training right across the Imperium means an officer needing personnel knows that anyone they assign can perform necessary basic tasks. Spacehands can be relied upon to be able to monitor sensor equipment, fix basic equipment, fight fires, function in a vacc suit and not to shoot themselves by accident. Everyone passed as fit for service in the Imperial Navy is a physically competent person who has shown they are willing and able to follow orders and procedures.

SPACEHANDS*Spacehand-Recruit**Spacehand Apprentice**Able Spacehand*

Most personnel do not rise above the rank of able spacehand, a rank that denotes they are a steady, dependable and well-qualified spacer who can be relied upon to perform their duties well, even under pressure. In the Imperial Navy, all able spacehands are qualified in basic shipboard maintenance, simple repairs of common systems and damage control procedures. This is signified by the award of Mechanic 1. In addition, an able spacehand will be familiar with the function of their specialist branch but may have more general skills. It is not uncommon to find an able spacehand in Engineering who has not received advanced training in drive system operation because they were selected for a security-and-boarding course or additional training in vacc suit operations.

Petty Officers

Petty officers do not hold the Emperor's commission but are an essential link in the chain of command. An officer is expected to identify what needs to be done but may not necessarily know who would be the best to do it. Essentially, petty officers translate the requirements of officers into actions of enlisted personnel. They fulfil important crew functions and often know more about their field, or at least the details of it, than their commissioned superiors. In addition, petty officers are responsible for leading teams within a crew or base complement.

Petty Officer Third Class: A PO3 would normally be responsible for leading a small team such as a damage control squad or gun crew, or for personally undertaking a complex or important job such as shuttle pilot, manoeuvre drive technician or sensor array operator. Assignments can vary, however, with personnel slotted in where they are needed. For this reason, a lowly third class petty officer might have to do the job of a first class PO until the ship receives a new personnel draft. In order to progress to PO3 rank all personnel have to receive training and demonstrate competence in vacc suit operations. This is signified by the award of Vacc Suit 1.

Petty Officer Second Class: A PO2 has much the same role as a PO3 but has received a promotion reflecting their knowledge and experience. A petty officer second class will be given more responsibility or assigned to more sensitive tasks than a PO3.

Petty Officer First Class: In general, PO1s undertake the same duties as their second or third-class colleagues. They often lead larger teams, typically with a PO2 or 3 to assist them. As specialists they handle sensitive or highly complex tasks requiring flexibility and discretion, having proven themselves time and again. The Imperial Navy has high standards of physical fitness and endurance for its senior petty officers, who cannot allow themselves to get out of shape. This is signified by the receipt of END+1 upon reaching this rank.

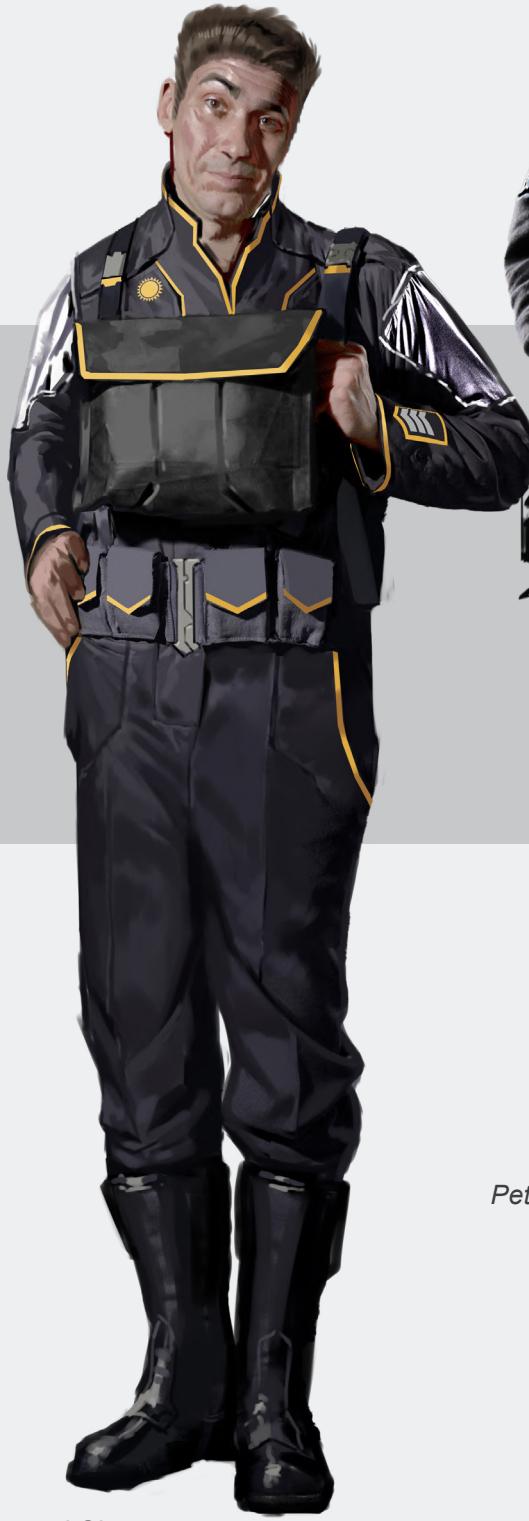
Chief Petty Officers: Promotion from first class petty officer to chief petty officer is considered an important career milestone. Chiefs are the most senior non-commissioned officers and commissioned officers rely on them for advice and expertise. A CPO or, informally, 'chief' is usually responsible for overseeing two or more teams led by more junior petty officers. A CPO may also be assigned a specific job such as security chief or shore liaison, particularly aboard mid-sized vessels, where spare officers are not available to fill sensitive posts.

Senior Chief Petty Officer: Highly experienced or outstanding chief petty officers may receive a promotion to senior chief petty officer. SCPOs may act as CPOs, or may form an additional layer of command in a large crew. SCPO is not explicitly listed in the *Traveller Core Rulebook*, but someone who has reached the rank of master chief petty officer will have passed through SCPO.

Master Chief Petty Officer: Master chief petty officers, informally known as 'master chief', are usually found aboard large commands or in staff functions. An MCPO acts as the department commander's aide and executive officer, and has a unique status as 'almost an officer'. MCPOs aboard smaller vessels are simply highly qualified personnel who have been promoted for their exemplary service. They perform the normal duties of whatever post they are in, usually a CPO slot. Very rarely, an MCPO of long and exemplary service may be awarded the special rank of fleet chief petty officer. Addressed informally – by those who dare – as 'Fleet' and formally as 'Sir' by most others, these individuals are repositories of the Wisdom Of The Ages and are treated with utmost respect by everyone – even admirals. FCPOs are rare and usually perform some special function, such as assisting an admiral on a special task or leading the enlisted personnel of a fleet flagship. The most senior FCPO in the whole Imperial Navy represents the enlisted personnel at the Admiralty.

PETTY OFFICERS

Petty Officer Third Class



Petty Officer Second Class



Petty Officer First Class

PERSONNEL



Chief Petty Officer

Master Chief Petty Officer

Senior Chief Petty Officer

Junior Officers

Officers hold a commission from the Emperor and are charged with acting for the good of the Imperium, its people and its Emperor. Even very junior officers are expected to be able to step into a higher command slot at need and to act in accordance with the political as well as the military needs of a situation. An Imperial Commission is a weighty thing and not given lightly.

Officer Cadet: An officer in training is known as an officer cadet. Cadets serve aboard ship as part of their training and can be placed in the chain of command by the captain of a vessel or commander of a base they are serving on. Otherwise their status is rather nebulous as they have no authority of their own. Officer cadets must be treated with respect by the enlisted crew but their ability to issue orders is 'only borrowed'. It has been said, unkindly but not without some truth, that an officer cadet ranks somewhere below the ship's cat and may or may not be more useful. Striking a balance between allowing the cadets to gain experience and develop into real officers and preventing them causing havoc through inexperience is difficult, and not every ship's crew is capable of finding it.

Ensign: Ensign is the lowest commissioned rank. It is held by graduates of the officer training programmes at various bases and naval academies, and the reserve officer training programmes run by some universities. The rank is often viewed as meaning 'apprentice officer', although many officers remain ensigns for several years and can be quite experienced. New ensigns are often assigned to work with experienced petty officers. On smaller ships, ensigns can sometimes be found as branch heads. By long tradition, all Imperial Navy officers receive instruction in sword and cutlass drill, and some take it further and learn to fence on their own time. All Imperial Navy ensigns receive Melee (blade) 1.

Sublieutenant: Most ensigns quickly gain promotion to sublieutenant, which on a small vessel can give them command of a branch. Sublieutenant is the most numerous commissioned rank and in the case of small non-jump vessels, such as system defence boats, the commanding officer may be a sublieutenant. This is common where the boat is part of a squadron commanded by a more senior officer. No ensign is promoted to sublieutenant without receiving training and demonstrating competence in leadership, indicated by the award of Leadership 1.

Lieutenant: The term lieutenant comes from 'tenant in lieu', an archaic reference to someone who holds responsibility in trust for a higher-ranking individual. Over time the word came to loosely mean a trusted subordinate who can give orders on behalf of the commander, and this is a good description of a naval lieutenant. A lieutenant has the same general duties as a sublieutenant but has been promoted to greater seniority. Aboard a small to mid-sized ship, a lieutenant might head one of the ship's branches, such as Engineering. An experienced lieutenant might also be assigned command of a small jump-capable vessel such as a close escort which is intended to function as part of a task group. Such vessels are rarely far from their parent formation and therefore the oversight of a more senior officer.

Field-Grade Officers

Most officers never rise above the rank of lieutenant. Those that do typically demonstrate their worth as the commanding officer of a small escort or patrol vessel operating under relatively close supervision. Officers of command rank have demonstrated they can handle a great deal of responsibility, commanding a starship or heading a branch aboard one. Achieving command rank requires experience, demonstration of competence and completion of the necessary training. Influence and patronage can assist in this but it is rare for a complete no-hoper to be given command of a starship no matter who their parents are.

Lieutenant Commander: The most junior of the Field Grade ranks. Those that perform well will progress sooner or later to the rank of commander. Both are represented in *Traveller* by rank 4 and which is held by a Traveller will depend on their career to date. The Referee should interpret the events of the Traveller's career or decide on a suitable backstory. This is not necessary if the Traveller stays in the service and reaches the rank of captain.

Lieutenant commander would normally command a vessel no larger than a destroyer. A full commander would expect to be given command of a cruiser-sized vessel. However, the neat allocation of lieutenant commanders to destroyers and full commanders to cruisers is not feasible in practice. As a general rule of thumb larger ships get higher ranking officers to command them. Field grade officers do not always command ships, however; they may be assigned as the commanding officer of an installation or be part of the crew of a large ship.



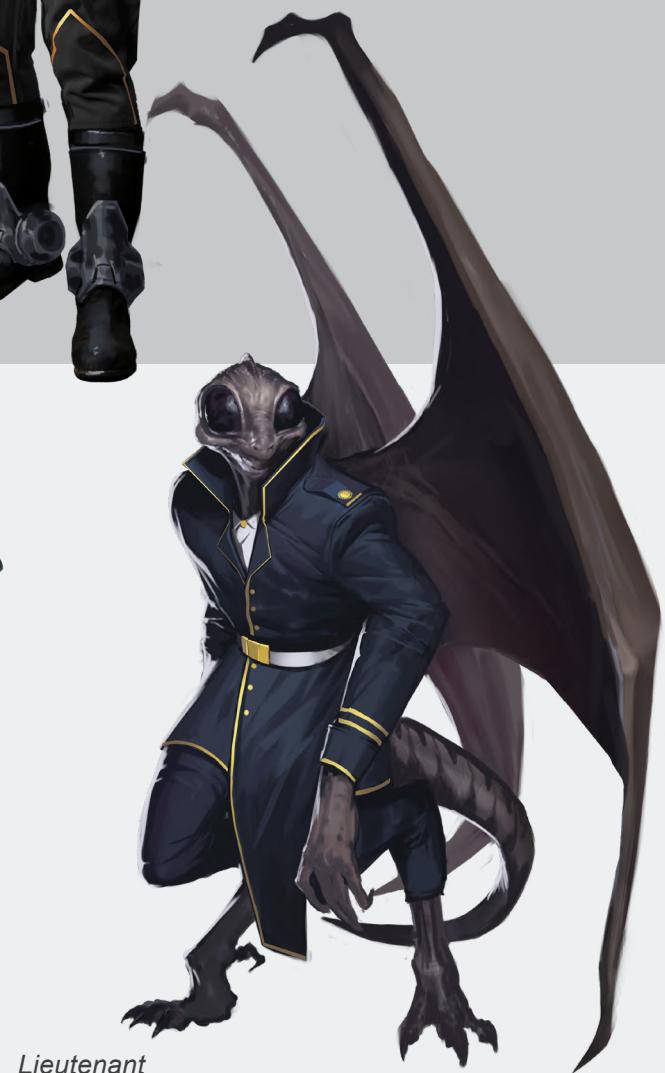
Officer Cadet



Ensign



Sublieutenant



Lieutenant

JUNIOR OFFICERS



FIELD-GRADE OFFICERS



Lieutenant Commander



Commander



Captain

Commander: Typically, a battleship will have full commanders leading at least some of its divisions, and a cruiser will have lieutenant commanders in those positions. It is also possible for the lead vessel of a formation to have a higher-ranking officer in command. For example, a squadron of system defence boats commanded by lieutenants and sublieutenants might have a lieutenant commander aboard the lead vessel, whilst the lead vessel of a destroyer flotilla might be a commander, with lieutenant commanders in charge of the other ships.

The jump from junior officer to command level is a big one; perhaps the biggest in the Imperial Navy. Part of the required training is a course in naval tactics. This might be used directly by the commanding officer of a warship but is still useful to those who never set foot on the bridge. Knowing about the big picture and what their superiors might do about it allows subordinate officers to predict their requirements. This is signified by the award of Tactics (naval) 1 upon attaining command rank.

Captain

Captain as a title means the commanding officer of a ship; that officer might be a lowly sublieutenant but aboard their vessel they are the captain. However, the rank of captain has various other meanings, one of which is a specific rank. Captain is the most senior of the command ranks. Holding this rank implies fitness to command any ship. While vessels of up to cruiser size may go into space with a commander as their skipper, battleships, dreadnoughts, fleet carriers and other capital ships are assigned a full captain in all but the most unusual of circumstances. Smaller naval bases are also normally commanded by a captain.

Most officers who reach the rank of captain transfer to Line and become non-specialist officers after a period of special command training. Such non-specialists are referred to as ‘salt horses’ in keeping with an ancient Terran custom. In the case where an officer is promoted to captain and remains a specialist, they will usually leave shipboard duty and join Staff as an expert or training officer. A few large warships have captains in charge of each of their branches and this is the practice aboard some very large dreadnoughts assigned to the Imperial Bodyguard Squadron, for example. The senior ship of an important squadron may have captains among its branch heads, highly experienced specialist officers assigned a formal post as squadron engineering officer, squadron gunnery officer, and so forth. They oversee activities in their field and help other officers troubleshoot or streamline operations.

Captains also undertake staff duties, as do officers of all ranks. An admiral will have a flag-captain and usually multiple flag-lieutenants to handle liaison and routine tasks. These officers may or may not have ever commanded a warship. Whatever their posting, navy captains are highly trained and experienced, and enjoy high status in society. For this reason, anyone reaching the rank of captain is immediately elevated to SOC 10 or gains SOC +1 if this would produce a higher result. Not all naval captains are Imperial nobles but elevation to knighthood is likely if the captain performs at least adequately.

FLAG OFFICERS

Officers who command multiple ships or an equivalent amount of resources are known as flag officers. The term is archaic, dating from a time when the admiral flew their own flag on the masts of whatever ship they were aboard – hence the term flagship – to identify it as the command vessel of a squadron. Flag officers are always Imperial nobles. Whether this is due to elevation for naval service, or because the admiral comes from a noble family, the fact is that the handling of naval forces is a political task as much as a military one. Admirals have concerns other than winning battles with the enemy, and a grasp of politics is vital for so many reasons.

Flag rank is indicated in *Traveller* by rank 6 but the exact rank a Traveller holds will depend on the events of their career and perhaps their noble rank. When a Traveller reaches the rank of admiral they are immediately elevated to SOC 12 or gain SOC+1, whichever is higher. Flag officers no longer really belong to any branch of the navy; their special position and training place them beyond such considerations. Their affairs are administered by the Staff branch.

Commodore

The rank of commodore is a peculiarity in naval tradition. Commodores are sort-of-but-not-quite admirals, who may be appointed on a temporary basis before dropping back to their previous rank. An ad-hoc squadron or flotilla might be commanded by an officer appointed for the duration of its existence, holding the rank of commodore for that time. This may or may not be the commanding officer of the senior ship in the force. These temporary commodores are unlikely to have completed the full training for permanent flag rank and may not have even started it.



FLAG OFFICERS

PERSONNEL



Commodore



Fleet Admiral



Sector Admiral



Grand Admiral

An officer might be elevated to commodore several times before finally retaining the rank. This is likely to attract the interest of the promotions board – someone who routinely gets put in charge of every odd job in the sector is probably worth investing in. Such officers are provided with training and eventually given a long-term command – and confirmation in their rank of commodore on a permanent basis. Commodores command squadrons of small and medium-sized ships, task forces and medium sized bases.

Fleet Admiral

The term ‘fleet admiral’ in fact covers three grades of rank, each of which is considered suitable to command a differing type or size of fleet. Their titles are drawn from ancient Terran tradition: rear-admiral, vice-admiral and admiral. A large fleet will have a full admiral in command, with vice-admirals and rear-admirals commanding elements of the fleet or held available to be assigned command of a large detachment. A sector’s naval depot will usually be commanded by a full admiral. These officers are referred to as ‘depot admirals’ to distinguish them from those who command fleets. Transfer between depot and fleet is possible, although depot command is often given to admirals more suited to administration than decisive action, or those a little old for active service. Important functions such as naval intelligence for a sector are also commanded by a full admiral, although this is a staff position rather than one leading the fighting fleets.

The commanding officer of a subsector fleet is usually a vice-admiral, although this can vary. Vice-admirals also command major naval bases and may head some functions throughout a sector. Rear-admirals generally command segments of a fleet or mid-level naval bases. The head of a branch in a subsector, such as Engineering, will also generally be a rear-admiral.

Sector Admiral

Sector admiral is both a rank and a specific job title. A sector admiral is in overall command of all naval forces in their sector and responsible for political and economic factors as well as strategic ones. In time of war, the sector admiral immediately becomes the theatre commander. They will not leave their headquarters under most circumstances; for command to be exercised information must reach the commander and orders need to be transmitted. This becomes a lot more time-consuming if the sector commander is moving around at the head of the battle fleet.

Sector admirals may vary from region-to-region. In the Core, sector admirals are often appointed for political reasons or to offer a loyal warrior a prestigious post until retirement. Administrative competence, the ability to advise the Admiralty Board on important matters and a certain amount of appeal to the public are useful qualities. At the frontiers, however, sector admirals tend to be relatively young and capable fighting commanders. A reputation for success in command is important to the confidence of an embattled fleet.

The Imperium also has 10 officers who hold equivalent rank to a sector admiral, the overall heads of the navy branches who make policy for that branch and advise on matters concerning their specialism. There are also a number of ‘spare’ sector admirals assigned to Staff who could take over a given sector in the event no suitable local replacement could be found. These admirals form part of the contingency planning staff, generating endless variations on crisis scenarios. Most specialise in a particular region and are experts on the fighting styles and weaponry of likely opponents. In the event of a major war, one or more of these admirals would be rushed to the embattled sector to advise the existing sector admiral or take charge if they are put out of action.

Grand Admiral

The Imperial Navy has a few grand admirals. For some, it is an honour-title held by someone long past the age where they can provide effective leadership but who might have useful insight. The rank is also awarded to some sector admirals upon retirement. In both of these cases the grand admiral is out of the chain of command and cannot legally issue orders. There are some fighting grand admirals, however. If a conflict spills into multiple sectors or a very large fleet is formed it will be given to a grand admiral to command. This is rare and most of the time grand admirals are assigned to the central navy staff or that of one of the domains. They plan and advise, ensuring the political masters of the Imperium are ready to put the navy to the best use in the event it is needed at all.

THE ADMIRALTY

The most senior officers of the Imperial Navy are collectively known as the Admiralty. Whilst the term is loosely applied to any and all officers of flag rank, it most properly refers to a small body of officers who make the big policy and procurement decisions for the navy.

The commander-in-chief of the Imperial Navy holds the same rank as other grand admirals but is formally known as Admiral-of-the-Fleet, which is very much a job title as well as an honorific. The title is relinquished when the incumbent steps down or is replaced; another grand admiral takes on the mantle at that time. The post of Admiral-of-the-Fleet is usually assigned for a long period but sometimes the holder may decide to effectively self-demote in order to take charge of a crisis on the border.

While the Emperor, in capacity as Admiral-in-Chief, is titular commander, the Admiral-of-the-Fleet is actually responsible for all naval orders, assignments and deployments. The appointment is as political as it is military. A significant part of their time is spent at functions and parties, representing the navy to nobility and public. However, the Admiral-of-the-Fleet does have certain vital duties. As the head of a large planning staff, the Admiral-of-the-Fleet is responsible for ensuring that a contingency plan – with suitable options and variations – exists for every conceivable naval situation. Within hours of news reaching Capital of a crisis, the Admiral-of-the-Fleet must be ready to present possible responses to the Emperor, along with detailed briefings on enemy capabilities and possible outcomes of any given course of action.

The Admiral-of-the-Fleet is also the Emperor's chief advisor on naval matters. They must have ready answers to any question, no matter how obscure, about the capabilities of any vessel or state. They must have accurate predictions of enemy intentions available, as well as detailed information about the Imperial Fleet and its leaders. While the Emperor tends to reserve large-scale decisions for themselves, the Admiral-of-the-Fleet has the right and the responsibility to deploy the fleet as they see fit, unless overruled by the Emperor. In practice, this means that the Admiral-of-the-Fleet is responsible for the day-to-day running of the entire Imperial Navy and for ensuring that it is ready for whatever happens.

In the event that the Emperor is not available, the Admiral-of-the-Fleet is expected to make naval decisions in their absence. To this end, their word carries the weight of an Imperial Standing Warrant – their lawful orders to naval personnel can only be overruled by the Emperor. The Admiral-of-the-Fleet is usually assisted by a staff of senior officers including one or more grand admirals. These 'spares' can be sent off to deal with a crisis or kept at home where their advice and many years of experience can benefit the planning process. Less effective admirals, promoted out of fighting assignments, are generally retained on the staff this way.

THE RESERVE LIST

The Reserve List contains details of all personnel who could be recalled or summoned to the navy at need, divided into categories ranging from those eminently suitable to the scrapings of the barrel. The ideal reservist has had recent training or left service in the past couple of years and can be quickly slotted back into the chain of command. Those most likely to be willing to come back or be called up are obviously preferred over those who may resent it. Recently mustered-out personnel and active reservists are the most likely to fit this category and will be called upon first. However, some specialisms are hard to fill, requiring older or reluctant personnel.

The Ready Reserve

Ready reserve personnel are mostly active reservists who undergo periodic training and have a legal commitment to make themselves available at need. In return, they are paid for the time they spend in training and receive other incentives such as assistance with education fees. Some of these active reservists serve for a time aboard training ships, either as trainees or instructors depending on their level of experience. Other ready-reserve personnel include merchant ship operators who receive a subsidy in return for being called to serve at need. Personnel who have left the navy in the past two years are also placed on the ready-reserve list unless there is some reason – such as a dishonourable discharge – this would be unsuitable.

The existence of the ready-reserve costs the Imperial Navy a lot of money but allows rapid expansion of forces at need. In the event that warships were reactivated from the mothball fleet, a skeleton crew of regular personnel, including a commanding officer, would be assigned along with a larger number of reservists. With a captain who was previously the XO of a warship or who had been promoted to command a larger but much older vessel and a crew of reservists, these ships cannot be expected to be hugely effective but the navy has a tradition of getting the job done. These reserve warships would at least free up more capable vessels for a front-line role.

Category 1 Reserve

Personnel are assigned to category 1 either because they are considered highly suitable for activation or have a necessary skill. In some cases quite elderly personnel remain in category 1 because there is nobody else in the region with their skillset but for the most part category 1 reservists are relatively young

and have left the service recently. Such personnel can be slotted into a ship's company with minimal or no retraining.

Category 2 Reserve

Category 2 reserve personnel would require considerable training before becoming suitable for service. Most who leave the navy are placed in category 1 for two years before being downgraded to category 2. They will remain in category 2 for a nominal 10 years, although this can be modified for various reasons. Health, age and moving into an important profession will normally affect the length of time someone is subject to recall as a category 2 reservist.

Category 3 Reserve

The lowest category of reservists, category 3 contains those who could in theory be recalled but would require extensive training or are unlikely to be much use. Recalling someone from category 3 would be an act of desperation on the part of the navy. Personnel joining the navy agree to being recalled to service at any time the Imperium has need of them, even many years after they have mustered out. In practice, the administrative services stop tracking category 3 personnel at some point. A questionnaire is sent to their last known location every year asking for an update on their health and occupation status. Depending on the answers they may be quietly dropped from the list. It is mandatory to make a response but the navy does not waste money chasing codgers who have moved halfway across the sector.

Administering the List

In peacetime, the Reserve List is nothing but an administrative nuisance for the navy's administrative corps and a source of highly-respected job references for the ex-navy officer or rating. However, the list becomes very valuable in wartime, since reservists are a ready pool of experienced personnel who can be recalled for duty at need. If a general or individual-specific recall comes in via the x-boat network, reservists are required to present themselves for duty for the duration of the emergency. Age or ill health, or special circumstances, may allow a reservist exemption from service.

Reserve commissions can also be held by personnel who have never been in the navy. These are merchant service personnel who have undertaken special Navy Reserve training in return for advancement and a pay hike, or those who took Naval Officer Training in college, then entered a different career. Such personnel are also subject to recall under the standard navy system.

It is one of the great traditions of the Imperial Navy that reservists do not wait for the official call. This is a source of great PR material and also something of a nuisance when a band of elderly former personnel squeeze themselves into their old uniforms, march into a recruiting office and place their 'retired' tabs on the desk. The chances of them being asked to do anything more than a recruiting vid are small, but it is expected that reservists will return to the colours. The example set by these elders is useful in persuading more effective reservists to come forward.

PROMOTION

Adventure vids are full of plucky young officers who seem to get promoted every two days for honourable conduct and bravery. This is not now an effective navy works. No matter how heroic and clever someone is, they need to be able to do their job. Every promotion brings with it greater responsibility and incompetence gets other people killed. People are sometimes promoted on the spot during a crisis but the navy provides training as soon as possible to bring the individual up to the required standard. During a major war personnel must sometimes bodge through as best they can, possibly holding a post two or more grades above their actual rank. Some of these people figure it out and become highly effective. Most just cope as best they can until the shooting stops.

The standard way to be elevated in rank is for an individual to be assessed by the appropriate authority and formally promoted. For the most part, promotions must be recommended by a superior. This usually takes place after a scheduled performance review but may occur if the individual has impressed their superiors. This is the closest the navy gets to the fantasy world of weekly-promoted vid heroes. Recommendations for promotion are also automatically made by the navy's bureaucratic system at intervals. This is intended to prevent individuals being unfairly stuck in rank because their superiors are incompetent or simply do not like them.

When a recommendation is made the individual is evaluated. Length of experience, time in present grade and performance to date are considered as variables. Training requirements are normally absolutes. Other than in a crisis, a promotion candidate must have passed the correct courses to be even considered. In many cases this means an individual showing promise may be sent on a course and promoted upon graduating. If they fail the promotion will not be awarded but this does not preclude another attempt later on. In some cases a particular qualification might be a barrier to promotion for an otherwise promising candidate. This can be worked around by transferring to a different branch of service which may have requirements the candidate can meet.

Formal promotions usually take place with due ceremony at a naval base. However, in some cases a post needs to be filled immediately and no-one of the requisite rank is available. In this case there are two similar options: to award acting rank or a brevet. Acting rank is formally conferred but explicitly temporary. For example, a naval lieutenant might be offered command of a destroyer, which normally requires a lieutenant commander. The regional naval command can get around this by making the lieutenant an acting lieutenant commander. The lieutenant now wears the insignia of the higher rank and receives all due deference and respect, but only for the duration of the assignment.

Someone holding acting rank can hope to be confirmed in the new rank. If they perform well enough, the Admiralty might decide to keep them at the new level and deal with training requirements later. These might even be waived if the individual demonstrates a high level of competence. Bureaucratic issues can result in officers spending years in an acting rank without a review that would perhaps result in recommendation for promotion to that rank, but more commonly someone serving acceptably in an acting role will be put forward for proper promotion as a matter of course.

Brevet rank is slightly different, although it is sometimes used for the same purpose – to fill a vacancy that requires a particular level of officer or rating. Where acting rank is usually a grade above or at most two, a brevet can be made to any rank. Occasionally this is used to give non-Imperial service personnel rank in the Imperial armed forces. The

practice was first implemented by Terrans during the Interstellar Wars. Forces willing to fight against the Vilani were welcomed as allies but in some cases personnel were co-opted into the Terran Confederation Navy. These were given brevet rank equivalent to their status in their home forces.

More recently, brevet rank has been used to give lawful authority to personnel ‘borrowed’ from outside the Imperial armed forces. For example, an officer of the Archduke’s Huscarles might be the ideal person to lead an anti-piracy operation if only they held Imperial Navy rank. A brevet could be issued, granting this officer the lawful authority to command Imperial Navy personnel. Similarly, a corporate magnate might offer their fleet of 20 ships as auxiliaries in a crisis and receive brevet rank to continue commanding them now they are navy assets.

Most brevet ranks are courtesies, rewards for heroism or expediencies to get around legal complications. The difference between acting rank and brevet rank is that there is no guarantee that a brevet officer or enlisted person has completed any requisite training. A brevet to commander might be used to allow an excellent administrator to take over a troubled supply base and sort its bureaucratic problems out, or to add weight to the demands of an auditor investigating potential misfeasance in the supply chain. Brevet rank can be awarded to honour individuals. For example, the commander of a system defence flotilla that holds out under immense pressure might be awarded the brevet rank of admiral in the Imperial Navy.

Brevet rank signifies only that the holder was elevated to this position for a reason. It does not necessarily correlate to overall competence or the capability to handle the tasks of a fully qualified officer. For this reason most brevets for specialist tasks are to the Staff branch, keeping unqualified officers out of the chain of command. Where someone is breveted into the chain of command it is because the Admiralty feels they are needed. Both acting and brevet rank signify that someone is providing a service above or different to their formal rank. A brevet suggests the individual has not gone through the usual channels to get there whereas acting rank is an assurance they are going or will be going through that process.

Commission

The usual way to obtain the Emperor's Commission and become an officer is to go through a naval training programme, a naval reserve training programme or to graduate from a naval academy. It is also possible to be commissioned from the ranks, although this is rare; very occasionally an ordinary crewmember is spotted as having leadership potential and sent to an officer training facility. More commonly, it is a highly experienced petty officer who already knows at least some of what they will need in the new role.

Someone who graduates from officer training will usually become an ensign but this is not really appropriate for experienced petty officers with several years of service under their belt. It is more common in this case for the individual to receive an abbreviated version of training and be promoted directly to lieutenant. Very occasionally, a highly experienced chief petty officer might go directly to command rank, although this tends to happen only in staff or specialist appointments.

However they get there, holders of the Emperor's Commission are expected to honour the traditions of the Imperial Navy and protect its reputation. This means that officers are treated more harshly than enlisted personnel for the same infractions. Stripping an officer of their commission – known as cashiering – is a formal and deliberately humiliating act. A cashiered officer will find it difficult to obtain civilian employment, although some of the more questionable merchant lines might value their experience and not pay too much attention to their record.

Noble Influences

It is inevitable that the navy and the nobility are inextricably intertwined. High naval rank comes with elevation to the nobility, as does heroism on some occasions. More heroes are ennobled from the navy than from other services, largely because there are more nobles already in service. This means that an act is far more likely to be witnessed by someone who can petition on the hero's behalf. Conversely, nobles tend to rise more quickly through the naval ranks than commoners. This is in part due to patronage and there have been notable instances in which real incompetents have sleazied their way through the promotions process. For the most part, however, it comes down to advantages starting out. Nobles are raised with expectations and opportunities unavailable to ordinary people.

Those who already possess, or are in line for, titles naturally wield considerable influence over their commoner peers. This sort of social influence is inevitable and not particularly harmful in most cases. Indeed, with few exceptions, young nobles are raised to believe that service to the Imperium is their right and duty. This ethic tends to rub off on those seeking to impress them, too. It is made very clear to young nobles joining the navy that they have an additional duty to those carried out by their peers – they are expected to provide a shining example of what it is to be a naval officer. Most live up to the challenge, or at least try. A few exploit their advantages. The navy has had many years to find ways of dealing with this kind of corruption.

Many noble families put their children through naval academy and a single term in the navy as an essential part of their education. For some, a naval career is seen as a duty, for others it is a pleasure and reward. For yet more, a period of service is a prerequisite for a career in diplomacy or administration. Unfortunately, for some the navy is nothing more than a day job while waiting for some aged relative to die and bequeath a title and stipend. Wherever possible these people are given jobs that will allow them to serve out their time without affecting efficiency. Unfortunately some have egos that require command of a warship, and the influence to make it happen.

The nobility influence the navy in other ways. Many corporations that build naval equipment or support bases are run by noble families, who exert influence to obtain a good posting, have a piece of equipment made the fleet standard, or further some other goal such as having navy ships in place to catch a rival red-handed in some dubious practice. Considerable influence is exerted by the great noble families to make sure the navy protects their interests. Border nobles want navy ships stationed in their system to defend against invasion. Industrialists want their products accepted for naval use. Those with shipping concerns want patrols to guard against piracy. Those with extensive outsystem holdings want a naval presence to deter raids.

The navy cannot meet all these demands, but each noble will try to get their own way. Social pressures applied at receptions, exchange of favours, correct through-channels requests, outright bribery, and even threats... any and all means may be used. The overall effect is that the navy is subject to shifting pressures in addition to the immediate military situation. These might not be directly obvious, but they do exist. This all makes the life of a senior naval officer more complicated, but that comes with the territory.

Nobles are permitted and required by regulations to use their noble titles with their rank. Such titles usually take the form of (naval rank) (noble title) (name), (noble rank). Examples include Captain Sir Sarah Kaamassi or Lieutenant The Lord Transis Sevralt, Baron Plennai. Those with very long titles just use a part of them, except for formal introductions. However, naval personnel are addressed only by their naval rank when on duty. Baron Plennai may be 'my lord' at a social occasion or upon a chance meeting in the recreation commons, but on duty he is Lieutenant Sevralt, or Sir, depending upon who is addressing him.

Nobles enter the service with certain advantages. Many have commissions received through naval academy, or relatives already serving in the fleet. This is an accepted situation. However, the noble recruit gets no special treatment, at least officially. Nobles are expected to lead the way for their peers; they can expect to be pushed hard and, if the rewards of success are greater, they get no more slack than a commoner in the same position. Indeed, a noble officer who is underperforming is likely to be in more trouble than a commoner. The 'navy' response might be the same but there is also a perception among titled officers that the noble has let the side down.

Some nobles manage to use their influence to make the training period easier or improve their grades but the navy is wise to such corruption. While training officers are often of lower social rank than those they instruct, the commanders of training institutions tend to be of high noble rank and well able to resist the influence of a noble family. Matters tend not to be pushed too far, since the navy has a special charge – Improper Use of Noble Influence – to bring against those who try to use their family name in place of talent. Such charges are investigated under the Admiral-of-the-Fleet's Warrant and are grounds for instant dismissal and all the associated disgrace. A certain amount of social and tacit influence is inevitable and considered acceptable so long as the noble recruit meets the standards required of their post.

Noble recruits tend to select Flight or Line and, given their educational advantages, most gain entry. Some select or are assigned to specialist branches but this is the exception rather than the rule. Promotion is also, on average, faster for nobles. The navy is biased towards people 'of name' in command positions and influence does play its part – but only to a point. The navy (and the Imperium in general) believes that members of noble families have already proved their

loyalty and have competence 'in their blood'. Both of these factors refer more to the traditions upheld by the Imperial nobility and the special upbringing its scions receive than to any abstract principle.

RECRUITING

The thousands of naval recruits needed each year must come from somewhere. How they get from the streets of their home town to a weapons station of a dreadnought involves a process of selection and targeted transformation known by the innocuous name of 'recruitment and training'. The latter part of this process is very much the same for everyone but initial recruiting takes a variety of forms.

The typical potential naval officer or crewman starts their career at the local Naval Recruitment Office. Recruitment offices are very common across the Imperium, found at the starport of almost any world with a population over 10,000. They are typically small, consisting of an advertising and information area, and an interview room. The former is easily accessible to the public and filled with exciting, colourful leaflets, with promotional video footage running constantly, plus an interactive information centre allowing the potential recruit to find out more about the service – or to watch a favourite vid clip over and over again. The office is usually manned by a line or petty officer and a couple of ratings. Often these personnel are nearing the end of their service hitch and becoming a little old for active duty.

Any would-be recruit is interviewed and their Imperial ID checked to ensure they are not wanted for any Imperial crime. Local misdemeanours are not considered particularly important but major crimes or a long history of troublemaking debar the recruit from enlisting, whatever other consequences may ensue. There is an exception to this. Occasionally someone with useful skills is offered the chance of naval service rather than prison or other punishment. A small proportion of these are transformed into excellent naval personnel and go on to great things, but most sullenly serve out their time and are up on charges again and again. Close supervision is always required.

After the initial interview, the recruit is given a set of intelligence and reflex tests while the recruitment officer examines their educational history and any weapon or equipment permits. If the recruit scores well enough in the tests and has a reasonable educational background, they are told to present themselves at a receiving ship to begin training. Particularly promising



recruits are flagged for potential officer or specialist training, although more commonly candidates would be identified during the training process.

Alternatives to the local recruiting officer include recruiting ships. In most cases these are more about putting on a show that will enthuse potential recruits about signing up at their local office, but on some occasions recruits may be taken directly aboard. This is most common on low population worlds that do not have a proper recruiting office. All member worlds have a right to the offer of Imperial service made to their citizens. There is no duty to provide personnel in most cases, although one can be imposed through a complex legal process. The visit of a recruiting ship once a year satisfies this right. It rarely produces enough suitable personnel to be worth the cost but is deemed necessary so the navy complies.

Occasionally, personnel come in through a different route. A planetary navy, noble's personal force or merchant line might provide a draft of personnel to fulfil some specific need. These personnel might be given brevet rank equivalent to their current standing and slotted into the existing chain of command, but sometimes it is necessary to put some or most through the naval training process. This turns them into full members of the Imperial Navy, with formal rank and all the duties and privileges associated with it.

Receiving Ships

All facilities for orientation of new recruits are officially known as receiving ships, although some are actually orbital installations and a handful are planetside. The navy considers it important to convey to the recruit as rapidly as possible that they are no longer civilians, and this is best done by removing them completely from their former life. For most new recruits, their first experience of navy life is aboard a receiving ship. A significant proportion find the transition too uncomfortable and take advantage of one of the withdrawal dates during orientation training. Those who complete orientation usually graduate from training as effective – if as yet inexperienced – spacehands.

The process is exactly the same for officer cadets as for enlisted personnel. Everyone gets the same orientation training, which is sometimes referred to informally as 'how to navy'. During orientation, all personnel hold the rank of spacehand-recruit, although officer cadets wear a slightly different insignia. Much of this initial training is about procedures rather than skills. Recruits learn who to salute and when, and how to

respond to an order. They are taught to recognise what is a legal order and what is not, and how to navigate the difficult situation where an order is appropriate but not legal in some manner.

By the time they finish orientation training, typically after seven weeks, personnel can be relied upon to function as part of a crew without messing up absolutely everything they touch. They can operate in a vacc suit and handle basic maintenance or damage control procedures, communicate via a shipboard comm systems, find their way around a vessel, and handle weapons without inflicting self-injury. The rank of spacehand-apprentice is conferred at this point and the recruits leave the receiving ship.

The majority of receiving ships are actual space vessels, usually old warships or support vessels converted to training facilities. Some lie permanently at their moorings but the majority are capable of in-system movement and are lightly armed. Where possible, jump capability is retained. This allows the draft of recruits to be conveyed to their next location at the end of their orientation training without requiring additional transport assets. Jump-capable receiving ships typically make the best orientation platforms as they provide an authentic experience. Tasks like refuelling are handled by the crew and instructors, with recruits privileged to watch the experts in action.

At the end of orientation, new spacehand-apprentices are given a short period of leave at a suitable location before beginning the next phase of their training. This usually takes place at a naval depot or major base, and is geared towards turning orientation survivors into competent spacehands. Criteria for being washed out or leaving can vary depending upon the needs of the service, but only if expansion is underway or heavy causalities have been taken. The Imperial Navy is large enough that losses can usually be replaced from other sectors and staffing levels brought up through the usual recruitment process.

Basic Training

Basic training takes place at a depot or major base, and nominally takes 14 weeks. It is acceptable for an apprentice to drop back to the next class coming through at least once or twice. This might happen if the apprentice needs to repeat the current training module, or if their overall performance is not good enough. Two-week remedial training courses run constantly in the background, with those who succeed re-joining the main training programme where they left off. This means they might graduate two, four or even eight weeks after

the class they started with but the navy considers the delay worth it if it salvages a good recruit who struggled with a few aspects of training. There is no official stigma associated with taking the scenic route through basic, and officers know it produces a higher standard over all. However, there is some unofficial disapproval of anyone who cannot meet the standard first time around. Potential officer candidates usually find that repeating a class harms their prospects.

Advanced Training

Having completed basic training, the individual is awarded the rank of spacehand or officer cadet and is ready to begin advanced training. Basic produces personnel who can be useful to the navy. Advanced turns them into personnel who can be useful to a ship or installation. The first stage is assignment to a branch of service. The navy is receptive to the wishes of individuals, since people tend to perform better in their preferred branch. However, expediency triumphs over all other considerations. If there is a shortage of personnel in one branch, or one is forecast, this will guide decisions about assignment. Likewise, if an individual shows promise in a given role they will be guided towards it. This is usually by consultation and persuasion but the navy can assign its personnel where it needs them and will do so with no regard to their preferences if necessary.

Completion of basic training confers level 0 in all skills found on the Service Skills table: Pilot, Vacc Suit, Athletics, Gunner, Mechanic and Gun Combat. At this point the experiences and competences of naval personnel begin to diverge. Enlisted personnel are assigned to a specialist branch or Crew, whilst most officer candidates go to a specialist branch or Line. In general, the selection for officers is based upon an appraisal of leadership potential, formed during basic training. Those considered promising are given additional training on top of an already busy schedule. Some cannot handle the workload or pressure but those who can develop the habits of the career naval officer.

Upon being assigned to a branch, personnel receive advanced training. This can be quite diverse, depending on what courses are available and what the individual seems to have an aptitude for. Advanced training is represented by a roll on the appropriate skills table. For most personnel this would tend to be their branch or service skill tables, and for officers it is likely to be branch or officer tables. The skill conferred at this point can shape a Traveller's entire naval career.

For officer cadets and those selected for officer training, advanced training takes place separately from the enlisted personnel. The individual is sent to Officer Candidate School (OCS) where they are taught the rudiments of leadership and big-picture decision-making. Selection for this process, and successful completion of training, is represented by a successful Commission roll. Any enlisted Traveller who makes a successful Commission roll is assumed to attend OCS at the beginning of their next term.

After advanced training is completed, graduates join their service branch at a ship or installation. Not everyone gets what they want; tankers and supply ships need crews just as badly as cruisers and battleships, and there are always small installations that need a crewmember or two. A certain amount of mobility is possible, especially for personnel who display aptitude and work hard. Whilst the navy is well aware of the dangers of dumping second-rate personnel in supporting roles, it does not want the best of the best serving out their time as a sandcaster technician aboard a tanker – and quite probably leaving the service early out of disappointment. Thus there is some rotation of personnel through the less prestigious postings and everyone is made aware that at some point they are going to have to serve where they are needed rather than where they want.

Other Routes

The Imperial Navy gets about half its officers by this process, spotting potential and developing it during training. This has the advantage of allowing a long period of observation which might help spot long-term problems. However, there are other routes into a commission with the Imperial Navy. The first is to graduate from a naval academy. These are specialist education establishments that provide training and also a proven accreditation process. Their courses include general education but for the most part focus on giving a candidate what they need to obtain a commission in the navy.

Naval academies cannot award a commission but candidates are carefully monitored by naval liaison officers and the reputation of the institution carries a lot of weight. Graduation grants the candidate automatic acceptance into the Imperial Navy but does not guarantee a commission. However, anyone who has completed the course and done well has an excellent chance of being commissioned. If so, they undergo an abbreviated orientation and training process and enter service as an ensign.

Those who are not offered a commission or choose not to accept one have the option of joining the navy as enlisted personnel. There are many reasons for doing this, ranging from a hope that the academy might lead to selection for OCS in the normal manner, to a desire to serve as the best possible enlisted spacer. Not everyone wants to make the navy their life; some prefer to serve for a time then move on. A naval academy graduate who does not go into the navy still has a good education but their skills are biased towards a space-related career. These personnel are snapped up by merchant lines and planetary navies.

Some universities offer Reserve Naval Officer Training programmes alongside their academic courses. Graduates of any university course have an improved chance of acceptance and those who have completed reserve officer training almost always receive a commission if they choose to join the navy. Reserve officer training is mainly planetside and theoretical but command exercises are commonplace, ensuring reserve officers at least know how to lead. At least one training cruise will be undertaken, sometimes aboard a naval training vessel and less commonly aboard a ship owned by the university.

Holders of a reserve commission are sworn in like any other naval officer but have no authority unless activated and assigned to a chain of command. They wear modified insignia and can be readily identified. An active reserve officer has the same authority as any other but is unlikely to be given a sensitive position unless they are highly experienced or the need is great. A reserve officer who decides to join the navy full time will be put through a fast-track training regime and, if successful, emerges as a fully qualified regular navy officer.

The Imperial Navy runs a medical officer training programme but many of its medical officers enter by way of the reserve officer programme. By undergoing officer training alongside the already rather full schedule of a trainee medical professional, the candidate can obtain a reduction in tuition fees but there is always the prospect of being called away from a promising civilian career to serve aboard a warship or at an installation. Many medical reserve officers enter the navy for a term or two, serving as junior regular medical officers before making a decision to go 'full career' or enter civilian practice.

THE NAVY LIFE

Naval personnel normally serve terms lasting four years. The standard enlistment contract or officer's commission is for a single four-year term, although 'going career' and signing up for at least three terms is viewed favourably by the Admiralty. Personnel can of course be dismissed at any time for serious misconduct, although any period of incarceration or other punishment must be completed before discharge. Early discharge can also occur more honourably, usually for medical or compassionate reasons. An officer can also resign their commission at any time, although this can be refused if the navy particularly needs them.

Resignation might be a protest against something but more commonly it is done so that a noble can take up an important post. During Traveller creation the nature of a Traveller's departure from the service might be indicated directly by an event that leads to ejection or indirectly by the more general circumstances of their departure. For example, a Traveller who has failed multiple promotion checks might simply have become disaffected with the navy life, whilst one whose career has been extremely eventful might have become burned out. This is largely a roleplaying matter, which might have implications for the Traveller's future interactions with the navy.

Assuming they are not discharged early, Travellers can choose to leave the service at the end of any term unless they have agreed to serve a particular number of years. In some circumstances the navy can force an individual to remain in the service. This might occur in wartime or when they have a skill that is in short supply. More commonly, personnel are allowed to leave if they wish. Similarly, the navy is more than willing to have experienced personnel remain for an additional hitch. It might decline an application to re-enlist or continue in commission for health or budget reasons, but the normal practice is that personnel who want to stay can do so.

During the last few months of a term the Traveller will be asked to indicate what they wish to do. Those intending to leave the service enter a wind-down process whose length can vary depending on how long they have served. Someone who has served one or two terms might spend the last three months on administrative or staff duties, rarely doing anything important. Longer-service personnel will find themselves on recruiting or training duty for up to a

year, possibly on secondment to a university reserve officer training facility or in some similar role. Those intending to serve at least one more term are usually given a 100-day furlough, whilst those departing the navy usually receive a 30-day 'terminal leave' in which they are still members of the service and subject to new orders at need.

Major changes and periods of extended training normally take place at the beginning of a new term of service. There is always the possibility an individual might not achieve what they hoped, in which case the new term must be served anyway. For example, someone who re-enlisted because they thought they were going to transfer to a more desirable branch of service must still serve out their term if this falls through. Likewise, a promising enlisted person who fails OCS returns to the deck in their old capacity.

Any training required for the new role or ongoing development training generally takes place in the first months of a new term. Training is conducted in blocks, however, so someone might spend two years in their role as a petty officer before finally getting the advanced vacc suit skills course they were supposed to graduate with before taking up the post. This is avoided where possible but the complications of sending personnel halfway across the sector to take a course sometimes result in people being 'owed' training.

In general, however, the pattern is one of training and development at the beginning of a term followed by service aboard one ship or at one installation for the majority of the remainder. Personnel are granted at least 30 days' leave during each year of service, in addition to liberty time in friendly ports or at base. Leave is usually taken in large blocks, since travelling anywhere eats up a week for every jump. Half the leave allocation has to be taken in the year it is assigned but it is permissible to carry the other half over to create a small furlough. As a result of this, leave is normally taken in a base system which will have extensive recreation facilities. Personnel are easy to find if needed and less likely to blow off steam in an environment unused to naval personnel.

Leave must be taken between operational deployments. Personnel from a starship may receive liberty when in port but periods of more than 48 hours away from the ship are not permitted during a deployment. The consequences of the ship engaging a corsair while its electronic warfare officer is away on leave are too serious for other considerations to apply.

Navy Families

The time required to travel between star systems means that personnel would rarely, if ever, get to visit their families if they were in a different star system. For young people this is not much of a problem; the navy is their family and there is plenty of fun to be had in the recreation facilities at its bases. Those who want to settle down or who already have dependents have only one option – the family must move with the Traveller's deployment. This is not a problem for the navy, whose bases include extensive family accommodation or which can come to an arrangement with local starport operators. For the family it can mean periodic upheavals, and sometimes being stuck in a backwater. Worse, some bases have a rather toxic social scene.

It is an unfortunate reality of navy life that some bases' civilian quarter is dominated by social climbers or members of a high-ranking family. Partners who become bored might decide they have nothing better to do than bully the families of lower-ranking officers, and all navy administrators are used to having to deal with people who think 'navy spouse' is actually a rank. On the whole, the navy manages these communities well so despite the odd problem, living in the civilian quarter is generally more good than bad. The schools are good, cost of living is low considering the quality of accommodation and there are opportunities for social advancement. With so many naval officers being nobles, an ambitious family can do well for themselves by making the right friends. The civilian social scene can be a whirl of glamorous parties and networking with the right people, or a cesspit of backstabbing and social climbing. Usually, it is a bit of both.

The navy is generous to those who have lost a family member under honourable circumstances. Pensions are decent and there is a support network – a formal one and often a more effective informal circle of compassionate friends who might have experienced the same thing. The navy would prefer that bereaved families move away after a suitable period, so as not to remind everyone about the reality of losses in action. However, it does not force anyone out. The partner of a crewmember or officer honourably killed or rendered unfit for service will be looked after to their dying day. Someone who is dishonourably discharged forfeits this, which acts as a quiet deterrent to those who might otherwise play fast and loose with the rules.

SPECIALIST SERVICE

The majority of naval personnel crew starships or work in the bureaucracy that supports them. However, a Traveller might be given a specialist assignment or volunteer for special duty. This can lead to an unusual skillset, which combined with a record for performing well in a variety of roles can lead to promotion or a position of influence. A Traveller's participation in special duty is usually indicated by the results of the Event table, although some Mishaps are also explained by special duty or unusual circumstances.

Training and Education

The navy provides constant training to its personnel, mostly in the basics of how to operate aboard a starship, form teams and deal with common hazards. This is routine training and a constant of navy life. Developmental training is provided to those who require enhanced skills or capabilities. In addition, the navy provides education for a variety of purposes. The difference between training and education is that training is focused towards a particular goal and usually connected with a specific skillset, whereas education is more general and usually optional. Some personnel take education courses in the hope of meeting requirements for promotion whilst others are thinking about their next career after leaving the navy or simply avoiding boredom on a long cruise.

Personnel might go on a training course or, if they have the right skills, teach one. For enlisted personnel this usually means secondment to a training institution or ship, assisting officers in delivering training or shepherding confused recruits. They might also be assigned to a warship as a trainer, delivering routine and specific training during a deployment. Another possibility is acting as an 'assistant' to a group of officer cadets. This does involve actually doing what they say but is mostly a courtesy to keep them from making stupid mistakes. An experienced petty officer knows far more about the navy than any cadet and those who realise their assistants are actually there to teach them tend to do better than those who do not.

Security

Detachment to perform security-related work can lead to a variety of places. In most cases it means little more than receiving advanced training in control and restraint techniques or weapons handling, or in skills related to damage control operations. Less commonly, personnel may be assigned to the security staff of a sensitive installation. Whilst detachments

of Imperial Marines are present at most installations, a lot of routine security work is undertaken by naval personnel. Anyone can be assigned to 'shore patrol' when a vessel is in port but those with advanced training in security work are preferred.

A security assignment for an enlisted person will probably be this sort of shipboard or installation security, either overtly as a guard or under the guise of doing some other job. Personnel may also be assigned to a prison ship or installation, or as naval police. Officers might lead these activities but could also be assigned an investigative role. Cyber-security is not the exclusive province of officers, but most low-ranking enlisted personnel fulfil a supporting role only. The security of sensitive systems is entrusted to experienced petty officers and commissioned officers only.

The Naval Regiment

The naval regiment has its origins in the naval landing parties deployed by the Sylean Federation. It is considered something of an oddity but has resisted all attempts to abolish it. Essentially the naval regiment is an element of the Imperial Army which is provided by the navy. Its personnel have more in common with army ground-pounders than the Imperial Marines, and indeed, shipboard troops are provided by the Marines who are extensively trained for the role, whilst the naval regiment serves in a more conventional capacity.

The naval regiment is mostly composed of light infantry, all trained for vacc suit operations. Its support elements include artillery and electronic warfare units but it has few vehicles. Its intended role is the protection of installations requiring vacc-trained personnel; the marines would be sent to capture such a place and could of course defend it, but their training and equipment is geared towards short-term operations.

Naval regiment units normally serve under army command but can be loaned to the navy at need. Having received the same basic training as all other naval personnel, they can interoperate seamlessly and be 'borrowed' to fulfil shipboard tasks. Most enlisted personnel in the regiment are there for a single term, often returning to the navy with a new perspective on joint navy-army operations. Officers may do the same but the senior commanders of a unit will be career naval regiment soldiers who wear naval uniform and hold naval rank.

The regiment has been described as simply an extension of the navy's ego, muscling in on the army's remit. However, it does have its uses. In addition to providing hostile-environment units, it is a tool for mutual understanding and liaison between navy and ground forces, and can be used to circumvent certain legal technicalities. Although under army command, the naval regiment can deploy under naval jurisdiction, allowing Imperial authorities to get boots on the ground without going through the usual army deployment process. There are occasions when seeing Imperial Army uniforms might cause a public reaction whereas the presence of naval personnel is nothing out of the ordinary.

Naval Intelligence

Naval Intelligence is a huge organisation, which has at times been accused of considering itself a separate service. It is the foremost intelligence service in the Imperium, with a remit to ensure the security of the Imperium from both internal and external threats. As such, naval intelligence is interested in far more than just naval matters. It provides information to the political leadership of the Imperium on all subjects and acts directly when required. Naval Intelligence is subdivided into three offices: Operations, Observation and Enforcement. Each has command structures at Imperium, domain, sector and subsector levels.

The Operations Office contains perhaps 70% of all naval intelligence personnel. Its function is to handle the mundane parts of intelligence work – information collation and distribution, analysis, staff briefings, liaison and so on. This represents the bulk of intelligence operations and the work is vital to the security of the Imperium. More critical information has been deduced through careful observation of non-secret actions, monitoring of communications and other highly mundane activity than by daring spies, although the latter are more glamorous.

The Observation Office contains about 25% of naval intelligence personnel. Some are sleeper agents, living out normal lives on member worlds or working for corporations within and outside the Imperial borders. Other personnel are members of embassy staff or otherwise positioned to collect information whilst engaging in legitimate activities. This surveillance of foreign states may be open and overt or under cover of normal diplomatic activity. Only legitimate overt surveillance is undertaken in Zhodani space, for obvious reasons.

The main function of the Observation Office is to warn the Imperium of unrest on member worlds and identify ways that the trouble can be headed off with a minimum of fuss. This may take the form of a sudden arrest or the precise arrival of an intervention force; the information gathered by the Observation officer is of similar value in either case. The contribution of this office to the stability of the Imperium is incalculable. The Observation Office also attempts to uncover and eliminate, expel or 'turn' agents of foreign powers.

The smallest office of Naval Intelligence is the Enforcement Office. Its personnel are screened even more closely and selected for intelligence and loyalty. Popular entertainment suggests that Enforcement personnel spend most of their time assassinating enemy notables or sneaking about installations that officially do not exist. 'Black ops' do happen from time-to-time but for the most part Enforcement personnel operate overtly – although that is not the same as being visible. Operations are normally conducted in a discreet manner in the hope they are not noticed. Ideally, nobody ever realises anything has happened.

Travellers may interact with Naval Intelligence in a variety of ways, perhaps without realising it. A secondment to diplomatic or staff duty might actually be with Naval Intelligence – many of the personnel they work with do not know it. At other times a Traveller might be co-opted into an operation. This might be something entirely mundane, such as being added to the escort detail of a document courier or piloting a shuttle for intelligence personnel. An officer might suddenly be given the job of intelligence officer aboard a ship that lacks one, or enlisted personnel could be assigned to assist. This essentially means doing the intelligence job without transferring to Naval Intelligence.

Attaché/Diplomatic Duty

The Imperial Navy is a political tool as well as a war machine. It must be able to use diplomacy as well as meson guns and it is the attaché corps that specialises in that softly-with-a-big-stick role. The officers of the Attaché Corps are trained diplomats, while enlisted personnel are trained as assistants and staff members. All personnel are carefully selected and vetted before commencing their training. The corps operates the many embassies maintained by the Imperium on member worlds and in foreign states. The Attaché Corps also provides naval officers as liaison or advisors to friendly powers and colonial navies. Many such are in fact ordinary naval officers on special duty with the Attaché Corps, although liaison officers tend to be experienced diplomats and may in fact be permanent members of the corps.

The Attaché Corps has few personnel with the skills required to crew a warship, although there are some personnel who have changed career paths at some point. The Attaché Corps maintains a fleet of couriers and diplomatic transport vessels manned by personnel on secondment from their normal duties. Most Travellers given special duty with the corps will serve in this role, essentially performing the same tasks as usual but in a different context. They may pick up diplomatic skills along the way or receive training in how not to offend visiting dignitaries.

The Frozen Watch

Some warships maintain a ‘frozen watch’ of personnel in low berths. In the event of serious crew losses these personnel can be reactivated as replacements. The practice is less common than it once was, for a variety of reasons. Crew in suspended animation are away from home and family, and must be paid for their time. They could, after all, become casualties without being able to do anything about it. Besides, crewmembers who are not active are not getting anything done. The navy feels it is better to have everyone awake and working if at all possible, so frozen watches are rarely more than a skeleton crew and personnel rarely assigned to frozen watch duty for more than one mission in an entire term.

The navy does have a percentage of personnel who are willing to remain frozen for several years at a time. Reasons vary, usually involving a desire to let some incident fall out of common memory or to stay away from a rival. Seniority is not gained during time frozen, so this is not a clever route to promotion. It is, however, sometimes necessary. All naval personnel agree as part of their contract to be assigned to the frozen watch when it is their turn and the navy for its part agrees to ensure they wake healthy as soon as possible.

Specialist and Cross Training

The navy sometimes cross trains personnel in the skills of a different branch, for example a gunnery rating may be cross trained in basic engineering operations. This has three main benefits. Firstly, co-operation is improved by understanding what challenges other departments face, and secondly cross trained personnel are often more flexible in their approach to problems. More importantly, cross trained personnel can provide replacements for casualties. Cross training greatly facilitates movement from one branch to another.

Specialist school is normally attended by enlisted personnel, who receive intensive instruction in one or two skills relevant to their shipboard role or one they may be moving into. For officers, courses may be quite academic. Having already been trained to repair gravitic systems, an officer might be offered a chance to work towards a university degree in the field. In these cases specialist training may be undertaken in conjunction with a civilian university. The same applies to more mundane fields. For example, navy chefs have their own specialist training programme which includes a stint in an upmarket civilian restaurant.

Officers have two additional options regarding specialist training: command college and staff college. Officers usually attend only one or the other, except when a starship commander moves to a staff post or becomes a flag officer. Courses are tailored at different levels; lieutenants undergo different training to potential captains. However, the intention is the same, to prepare the officer for a new level of responsibility. Command college attendees study tactics, strategy and leadership skills at the appropriate level – commanding a destroyer is not the same as commanding the lead ship in a four-vessel battleship squadron. Staff college attendees train in liaison, strategy and administration, along with whatever additional fields their new role will require.

The existence of staff and command colleges makes nonsense of the popular-fiction idea that a heroic officer can rise from ensign to commanding a cruiser in a couple of years. The level of knowledge and depth of experience required would make such a hero a liability. Indeed, one role of the colleges is to instil a sense of humility – officers need to understand how much they do not yet know if they are to be effective and reliable in their new role.

Ceremonial Duty

Ceremonial duty is highly prestigious but can also be deathly boring. Parades, ceremonial guard detachments and the like are accompanied by endless cleaning and polishing of equipment. There are some benefits, however. It is possible to make good contacts, even as an enlisted crewmember, and since no commander will risk embarrassing the service by sending a buffoon on ceremonial duty the fact a Traveller has been so assigned is an indication they are trusted.

Actual duties range from standing watch over a memorial to parading for visiting dignitaries and are typically at a local level. It is rare for personnel to be sent out of their current subsector and fewer still leave the sector. However, some make the journey to Capital to join the Imperial Bodyguard Squadrons, a much-sought-after assignment, despite the endless polishing and cleaning that goes with it. Archdukes and sector admirals maintain smaller numbers of ceremonial vessels for purposes of impressing foreign and member world dignitaries.

Ceremonial duty is not a non-combat assignment. The showcase ships of the navy pride themselves on being the most efficient and effective in the fleet. Similarly, ceremonial guards and escorts are also bodyguards, and may carry loaded weapons in places they would not normally be permitted. Ceremonial duty is assigned to the best the navy has and it is a matter of pride that they stay the best or get even better during their stint.

Secondment

Naval personnel may be seconded to service with the Marine Corps, Colonial Fleet, system squadrons, merchant corporations or friendly powers. In this capacity, most fulfil the same role as in the navy, providing expertise to a friendly service or helping with on-the-job training. Officers sometimes act as advisors or liaison officers, in which case they are termed attachés. There is no special training for this role, although an attaché's experience usually counts positively when the next assignment comes along.

Secondment sometimes occurs internally as well. Personnel might be 'loaned' from a base to fill a warship's complement, with some given acting or brevet rank whilst in their new post. Secondment on a large scale plays hell with the navy's administration system, with pay and leave allocations sometimes taking months or years to catch up with a seconded officer or crewmember. Promising careers have foundered on the rocks of secondment. An officer might miss a scheduled training assignment due to being needed elsewhere and thus not be eligible for promotion when expected. They are now 'behind the curve' and may never reach the heights they or the navy expected. The navy does its best to resolve this sort of mess but unfortunately the needs of the service come first.

Ship and base commanders asked for a contingent of 'secondmenters' rarely detach their best personnel, making this a rather poor way to fill out a crew. It may be the only way, however. Those sent over in response to a request are also unlikely to be the worst available. The commanding officer of the base or ship sending personnel might discreetly get rid of a few no-hoppers or troublemakers but taking advantage of the situation will bring official displeasure as it weakens the receiving unit.

Staff Duty

Assignment to one of the branches of the naval staff can be career-making or bring one to a halt. It can be an exciting opportunity or a boring dead end. It is often used to get useless personnel out of positions where they can harm the navy and it is always possible that very skilled and dedicated personnel might be ruined by serving under or with such persons. However, the staff is absolutely necessary and most personnel assigned to it are good at what they do.

'Staff duty' for most personnel refers to an assignment to the personal staff of a commodore or admiral. Enlisted personnel are usually clerks and runners, occasionally pilots or specialists. Officers usually have a more directly supporting role and are referred to as aides or flag-lieutenants (flag-captain for those of that rank) if operating closely with the flag officer. Aides are often sent off to do important work or directly liaise with another admiral or noble, making this an excellent way to develop contacts. In some cases a noble flag-lieutenant might be sent to the court of a family member or have an informal meeting with 'uncle Jimmi' who just happens to be a sector admiral. Back channels diplomacy using noble contacts is one of the ways the navy gets things done, so it is no surprise that noble families produce so many staff officers.

At any given time there are thousands of staff officers crossing and re-crossing Imperial space on errands that may take months or even years to complete. They may travel aboard regular couriers or be given a small ship, or sometimes have to slum it aboard a vessel headed to join a new command. The navy has even been known to charter liners for staff work when demand was high. The cost of all this activity is phenomenal and it produces no immediate fighting-navy benefit. However, without it the navy would grind to a halt in months.

In addition to assignment as an aide to a senior officer, staff assignments include a variety of other roles:

Administrative and Legal: Perhaps the dullest branch of staff work but utterly necessary. Administrative personnel deal with pay and related matters, and keep track of all the routine information needed to run the fleet. Legal experts mainly advise on how Imperial High Law interacts with local legislation and similar questions, but are also responsible for prosecuting – and defending – naval personnel accused of crimes. Legal experts have to deal with endless accusations that the navy violated some innocent merchant captain's rights by boarding in search of contraband. Both arms of this branch advise treaty-makers, with far-reaching consequences in many cases. Major treaties have at times been derailed by cost considerations, so the navy is ever mindful of the administrative side of political and military actions.

Board of Ordnance: A small body is maintained by each sector fleet to discuss and advise on the nature of weapons and other systems that the fleet needs to maintain its technological edge. A larger staff is maintained at the senior-command level of the whole navy. The Board of Ordnance makes procurement decisions and deals with major issues such as accelerating a maintenance or overhaul programme to ensure the fleet remains effective.

Courier: Most of the navy's courier vessels are commanded by Line lieutenants assigned to one of the many fleets. This is often the first command an officer receives and is not really independent as the ship tends to bounce between installations and squadrons commanded by senior officers. Information of a highly sensitive nature is placed in the charge of a naval courier; a reliable staff officer trusted with the protection of their charge and its safe delivery. Such an officer may travel by way of normal courier operations, or use other means to reach their destination. A staff courier will not be in command of the vessel, although they may be in command of the mission. This means that a request from a staff sublieutenant of a courier for a destroyer – commanded by a lieutenant commander – to change destination will usually be honoured. It is, however, a request and not an order. As always, the ship's commanding officer has ultimate responsibility for its actions.

Liaison: Officers may find themselves acting as naval liaison with local governments, army units or Imperial 'shore' installations, the latter including orbital facilities such as starports or bases. Other liaison duties include membership of the development boards of weapons companies and as advisors to shipping concerns.

Logistics: The Naval Logistics Corps is absolutely vital to the operation of the navy and thus the defence of the Imperium. Because of its humdrum reputation, the Logistics Corps attracts few volunteers and has trouble getting good personnel. To offset this, the Admiralty has recently stated that it views a stint in the Logistics Corps as a plus for any prospective flag officer. The result has been an upturn in the number of ambitious young officers wanting to make their mark on the cosmos by ensuring resupply ships full of rations, uniforms and electronic spares get where they are going on time.

Public Relations and Recruitment: The navy needs to maintain a positive image and attract good-quality recruits. The personnel of this department see to it that naval service is a popular career choice. Not merely the preserve of ageing veterans, the PR&R corps has more than its share of highly-decorated, attractive, dashing young officers and nobles crewing recruitment offices or undertaking recruiting sweeps aboard shiny new ships.

Research and Development: Some new technology is developed in-house, although most comes from private companies. R&D officers liaise with those private concerns, advising on suitable modifications or changing navy requirements and seeing to it that adequate security is maintained. R&D officers usually accompany new ships on their trials, acting as liaison between builders and the navy. Inside this department are specialist groups working on 'black-sky' technologies or trying to figure out how foreign devices work. Ancients artefacts obtained by the navy find their way to R&D facilities sooner or later.

Tactical Studies Units: The Imperial Navy maintains several think tanks devoted to developing new tactics and predicting enemy responses. These TSUs take the best and the brightest from the naval academies and serving officers may attend one on secondment during their career.

The Staff Pool: The Staff Pool is a collection of unassigned staff officers, usually of ranks between sublieutenant and lieutenant commander. These officers, sometimes known as the ‘odd-job squad’, can be assigned any necessary task by fleet command. They may act as couriers, clerks, emergency replacement officers for ships of the fleet, liaison officers, personal envoys or extra training officers. The staff pool exists simply to ensure that if something needs doing, there is a reliable someone on hand to do it.

MEDALS AND REWARDS

According to the recruiting vids, serving in the navy is its own reward and this is actually true to some extent. It is a steady job with good career advancement, and medical and pension benefits. It is an excellent source of references for future employment and teaches skills that can make former naval personnel highly desirable in the workplace. In return, the navy expects hard work and dedication, honourable conduct and possibly sacrifice. Meeting these demands earns the crewmember or officer standard rewards in the form of medals and sometimes special insignia. When an individual goes above and beyond the already high standards of the service, additional rewards may be merited.

The most basic decorations, awarded automatically, are service ribbons. These are granted for service with a particular fleet and in a particular type of ship, and form part of the ‘fruit salad’ of medal ribbons worn with formal uniform. Two years’ service is normally required to be eligible, although service ribbons may be awarded to anyone who participated in a particularly notable action no matter how long they were actually aboard the vessel in question. For example, an officer serving as a staff courier with the Old Expanses Fleet would be eligible for the Old Expanses Fleet Medal but not for any of the fighting-ship service medals as they are not assigned to one. However, if they happen to be delivering despatches to a cruiser when it earns glory fighting off a horde of raiders the staff officer may be awarded the Cruiser Service Medal if they contributed something to the victory. Whether or not such awards are made unfortunately depends a lot on who pushes for it. Nobles and friends of nobles tend to collect more of these peripheral awards than commoners.

Other standard medals include the Good Conduct Medal, awarded to enlisted personnel who get through a whole term without getting into trouble and generally create the impression of being a good and reliable crewmember. It is not awarded to officers, for whom good conduct is expected. Medals commemorating a particular campaign and occasionally a specific battle are awarded to everyone who took part in any capacity whatsoever. A chef at the support base from which the final assault on Terra was launched was part of the campaign and will receive the medal, although many recipients might question if they are quite as deserving as the gunners aboard front-line dreadnoughts. Those who serve five terms – usually 20 years – receive the Long Service Medal.

For most personnel, their ‘fruit salad’ will be quite similar. Someone who knows how to read medal ribbons can quickly see where the individual has served, what kind of ships they were aboard and whether they took part in any notable campaigns or battles. Combat ribbons are awarded to anyone who was aboard a ship that saw action, with the exception of command officers who instead receive a specific medal known as a command cluster. Medals for gallantry stand out from these relatively routine medals, even when just the ribbons are being displayed, as they are less common.

Non-Combat Decorations

The navy awards decorations for service outside combat or in a supporting role. These include the Damage Control Medal, awarded to those instrumental in preventing the loss of a ship – sometimes to combat damage but more commonly other causes. Those who tackle critical combat damage under fire would more commonly receive an award for valour. Likewise, the Navy Lifesaving Medal is awarded to those who courageously act to preserve lives and safety outside of combat. It might be awarded for actions under fire but these are more commonly rewarded with a medal for gallantry.

Those who excel in other areas, possibly but not usually in combat, may receive the Meritorious Performance of Duties Medal. This is typically awarded for good, solid service over a long period but can be used to reward a moment of brilliance during a crisis. Exactly what it is awarded for can vary a lot. An epic spacewalk to unjam the main communications antenna of a fleet flagship, 12 years of high performance as an instructor, or a particularly brilliant solution to a difficult jump plot might all qualify. The MPD is also awarded for impressive service in areas the navy does not want to disclose, such as intelligence work or research and development of sensitive systems. There are some quite obscure or very specific non-combat decorations including the Navy Staff Medal which rewards excellent – but probably quite boring – staff and administrative duties. The forensic accountant who provided evidence of a pirate haven might get the NSM whilst those who eliminated it qualify for combat-related decorations.

Mention in Despatches

The lowest form of reward for gallantry is a mention in despatches. This might seem trivial to an outsider but to those who understand the navy it is a great honour. When the commander of an operation sends their report back to headquarters, certain specific individuals are named along with a note on what they did. This becomes a part – albeit a small one – of the history of the Imperial Navy. It is impressive to be able to say ‘I was at the Battle of Two Suns’ but ‘I am named in the official records of that battle’ garners a great deal more respect. Mentions in despatches are recorded in a Traveller’s service record and may influence decisions about promotion or requests for service.

Exemplary Service Medal

The Exemplary Service Medal generally accompanies an award for outstanding performance on a particular occasion. Where everyone who was at the Battle of Two Suns gets a decoration for being in that notable action, someone who contributed above what is expected might get the ESM. This usually involves valour under fire or in some other dangerous situation but an ESM can be awarded for supporting actions. The logistics staff who made sure there were enough missiles and repair components might not have been in danger but their contribution was vital to success, so they would be eligible for an ESM as well as the standard campaign ribbon.

Meritorious Conduct Under Fire

The MCUF is awarded for heroism or exemplary actions whilst in direct danger. It may be awarded on multiple occasions and is considered to have three classes. The MCUF Third Class signifies the recipient has received it on one to five occasions. MCUF Second class signifies six to ten receipts, and MCUF First Class signifies eleven or more awards.

Medal for Conspicuous Gallantry

The MCG is awarded for outstanding acts of heroism. Where the MCUF can be awarded in situations where an individual performed to an excellent level whilst there was only slight danger, the MCG requires a serious to extreme threat. It is awarded in three classes following the same system as the MCUF. The holder of an MCG is considered to possess social precedence just below that of a knight, although there is no associated title or stipend.

Starburst for Extreme Heroism

The Starburst for Extreme Heroism is only awarded for the most extreme acts of gallantry and is usually posthumous. Nevertheless it is possible to win more than one SEH. Unlike other medals, which gain alterations to the ribbon or clasp to signify multiple awards, each award of the Starburst for Extreme Heroism is always a new medal. It is not worn on the usual medals board but on a ribbon around the neck. Officially, the holder of an SEH ranks above an MCG holder and below a knight in terms of social precedence, but often specific individuals are held in particularly high regard, with an unofficial level of influence and prestige exceeding most minor nobility. A commissioned officer who receives the SEH gets a modified version known as the Starburst for Extreme Heroism With Diamonds.

Wound Badge

Anyone wounded in action against the enemy is eligible for a Wound Badge. Accidents do not count, however sometimes a non-combat incident is sufficiently dangerous that those involved may receive a special award. The decoration is unofficially known as a Purple Heart after an ancient Terran tradition. There is no special prestige associated with a Wound Badge, although it does recognise the sacrifice the individual has made. Particularly reckless or unlucky personnel can receive the Wound Badge in grades similar to the gallantry medals.



Non-Combat Decorations



Mention in Despatches



Exemplary Service Medal



Meritorious Conduct Under Fire



Medal for Conspicuous Gallantry



Starburst for Extreme Heroism



Wound Badge

LEAVING THE SERVICE

Personnel leaving the service receive a portfolio of references and testimonials, and a place on the Reserve List in addition to whatever benefits and bonuses they earned during their period of service. Most go straight into a job in a merchant fleet, a starport authority or civilian corporation, or take up the duties of an Imperial noble. Some travel for a while before settling down. Some miss the navy life and re-enlist at their old grade. This option remains open for personnel under 60 years of age, for one year per four-year term of service. Honourably discharged personnel are entitled to wear naval uniform at formal events, although their insignia is altered to a hollow Sunburst to show their retired status.

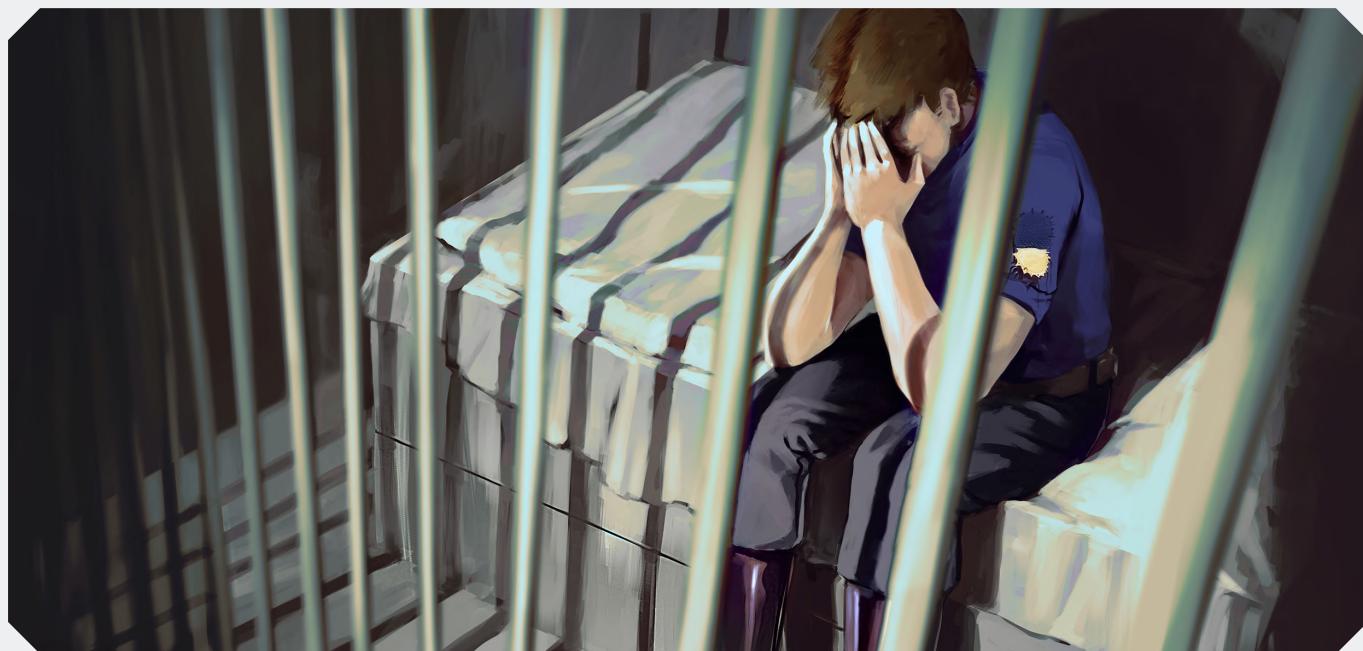
Personnel may be discharged at other times than the end of a service. A dishonourable discharge may occur at any time in a naval career, usually following a period of punitive incarceration in a naval prison. A Traveller who is dishonourably discharged is stripped of all naval rank and not entered on the Reserve List. This process is referred to as 'cashiering' for officers. A cashiered officer is disgraced and may not wear naval uniform at formal events, although some do anyway. Cashiered officers sometimes enter Colonial Fleet or client state service.

A medical discharge can be earned at any time. Many seriously injured personnel return to active duty after a period of excellent care at a base hospital. However, major injuries can be traumatic, and the navy recognises that many personnel will no longer want

to serve, even if their physical recovery is total. Some injuries are too severe for them to remain in service and medical discharge is mandatory in this case. This is also true where someone is judged to be mentally unsuited to navy service.

A special discharge can be granted for various reasons, always on a case-by-case basis. Normally this occurs when an officer is suddenly required to take up their duties as a noble. Other special discharges are granted upon request for personal reasons, such as becoming a single parent or when an officer resigns their commission to take up a civilian post. In the latter case, the officer retains uniform privileges but cannot reenlist in the Imperial Navy.

Personnel leaving the navy receive a travel pass sufficient to get them home or some other chosen destination. This takes the form of a voucher good for a varying number of middle passages, assigned at time of mustering out. The navy is not ungenerous about this but is not willing to grant months of free travel to someone who does not have far to go. Typically, the vouchers are sufficient to get the Traveller to the destination they state in their mustering out paperwork, and are good for a year. If something goes wrong, the Traveller will be able to get assistance from any naval installation. This is generally granted without too many questions asked, as the navy cannot afford a reputation for being stingy with those who have given it years of service. On the other hand, a dishonourable discharge might be accompanied by deportation to the nearest civilian starport and nothing more.



NAVAL PROCEDURES

Naval regulations require that operations be carried out in a certain way. These procedures are intended to prevent pointless accidents or promote efficiency, learned by recruits and constantly refreshed.

Emergencies may cause variation from the norm but the main point of established procedure is that personnel know what to do when there is no time to stop and think.

TERMS OF ADDRESS

Spacehands of all grades are often referred to as 'Crewmember...' rather than by their actual grade, at least by their superiors. Formal rank is rarely used except during ceremonial occasions. What they call one another when officers are not present depends upon personal relationships and is usually a nickname or just the crewmember's forename. All ranks and terms of address are non-gender-specific.

Petty officers below the rank of master chief petty officer are not called 'sir' by subordinates. Formally, they are addressed as 'petty officer' or 'chief petty officer'. The latter is usually shortened to 'chief' in less formal situations. Master chiefs are called 'sir' by their juniors, and extended the 'mister' courtesy by officers. Typically officers address chief petty officers and above by forename only if a good enough working relationship exists. Enlisted personnel on good terms with their petty officers sometimes use informal honorifics. 'Boss' is not uncommon for a team or watch leader.

It is always safe to address a superior officer using the non-gender-specific 'sir'. Indeed, there is a certain kind of rating who tries to say nothing other than that single word to all officers. The word can have all manner of meanings in this case. Officers are often referred to as 'Mister...' by both superiors and subordinates. Again this term is non-gender-specific in naval use. Aboard some ships, the use of an officer's rank title implies disapproval – from above or below – while 'Mister' is respectfully friendly and approving. Both forms are actually correct in Imperial Navy usage.

Crewmembers with a specific job may be referred to by a formal or informal title. These are usually used by superiors or those who think they are out of earshot. The ship's senior medic, whatever their actual rank, is 'doc' or 'doctor'. The gunnery officer is 'guns', communications operators are by ancient tradition 'sparks' and security chiefs are often formally addressed as 'master-at-arms' even if they do not formally hold that position,. The captain is addressed as 'sir,' or 'captain'. 'Skipper' is a nickname usually reserved for the captain's absence; to most professional navy officers it smacks too much of beat-up merchant auxiliaries with reservist crews to be properly respectful.

Noble forms of address are not used within a crew, except as an insult to a junior. Referring to Sir Angus instead of Ensign McCalley implies that he is not fit to be addressed as a real navy officer but is only here thanks to family connections. Of course, guests, diplomats and admirals are addressed by their noble titles. Off duty or in port, naval or noble rank can be used according to preference and situation.

ORDERS

There are orders and there are orders. The difference between different types and levels of orders is drilled into personnel during their training until understanding the hierarchy of orders and regulations is second nature. This is important, since personnel must sometimes choose between conflicting orders. One overriding factor is that personnel are expected to obey any legal order instantly, without question – although sometimes explanation is necessary. At the same time, personnel are not required to comply with illegal orders or those that conflict with the crewmember's conscience. Obeying orders is never a legal defence in cases of crime or atrocity.

The navy has many standing orders, which personnel are expected to obey at all times or when the situation arises, depending upon the nature of the order. Most standing orders have been in place for centuries and concern matters such as maintaining combat readiness or shipboard integrity. Such orders form the bulk of accepted navy practice and are simply part of daily life for personnel.

Standing orders are also issued to a particular ship, squadron, or fleet for the duration of a mission, war, operation or deployment. They detail what to do if certain types of vessel or activity are encountered, or circumstances requiring instant recall to base. Another standing order sometimes issued is along the lines of 'if a certain event occurs or a certain signal is received, open the sealed orders in the captain's safe and execute immediately'.

Mission orders are – usually – given to the ship's captain before the vessel leaves port and detail what the ship is to do, in general and then specifically. Sometimes the ship may carry one or more sets of sealed orders which are to be opened only at a certain time or when certain circumstances occur. The contents are not known to anyone aboard the vessel until that time.

Orders are issued by superiors in order to carry out the ship's functions. Subordinates are allowed to ask for clarification of an order if necessary, and to question or protest the order under some circumstances. However, they are always expected to acknowledge the order and carry it out unless it is countermanded. Acknowledgement takes various forms. 'Aye sir,' or 'aye, aye sir' is common. Just saying 'sir', implies disapproval of the order, or perhaps great stress. Critical orders are often repeated back with confirmation, such as 'initiate jump sequence. Aye, captain.'

Most orders are commonplace and phrased as polite requests. Stress or wartime might make a captain say 'do this' instead of 'would you mind doing such-and-such?' but in practice both are orders and must be obeyed. A more forceful order would be phrased as 'do this... that's an order.' This implies that the subordinate will be in big trouble if they query the order or hang around. This form is used to overrule the protest of a specialist officer.

A third form of order is sometimes issued in the event of hesitation, protest, or defiance from a subordinate. 'That is a direct order...' means that if the recipient is capable of basic metabolic functions, they had damn well better obey, right now. The only way out of obeying such an order is to be dead or hospitalised, or to directly refuse on the grounds that the order is illegal. In that case the order's recipient is usually arrested and must explain their actions to a captain's inquiry or a full court martial. Sometimes the recipient is shot out of hand, although this always results in an inquiry which may find the officer guilty of murder – or might rule that the action was legal and made necessary

by circumstances. A crewmember who is given an order that seems unwise may query or protest it. If the superior insists, the subordinate is allowed to state that they are obeying 'under protest'. Officers are more likely to protest than enlisted personnel. Protesting does not make it acceptable to obey illegal orders.

Orders can be illegal for several reasons. Most commonly, this is because they come from outside the chain of command. For example, a branch head admiral or sector duke cannot issue orders to Imperial warships. Recommendations and requests can be made; influence is often brought to bear. But these individuals are not in the chain of command and their orders are not legal. They may be complied with if the ship's captain thinks that is the correct course of action but this is on the captain's own authority and not that of the officer issuing the order.

Within a ship, the chain of command also applies. Technically, orders issued to personnel of a different branch may not be legal. Those coming from the ship's captain and executive officer are always legal in this context but the ship's engineering officer is not allowed to call ratings away from gunnery duties. However, some orders, while technically not legal, make sufficient sense that anyone not obeying them would be guilty of obstructing the running of the vessel. So, when an ensign from medical rushes into the aft gunroom and orders the petty officer in command there to form a firefighting party, the petty officer can technically refuse the order as illegal. The petty officer would be in real trouble for it, assuming anyone survived the fire. Any order backed by an Imperial Warrant is considered legal in this context.

The other form of illegal order is rather different. There are some actions that cannot and must not be countenanced, no matter who issues the order. It is never legal to massacre prisoners or shoot up civilian targets for the fun of it. Personnel are required to refuse such orders and report the person who issued them to the authorities no matter how many Imperial Warrants they may have.

NAVAL DISCIPLINE

All naval personnel are subject to naval discipline under the Imperial Articles of War. A system of infractions and standard punishments are laid down and cover most situations. Minor infractions are dealt with by the officer of the watch, who may choose to refer the incident to the captain or base commander but will usually hear the case and decide upon

punishment on their own authority. There is no trial as such; miscreants are presumed guilty if the shore patrol, the marines, or watch commander says they are. Punishments usually take the form of confinement in quarters or the brig, a fine, or assignment to a punishment detail carrying out unpleasant work. This may be necessary or simply make-work. Laxness in routine duties, excessively rowdy behaviour while on shore leave and other minor infractions of naval regulations are dealt with in this way.

More serious incidents, or those where there is real doubt as to blame and culpability, are dealt with by the captain or base commander. Incidents requiring the captain's personal attention include fighting with personnel from the same or another ship, laxness that might endanger the vessel or impair combat readiness, and any crime requiring a full court-martial. The captain can demote a member of their own crew or impose longer periods of confinement or punitive detail. These actions will be investigated when the ship returns to port and are usually confirmed as correct as a matter of course.

In times of severe need, the commanding officer of a base or ship can dispense summary justice – up to and including death. The commander will have to justify their actions to a court of inquiry and may face murder charges. The only circumstance likely to be accepted by the court is when there is a clear danger that a highly dangerous prisoner may escape and cause further harm. Shooting a mutineer in the course of suppressing an attempt to take over the ship is acceptable. Executing captured mutineers is not, unless there is no way to prevent them from immediately repeating the attempt.

Court of Inquiry and Court-Martial

Facing a court-martial is not a punishment in and of itself, although many laymen believe differently. In fact the term simply means 'military court'. It is the right of any officer – and enlisted personnel under some circumstances – to request a court-martial. This is sometimes done when an officer feels they have been unfairly treated or punished. However, it can be unwise, since a court can impose far worse punishments than a ship's captain. A court may dismiss an officer from the service or to be handed over to the civilian authorities, although normally the navy deals with its own. Courts-martial differ from civilian courts in that they can consider the wider implications of their verdict. Where a civilian

proceeding has to sentence or acquit on the strength of the evidence alone, a court martial must consider the implications for the navy and may impose a sentence based on the effect of letting the accused get away with something not technically illegal but unacceptable by the service.

Serious crimes such as treason, rape, murder, desertion, embezzlement or theft of navy property are always grounds for a full court-martial. Such a court can impose any punishment allowed under Imperial Law. The defendant is appointed an advocate, usually a naval officer with special training in naval and Imperial law. There is no jury. Guilt and punishment are decided by a panel of three senior officers. In many cases, the court-martial simply rubber-stamps the recommendation of the miscreant's commanding officer. Other trials are more lengthy but never go on for months as a civilian case might.

Many incidents are followed by a court of inquiry. This is a special form of court-martial, which investigates an incident and the way it was handled. Blame may be apportioned, commendations issued or the whole matter quietly swept under a handy rug. The difference between the two is that a court-martial revolves around accusations that an individual did or did not take certain actions which constitute some kind of offence, whereas a court of inquiry is about finding out exactly what happened and why.

An officer facing a court-martial or a court of inquiry where their conduct is called into question, is required to hand their sword over to the court at the beginning of proceedings. If the verdict of the court is against them, they will know the moment they are called back to hear the court's decision. In this case, the sword will be placed on the court bench with the blade facing towards the defendant, and they can expect at the very least an official reprimand and probably far worse. Loss of rank and seniority are common punishments.

If the hilt of his sword faces them, the officer at least knows they are not going to be punished. Indeed, they may be praised or decorated. However, sometimes a court may find that there is insufficient evidence to censure an officer but remain suspicious of them. In that case the official verdict will be favourable but the officer's career will inexplicably stall, or they will be reassigned to a harmless or dull post where they can do little damage if they screw up again.

THE OLD EXPANSES SECTOR FLEET

Each sector of the Third Imperium has unique characteristics which translate into naval requirements. The Old Expanses faces the Solomani Confederation to rimward and is a border region with non-aligned systems to trailing. There are internal borders to spinward and coreward. The worst-case scenario for naval commanders in the region is renewal of conflict with the Solomani Confederation, which would mean facing a major power with large numbers of powerful vessels in well-organised fleets. The independent worlds and small states are a much lesser threat but the open frontier does impose significant demands on available resources.

The Old Expanses is part of the Domain of Sol, along with Diaspora and the Imperial holdings in the Solomani Rim and Alpha Crucis. The latter are small, consisting of two subsectors, but Alpha Crucis does have a sector fleet of sorts. The Solomani Rim is mostly in Imperial hands but surrounded on three sides by the Confederation which, at some point, will surely try to retake the areas lost in the Solomani Rim War.

The Old Expanses Fleet is part of a domain-wide structure, with regular joint exercises strengthening links between the four sector fleets. The sector fleet in Alpha Crucis is essentially a placeholder, with a handful of heavy units present to show the flag and remind the Solomani Confederation that the Imperium will defend its territory. In the event of a major war these forces would not be able to hold the Ximenes and McKenzie subsectors without major reinforcement, which would take some time to arrive. One likely scenario is a token resistance and retreat, although if tensions increased over time the forward-deployed forces could be reinforced before commencement of hostilities. This is always a risk, however, as forward deployments can be bypassed or overwhelmed by a sudden attack.

In keeping with the 'avoid defeat and maintain the fleet in being' component of Imperial naval doctrine, the heavy units of the Alpha Crucis fleet would reinforce the defence of major bases in the sector, launching raids wherever possible and attempting to present a threat to Solomani forces operating nearby. System denial operations and maintenance of a

threat would delay a Solomani advance and hopefully disrupt it. Worlds would be taken but a fleet in being with suitable bases can retake lost territory. One expended trying to stem the tide is no longer any use and would present the Solomani Confederation with a propaganda victory.

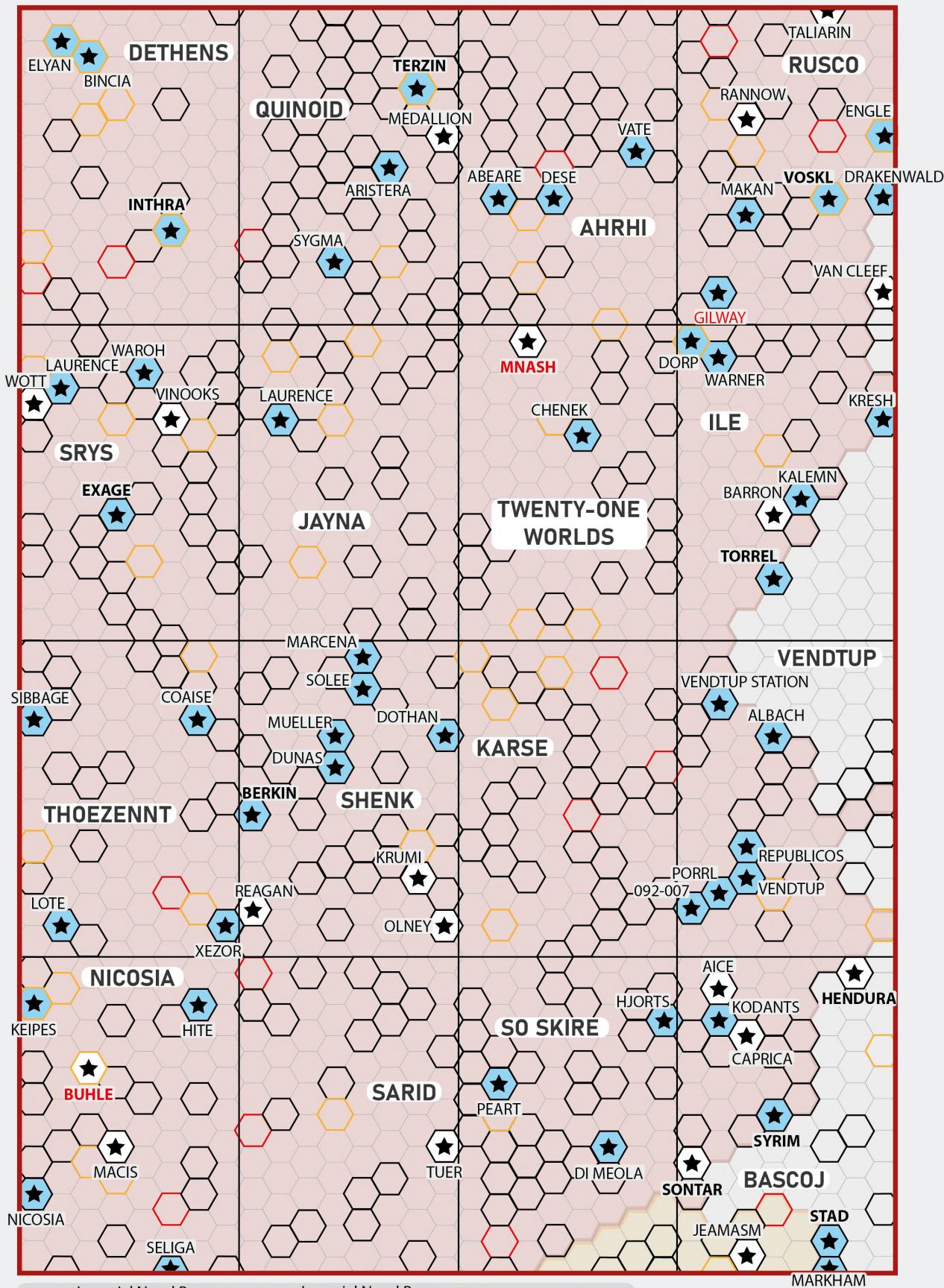
Any major war with the Solomani Confederation would be won or lost in the Solomani Rim. Imperial forces there are slightly overstrength and tend to receive a higher proportion of front-line dreadnaughts. Again, initial goals revolve around avoiding defeat but in this case that does mean defending certain systems, no matter what. Terra is one, along with the sector's major naval bases, and the Vegan Autonomous District must also be protected. Losing these critical areas would be a major blow to Imperial prestige and might force it into negotiations at a disadvantage. Whilst the Vegans are not particularly important to the economic wellbeing of the Imperium, failure to protect a member group might weaken the confidence of others and create internal rifts.

In the event of war, Solomani forces could be expected to drive into the Old Expanses. Countering such an assault is the initial mission of the Old Expanses Fleet, leading into a campaign to relieve the Imperial holdings in Alpha Crucis and attack Solomani bases there. Both sides are likely to view this part of the campaign as secondary to the fight for the Solomani Rim, but pressure in the Old Expanses/Alpha Crucis theatre would divert forces and might produce victories that would permit negotiations from a position of advantage.

The role of the Diaspora Sector Fleet in such a conflict is as reinforcements for the other sector fleets. Since the Solomani Rim theatre will inevitably take precedence, the Old Expanses fleet cannot expect heavy reinforcement in the initial stages of conflict. The astrography of the Delphi sector, to coreward, is such that its forces are small and dispersed, so the most likely source of major reinforcement would be the Massilia Sector Fleet. This will take some time to arrive, so the Old Expanses sector admiral must expect to fight with what they have for at least several months.



OLD EXPANSES



There are, of course, other threats. Rebellion is always a possibility, although a single world or even a small group could not possibly challenge a whole sector fleet. Such problems could be dealt with internally, without a request to the archduke for additional forces. The fleet is also tasked with protecting commerce and Imperial interests in the non-aligned regions of the Hinterworlds and beyond. This is a task for the sector fleet; the subsector fleets deal with internal security but are not authorised to cross the border.

The primary threat to Imperial interests in the Hinterworlds is the interstellar polity known as the Ral Ranta. With a long history of conflict with the Imperium, the Ral Ranta is heavily militarised, and whilst its navy could be crushed without difficulty, occupation of its worlds would become a quagmire. The polity operates large numbers of corvette-sized warships best suited to raiding and corsair activity. These prey on shipping and weakly defended worlds in the Hinterworlds and sometimes beyond. Those that venture into Imperial space usually meet a bad end and there are reprisals as a matter of course. However, the society of the Ral Ranta is subdivided into a great many ‘warrior clans’; chastising one is unlikely to deter others.

Imperial warships are primarily concerned with ensuring the security of Imperial trade but that means more than just protecting ships. The Old Expanses fleet maintains a number of standing patrols in the Hinterworlds and carries out sweeps to drive corsairs away from ports used by the trade vessels. Longer deployments may take vessels right across the Leonidae sector and as far as borders of the Hive Federation. At any given time a proportion of the fleet’s cruiser and support ship strength is away on this mission and unavailable for other operations.

BASES

The headquarters of the Old Expanses fleet is at Depot, sometimes referred to as the Ultraneta system. As is common with naval depots, the ‘mainworld’ is an asteroid belt and the whole system is considered Imperial territory. It is governed by a naval bureaucracy headed by an appointed governor, although there are non-military services and institutions for the civilian population. This numbers

around 700,000 and is largely made up of families and dependents of personnel serving with the Imperial Navy. There is a working-resident population to support the navy dependents, ranging from doctors and educators to shopkeepers and plumbers, but everyone applying for residence in a depot system is carefully vetted – they are not somewhere to put down roots but a temporary place of work for almost everyone, navy and civilian alike.

The astrographical position of the Depot system, making it a necessary link for jump-1 vessels, necessitates a separate civilian starport. This orbits the uninhabited rockball world of Ultraneta. Settlement of such bodies is prohibited for security reasons, as is going outside its orbital zone without a navy permit. This greatly simplifies security of the system – anything outside the permitted zone will be challenged with a degree of suspicion. Ships within the prohibited zone are likely to be challenged but are not assumed to be suspicious.

The installations of the naval depot are mostly within the main asteroid field, with some orbiting the gas giants, the latter used for local security patrols in addition to their other functions. There are also installations orbiting some of the system’s rockball worlds. Some of these are so sensitive that even most of the navy are not allowed to go there, whilst others are isolated for safety reasons. The mothball fleet is moored at one of these installations, as having so many ships in an asteroid field would cause navigational complications.

The system is protected by a dedicated security fleet. Its primary asset is several squadrons of heavy battle monitors and planetoid monitors. The latter are mobile but very slow, and considered to be forts as much as ships, lurking within the planetoid field to ambush intruders. Smaller monitors fulfil the role of destroyers and cruisers, backed up by a large system defence boat flotilla. One of the experiments being trialled at Depot is the idea of jump-capable monitors this seems at first to be a contradiction in terms, since by definition a monitor is intended to defend a single star system. However, the ability to jump to distant parts of the system is considered a possible advantage. Only jump-1 capability is required for this and of course the monitors could transfer from a construction site to their deployment under their own power. Whether this is cost-effective remains to be seen.

In addition to the mothball and security fleets, Depot is also home to a training fleet. This includes receiving ships training ships, and recruiting ships, in addition to vessels set up to look like those of potential enemies. Most are Solomani designs but there are independents, corsairs of Ral Ranta design and even a few Hiver-type ships. All of these vessels are in theory available as extra defences for the system but any attack that could take out the security fleet and whatever elements of the sector fleet were present would have no problem swatting a few old destroyers crewed by recruits and instructors.

Depot is the administrative and strategic hub for all naval activity in the sector. Couriers are constantly on the go, along with transports and auxiliaries. There are installations for R&D, repair yards and administrative complexes, as well as the headquarters of Naval Intelligence for the sector. Most of these functions are repeated on a smaller scale at other bases.

The Imperial Navy maintains an average of four-five bases per subsector. Typically, there are two bases belonging to the sector fleet, of which one is a specialist installation, and two to three dedicated to supporting the subsector fleet. There is some crossover of course; all bases support the movement of couriers and any ships assigned to the subsector will use the available bases. However, their focus varies.

A typical subsector has a subsector fleet headquarters and one or two smaller installations supporting local patrols, plus a couple of sector fleet bases. Usually one of these is quite small, being primarily set up to host a destroyer flotilla and maybe a couple of cruisers, and the other is a supply and logistics base. The latter might be extensive and served by large numbers of transports as well as contracted civilian freighters bringing in rations, spares and munitions from their producers.

In any sector there will be at least a couple of more important sector fleet bases in addition to the depot. The Old Expanses is no exception. The sector fleet's secondary headquarters is at Bhule, in the Nicosia subsector, which hosts elements of the capital ship and cruiser forces. The Peart system, close to the

Solomani Confederation border, does not normally have a large heavy-ship contingent but is set up to support one and is heavily protected. It is the forward concentration point in the event of a war with the Confederation and would support offensive or defensive operations in the region.

Installations very close to the border are also well defended, in the hope of creating a breakwater of 'fortress systems'. A large part of the warship contingent present actually belongs to the colonial forces of the hosting world, paid for by a subsidy from the Imperial Navy. These ships are rarely jump-capable, which suits the purposes of the navy. Unable to retreat and fighting to defend their homes, these vessels would inflict heavy damage upon any invader.

A small capital ship contingent is also maintained at Kresh, right on the border with the Ral Ranta. It is a measure of how little threat this polity poses that a forward deployment is considered acceptable. Indeed, current thinking is to remind the clans of the Ral Ranta of their insignificance by constantly showing the flag. Against a state with a credible navy this might be risky but the Ral Ranta has a 'navy' of raiders and corsairs, not battleships. Albach, in the Vendtup subsector, is home to a large cruiser contingent and supporting vessels, plus a destroyer flotilla. These vessels are normally engaged in operations out into the Hinterworlds. Most other fleet bases are small or specialist in nature.

SECTOR FLEET ASSETS

Given its proximity to the powerful Solomani Confederation, the Old Expanses Sector Fleet has a higher than average contingent of top-end ships and also more battle rider squadrons. Fleets deeper in the Imperium would have less dreadnoughts and more second-class battleships. The exact composition of the various contingents can vary over time as ships and squadrons are detached or moved to a new command structure. Support vessels are not listed as they tend to move around a great deal. Typically a base will host one to two times as many supports as it does fighting ships.

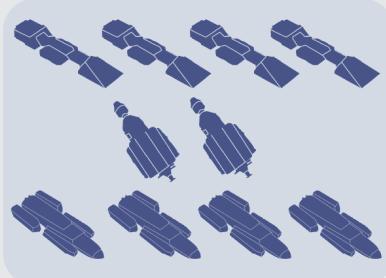
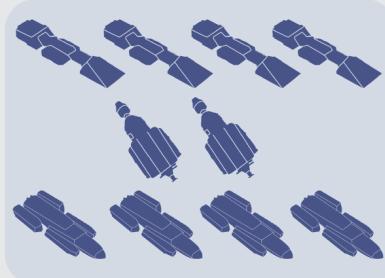
Old Expanses Flag Fleet

The primary combat force of the sector fleet carries its name and is based at Depot. Its mission is straight combat, hitting an enemy located by other forces and shattering it. The Old Expanses Flag Fleet contains almost half of the capital ships available to the sector admiral and there is also a single battle rider squadron officially based at Depot, although it is frequently detached for operations along the Hinterworlds border.

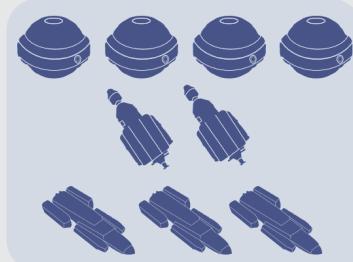
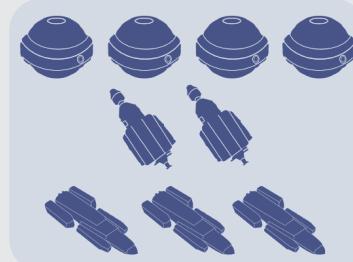
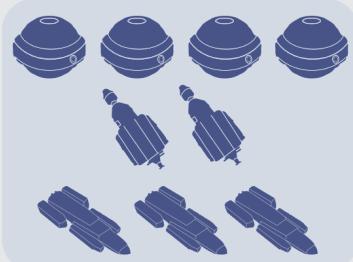
The capital ships are supported by a force of cruisers. In wartime some of these would be detached to launch raids or deal with raiders whilst others would remain with the fleet. In peacetime much of the cruiser force is broken up to carry out missions ranging from flag-showing and diplomatic transport to piracy suppression and commerce protection beyond Imperial borders.

OLD EXPANSES FLAG FLEET

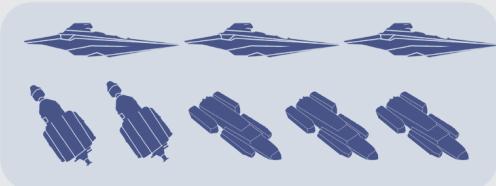
Dreadnought Squadrons x 2



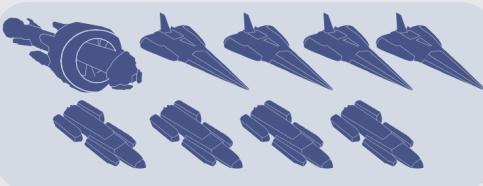
First-Class BatRons x 3



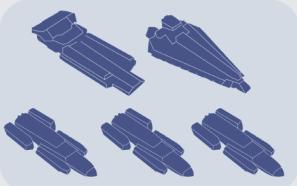
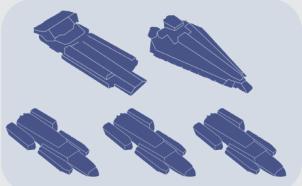
Second-Class BatRon



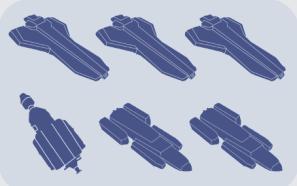
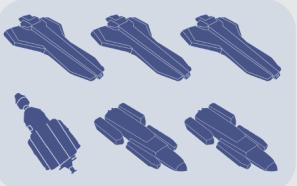
Battle Rider Squadron



Fleet Carrier Task Groups x 2



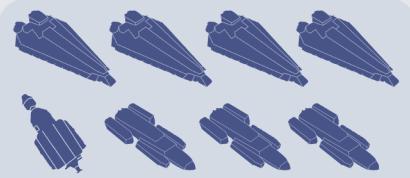
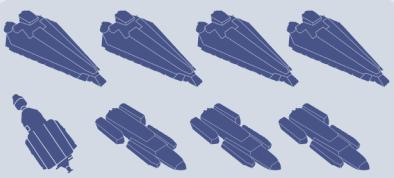
Heavy CruRons x 2



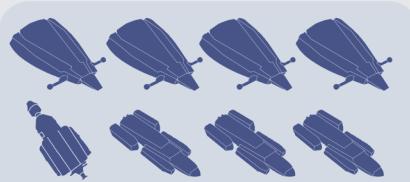
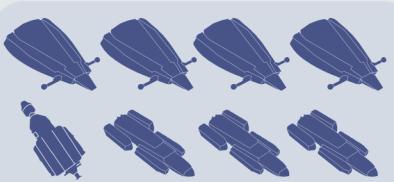
Armoured CruRon



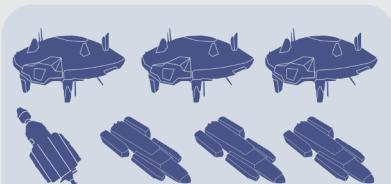
Light CruRons x 2



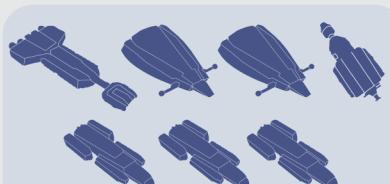
Missile CruRons x 2



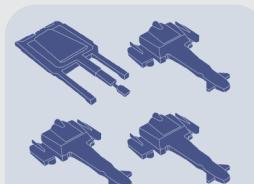
Bombardment CruRon



Provisional CruRon



Light Carrier Task Group



EscortRons X 2



Fleet DesRons X 2



Escort DesRons X 3



KEY



Bombardment Cruisers



Escort Destroyers



Dreadnought



Light Cruiser



Fleet Escort



Battle Tender



Close Escorts



Armored Cruiser



Battleship



Battle Rider



Older Battleship



Heavy Cruiser



Fleet Carrier



Corvette Mix



Patrol/Courier Flotilla



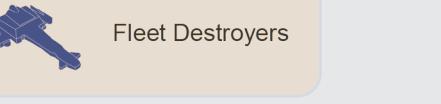
X 40-60



Light Carrier



Missile Cruisers



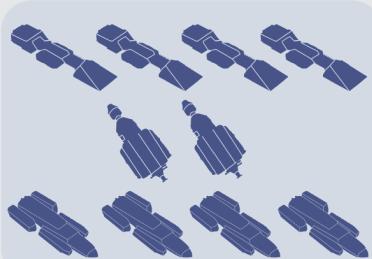
Fleet Destroyers

Bhule Contingent

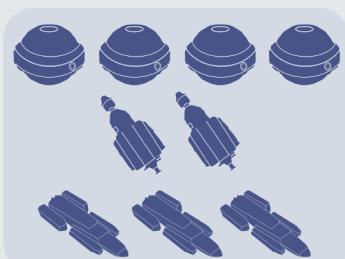
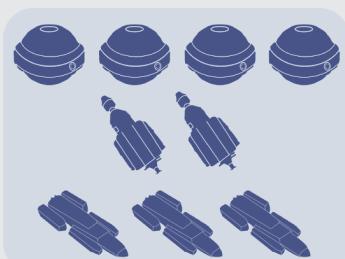
The secondary headquarters contains most of the remaining capital ship strength. This force is poised for an advance into Alpha Crucis to reinforce the small fleet based there, or to counter an attack into the spinward side of the Old Expanses.

BHULE CONTINGENT

Dreadnought Squadrons



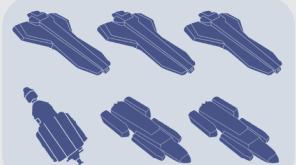
First-Class BatRons x 2



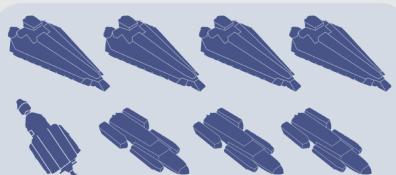
Second-Class BatRon



Heavy CruRons x 2



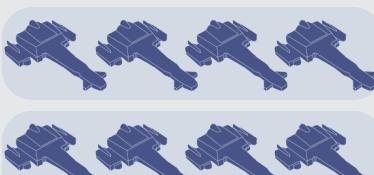
Light CruRons



Strike Carrier Task Groups X 2



Fleet DesRons X 2



KEY



Dreadnought



Light Cruiser



Fleet Escort



Battleship



Close Escorts



Armored Cruiser



Strike Carrier



Older Battleship



Escort Destroyers

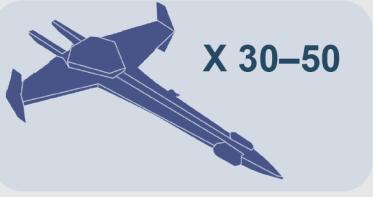


Corvette Mix

Escort DesRons X 2



Patrol/Courier Flotilla



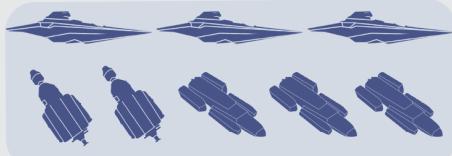
Kresh Contingent

A single squadron of older battleships is maintained at Kresh. Vessels are routinely detached as the lead ship for a task force cruising in the local systems, or occasionally as a guardship for one of the Imperial worlds close to the Ral Ranta. These ships will be

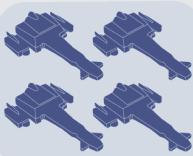
sighted by Ral Ranta vessels transiting the system, providing a constant reminder of how greatly the Imperial Navy outclasses anything that could be mustered against it.

KRESH CONTINGENT

Second-Class BatRon



Fleet DesRons X 2



Patrol/Courier Flotilla



KEY



Fleet Escort



Older Battleship



Corvette Mix



Close Escorts



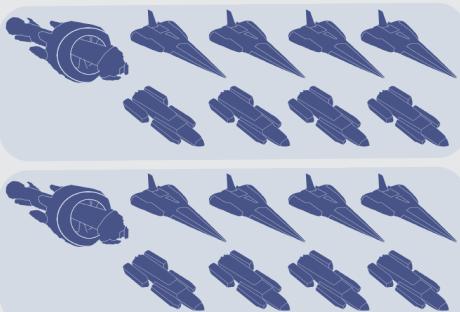
Fleet Destroyers

Peart Contingent

A standing deployment of two battle rider squadrons is maintained at Peart, partly to defend the system and partly to provide rapid defensive reinforcement for systems along the frontier.

PEART CONTINGENT

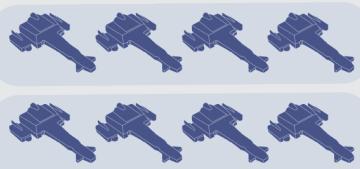
Battle Rider Squadrons x 2



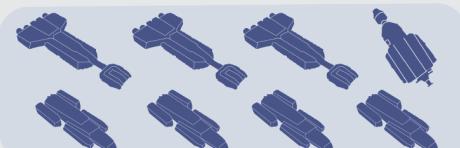
Light Carrier Task Group



Fleet DesRons x 2



Armoured CruRon



Escort DesRons x 2



Patrol/Courier Flotilla



KEY



Close Escorts



Fleet Destroyers



Corvette Mix



Escort Destroyers



Armored Cruiser



Fleet Escort



Battle Tender



Battle Rider



Light Carrier

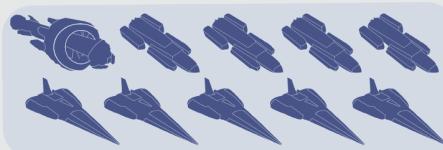
Alpha Crucis Detachment

Part of the Old Expanses fleet is on near-permanent detachment to Alpha Crucis. The Alpha Crucis fleet is little more than a placeholder, with only a handful of major warships. The small force loaned by the Old Expanses command is a bone of contention

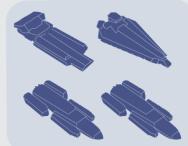
between the two sector admirals. Alpha Crucis wants more ships, with some justification, whilst Old Expanses is unwilling to detach too many vessels for service elsewhere.

ALPHA CRUCIS DETACHMENT

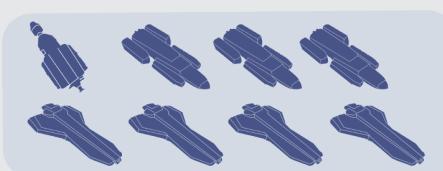
Battle Rider Squadron



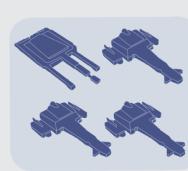
Fleet Carrier Task Group



Battle Rider Squadron



Light Carrier Task Group



KEY



Battle Tender



Close Escorts



Heavy Cruiser



Fleet Destroyers



Light Carrier



Fleet Escort



Battle Rider



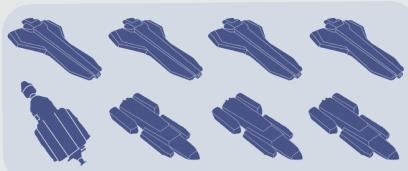
Fleet Carrier

Albach Contingent

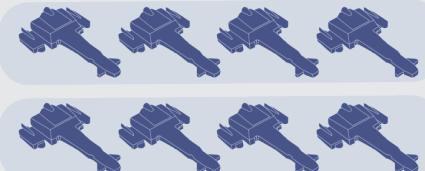
Albach is very much a cruiser base, set up for medium-sized vessels rather than battleships. It also has a significant destroyer contingent.

ALBACH CONTINGENT

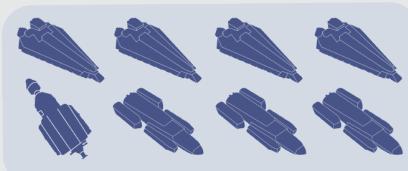
Heavy CruRon



Fleet DesRons x 2



Light CruRon



Escort DesRon



Light Carrier Task Group



Strike Carrier Task Group



Patrol/Courier Flotilla



X 20-40

KEY



Heavy Cruiser



Corvette Mix



Fleet Escort



Close Escorts



Fleet Destroyers



Strike Carrier



Light Cruiser



Escort Destroyers



Light Carrier

SO SKIRE SUBSECTOR FLEET

The So Skire subsector lies right on the border with the Solomani Confederation and would be a battleground in any new conflict. Its ships and crews would do their best but would be hard-pressed to defend their bases, let alone operate against a major force. This is a reality of the strategic situation. Assigning powerful forces of capital ships to border subsectors would only expose them to defeat in detail if attacked. If they were bypassed, dispersal would ensure they did not reach the conflict zone in time or suitably concentrated. In short, forward-deploying capital ships effectively defeats or neutralises them.

Most of the time, So Skire's subsector fleet – the 308th – has the same role as any other. It is not intended to repel an assault by Solomani forces and could not do so in any case. In peacetime the 308th Fleet handles internal security. In the event of war, its forces would attempt to counter raids and gather reconnaissance data for the sector commander whilst harassing enemy forces. The admiral in command becomes a local theatre commander in this event, coordinating the efforts of colonial forces to defend their homes and liaising with the sector commander on their behalf.

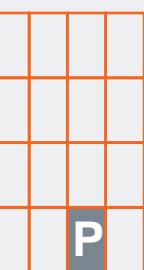
The So Skire subsector fleet is unusual in that it has only one base of its own, its headquarters at Di Meola. The other two bases in the subsector, at Peart and Hjorts, are sector fleet installations. Peart hosts two battle rider squadrons and lighter forces, whilst Hjorts is a logistics installation. As such it would be a prime target for an early Solomani strike and so has heavy in-system defences. The subsector fleet uses both of these bases, mainly to support small patrol vessels operating in nearby systems but they are commanded by the sector fleet.

Most subsector fleets have only one cruiser-sized vessel as their flagship but the 308th Fleet has three, unusual for internal subsectors but not uncommon on the borders. Typically, these vessels each form the centrepiece of a task force, of which at least one is patrolling the border systems at any time. Cross-border smuggling and espionage are serious problems in all frontier subsectors, requiring a heavier than average security presence. The

308th Fleet also has a slightly higher proportion of destroyers than is usual for a subsector fleet. In theory this contributes to deterrence but in fact the emphasis is on peacetime border control.

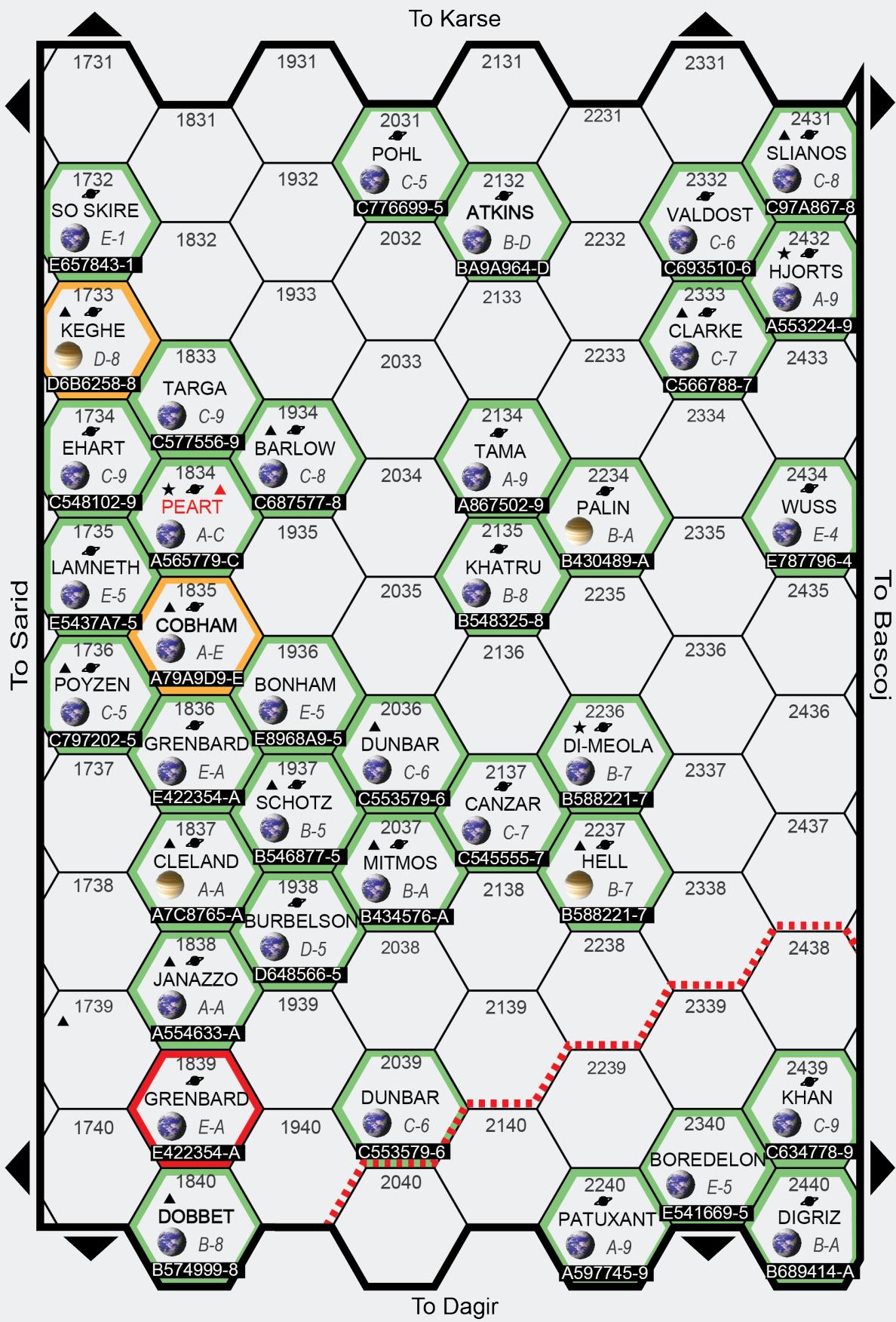
The 308th Fleet's area of operations is dominated by a large cluster of systems which contains two naval bases. The majority of the fleet operates out of Di Meola, conducting patrols as far coreward as the Cobham system. A small contingent at Peart provides security for the coreward end of the cluster and the two outlying worlds just over the border in the Sarid subsector. Although these lie outside the subsector, astrographical realities make it more practical to assign their protection to the 308th Fleet rather than the neighbouring 108th. The handful of worlds not connected to the main cluster are patrolled by ships out of Hjorts. Major vessels are normally encountered in systems close to the Solomani Confederation but might be called upon to respond to a problem anywhere in the subsector.





OLD EXPANSES

SOSKIRE SUBSECTOR



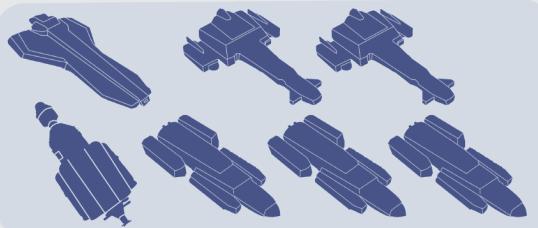
Di Meola Contingent

Most of the subsector fleet is based at Di Meola, two parsecs from the Solomani Confederation border. The mainworld is virtually uninhabited, with a token settlement to cement the Imperial claim to the territory, so has no defences of its own. However, the naval base is protected by a force of monitors and system defence boats which might stand a credible chance of repelling an initial strike. Technically, this force is under the command of the subsector admiral but as it cannot leave the system it is not normally counted among the 308th Fleet's assets.

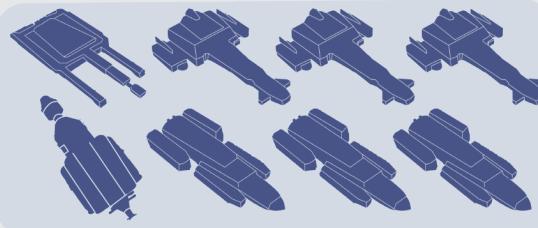
The three primary vessels of the subsector fleets are used in different ways. The fleet flagship is a heavy cruiser which leads a conventional task force, whilst the carrier and its supporting vessels are used to provide a surge in security vessels in systems with serious smuggling problems. The response flotilla is considered a destroyer force led by a light cruiser rather than a cruiser and supports, and is the most likely of the three major vessels to be encountered several parsecs from base.

DI MEOLA CONTINGENT

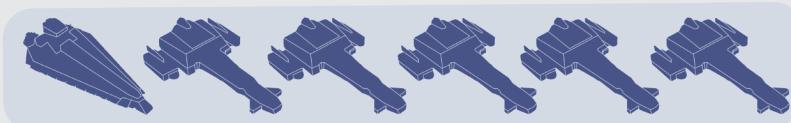
Flag Task Force



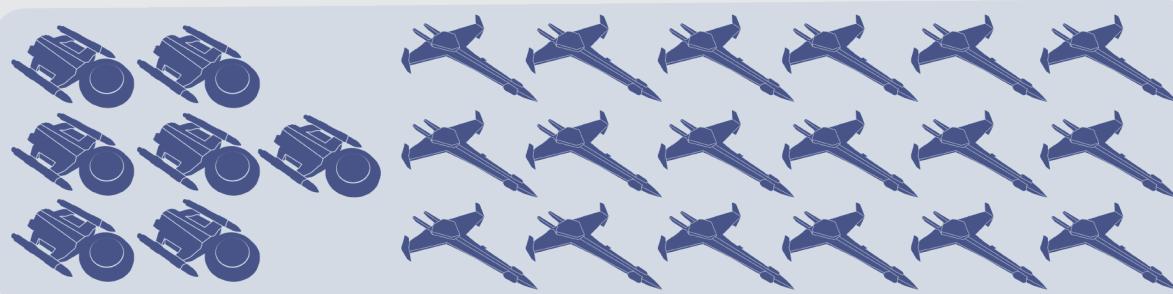
Carrier Task Force



Response Flotilla



Di Meola Patrol Flotilla



KEY



Close Escorts



Escort Destroyers



Light Carrier



Heavy Cruiser



Fleet Escort



Fleet Destroyers



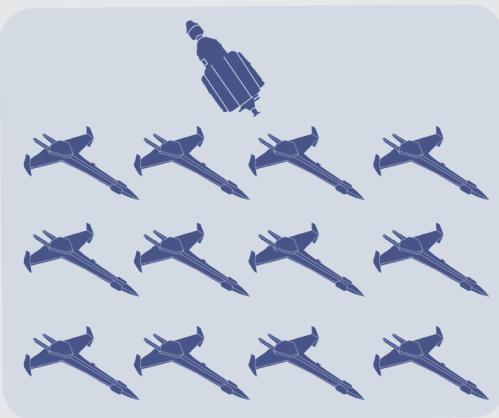
Corvette Mix

Peart Contingent

The Peart contingent is permanently assigned just one destroyer along with a small group of patrol vessels, which have their own area of the sector fleet base at Peart. Occasionally the response flotilla makes a sweep of the area, either together or more commonly dispersed.

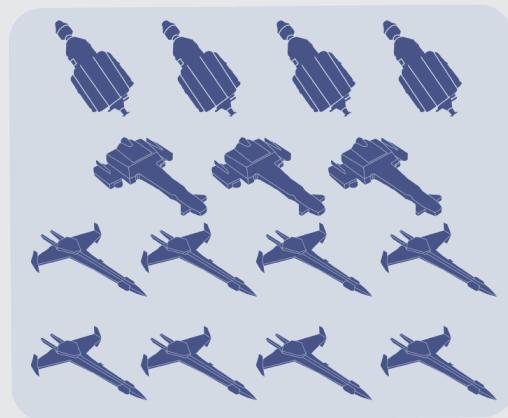
PEART CONTINGENT

Peart Patrol Flotilla



HJORTS CONTINGENT

Hjorts Patrol Flotilla



KEY



Fleet Escort



Corvette



Fleet Destroyers

Additional Forces

The subsector fleet's corvette strength is a mix of close escorts and patrol corvettes. Most of the escorts are operated by regular navy crews whilst most of the patrol corvettes are colonial units loaned by member worlds. Systems with a significant population also have their own system defence and security assets. At the least this will be a few fighters and armed small craft at the starport, and in many cases the system flotilla contains numerous system defence boats or even powerful monitors. It is not uncommon for worlds, especially those on the borders, to buy old cruisers and battleships and refit them as in-system defence craft.

Whilst these system defence vessels cannot patrol other star systems they do create a secured and defended zone around their mainworld and perhaps the rest of the system. This reduces the burden on the subsector fleet. Defended systems are still patrolled, not least to remind everyone that the flag is still flying, but for the most part the 308th Fleet is responsible for 'everything else' in the subsector.

THE TIGRESS-CLASS DREADNOUGHT

The Tigress is the latest and most advanced capital ship design in service with the Imperial Navy. At 500,000 displacement tons it is one of the largest warship classes ever produced. Larger ships have typically been either one-off experiments or vanity projects implemented for political reasons. The few classes that actually went into production are long since obsolete but might be encountered in service with a planetary navy or among reactivated mothball fleet forces in times of crisis.

Design philosophy changes over time. In some periods dreadnoughts have been pure ship-killers; in others there were attempts to create one-ship fleets. The Tigress was, at the time its initial requirement was agreed by the Admiralty Board, a move back towards the one-ship fleet concept. However, like all designs it evolved along the way, and again after the prototype was evaluated. The Tigress carries a very large small craft complement for a capital ship but these are not all fighters. A variable small craft complement allows the Tigress to carry out a variety of missions either solo or as part of a task force.

The general hull form of the Tigress has resulted in a nickname: Happy Fun Ball. This in turn led to a controversial animated vid series of the same name which achieved astounding popularity despite repeated lawsuits originating from the higher echelons of the Imperial Navy. The generally spherical hull has an opening and recess for weapons and other sensitive systems, limiting firing arcs but providing additional protection from attacks. Opposite the weapons recess is a ‘backpack’ containing all systems required for flight operations, underway replenishment and interactions with small craft.

ROLE

The most critical role of the Tigress dreadnought is to smash the enemy line of battle. In wartime it is envisaged the Tigress will be deployed in squadrons of four with suitable supports, leading the main battle fleets to victory. However, it is possible that some ships would be deployed slightly differently. The Tigress was built from the keel up for a flagship role, making it possible that some squadrons might be broken up to provide flagships for other dreadnought

or first-class battleship squadrons. Which option is preferable depends on circumstances. Against an extremely powerful enemy it would be desirable to concentrate the top-end fighting power as Tigress BatRons but in many cases the presence of a Tigress as flagship would sufficiently elevate the performance of a less potent group of battleships that it might, on balance, be a more effective option.

If any single warship in the fleet is capable of taking care of itself, it is the Tigress dreadnought. For this reason, Tigresses are sometimes detached to carry out other duties. Occasionally a member of the high nobility will need transportation to some important function and will be provided with a Tigress as a demonstration of prestige; this is normally only done when the noble is acting on the behalf of the Emperor. When on private business they would be expected to provide their own transportation and escort. The arrival of the archduke aboard a single dreadnought into the middle of a tense situation between two worlds of a domain is a powerful statement – arguably a more potent one than sending a fleet. The arrival of a fleet says the navy has taken an interest whereas using a Tigress emphasises the archduke and reinforces the image of their importance. In this regard the use of a single capital ship is almost subtle... but only almost.

One notable incident of this sort occurred in 1104, when the Imperial ambassador to Cronor was assassinated. The Zhodani Consulate gave permission for a single warship to enter its territory in order to return the ambassador’s body in appropriate splendour. The navy sent the newly-completed *Pantheress* to undertake the task and garnered considerable public relations capital in so doing. Official images of a Tigress dreadnought in orbit above the capital city of Cronor are extremely popular and have been made into a variety of memes, most of which are in fairly poor taste.

As a new class, the Tigress is still under evaluation. Since no amount of trials can take the place of operational experience the fleets have been finding things for their Tigresses to do as soon as they receive them. The usual policy is to keep most of the vessels concentrated but alternate them through a series of deployments more normally suited to

cruisers or even smaller ships. In a few cases, there is some justification to having a dreadnought on blockade station. One such is Andor, a Droyne homeworld in the Spinward Marches. This area is of sufficient importance that the Imperial Navy has, almost without exception, maintained at least one capital ship among the interdiction forces since the imposition of the Red Zone. Currently the flagship of the interdiction flotilla is a Tigress, although whether this is because the navy really feels it is necessary or simply to gain operational experience with the class is an open question.

In other cases a dreadnought is extreme overkill but for the next few years it is likely that most sectors will have at least one carrying out odd jobs better suited to a cruiser. Extremely unlucky pirates might find their haven under attack by a capital ship, and there is even the tiniest chance that a small merchant might be boarded in some backwater system under the meson gun of a Tigress. Overall, however, the role of the Tigress dreadnought is to make a political statement in peacetime and to lead the battle fleets – as a flagship or in a powerful squadron – in war.

DEPLOYMENT

The navy's initial target was to place one BatRon of Tigresses in each sector fleet by the end of 1104. This has largely been met, although with one exception priority was not given to fleets on the borders. Instead, the first BatRons were sent to internal sectors such as Massilia, Zarushagar, Dagudashaag and Core. The purpose of this was to permit early-build vessels to be evaluated and modified, with lessons learned incorporated into the construction of later examples. Some of these early vessels have been taken in hand for modifications, eliminating defects or incorporating new components not initially considered necessary.

Deployment to internal sectors allowed the navy to create a strategic reserve of extremely powerful ships where it was difficult for a potential enemy to observe and evaluate them. By the time the Old Expanses and Solomani Rim fleets received their designated BatRons, the Tigress was a fully worked up and highly effective battle platform. Even so, they are kept back from the borders and usually held at depot systems where security is tight. This differs from policy in most other regions, where the priority is on gaining experience of Tigress operations.

Most sectors have now received their full complement of four Tigresses, in almost all cases arriving as a fully battle-ready squadron with escorts already assigned. Some sectors have received one or two more, and deployed them either as a division – a half-squadron – alongside lesser ships, or as flagships. Some have been co-opted as flagships for the main or secondary battle force of the sector fleet, a move considered questionable by many naval experts. Whilst the command capabilities of the Tigress are impressive, it is a fighting ship first and foremost, and the fleet admiral might be distracted in a direct engagement.

The exception to both the internal-deployment and the one-BatRon policies is the Spinward Marches. The Spinward Marches received a BatRon of early-build Tigresses, followed by a couple of single ships. Additional vessels were then assigned when the main production run got into full swing. This departure from the policy seen elsewhere is thought to be connected to tensions with the Zhodani Consulate. The Fourth Frontier War (1082–1084) ended 20 years ago but is widely thought to have been more of a foreshock than a major piece of history. Some observers maintain that deploying more capital ships will increase tensions and perhaps trigger a Fifth Frontier War whilst others suggest they may deter one. A different school of thought says that war is inevitable and this time the Imperium needs a decisive victory.

Be that as it may, the Spinward Marches sector fleet has a complete BatRon of Tigresses on its strength. They are under sector fleet command but more or less permanently assigned to the Rhylanor subsector. This is a curious decision, given that experience in the Fourth Frontier War resulted in a move away from the 'crust' strategy. It is widely assumed that the sector admiral is subject to influence from nobles in the region and has deployed the squadron to appease them. Alternatively, it might be that the loss of Rhylanor in the early stages of a war would be a shock Imperial morale would not recover from. If so, the presence of such a powerful force might be necessary to the 'avoid losing' part of Imperial strategy.

Another supposedly complete BatRon and two individual vessels are available to the Spinward Marches sector fleet. These ships are dispersed to an undue degree according to many naval experts. At any given time one is assigned to the Andor blockade fleet and one acts as a guardship at Mora. The former is questioned on the grounds that a single Droyne Oytrip

is hardly a threat worth a dreadnought... unless it is, in which case the vessel is unduly exposed. It has been postulated that this ship is there as an ambassadorial platform and that small craft descending to the surface are bringing Droyne diplomats up for conferences. That idea has spawned many conspiracy theories – is the Imperium courting an alliance with the Oytrip of Andor? Why? Who gains the most from it?

The other standing deployment, at Mora, is easy to explain. The Duchess of Mora is a... difficult... individual who makes it perfectly clear she thinks she should be made Archduke of the Domain of Deneb. She is extremely influential and powerful, and a vocal opponent of the deployment of Tigresses at Rhylanor. A similar vessel, sometimes two, standing guard over her homeworld appears to be a concession intended to avoid pressure to remove the Rhylanor squadron. If so, it may be that the ego of a great noble is being allowed to impact fleet deployments to an excessive degree.

Yet another Tigress from the Spinward Marches sector fleet is in service as a flagship for the sector admiral. Contrary to the usual policy of commanding from the sector depot, the present admiral spends an inordinate amount of time flitting about the sector. It is widely supposed that he is playing politics, trying to appease the great nobility and persuade them to counter the demands of the Duchess of Mora. There could be more to it than that, of course; perhaps the admiral feels it is better to consult personally with local nobles and fleet commanders on matters of defence. However, it does mean he is in transit a lot of the time rather than standing ready to issue immediate fleet orders.

The Tigress force in the Spinward Marches is thus something of a political football. The fleet has more Tigresses than any other but has one squadron forward-deployed at Rhylanor, one ship at Andor, one or two at Mora, and one acting as fleet flagship. This leaves just two or three ships – an understrength BatRon in other words – available for fleet operations at any given time. However, it has been suggested that the movement of the guardships and flagship to and from various destinations is intended to conceal the deployment of one or two additional Tigresses from the main fleet. To what purpose, and where, is a popular subject for debate among naval observers and conspiracy theorists.

CONSTRUCTION

The Tigress dreadnought is constructed at only five yards in the whole of Imperial space, all located far from the borders and subject to tight security. Components may be produced elsewhere but only these yards have the full specifications and blueprints for the whole vessel. Overall hull form is a 'sphere with a backpack' but at the heart of the ship is a set of primary structural components which could as easily have been the heart of a rectangular or conical ship.

The primary structural components, or PSCs, take the form of four long rectangular 'beams' of superdense material linked by smaller – but still huge – superdense girders upon which the main structural components are mounted. These run from the weapons recess all the way aft through where the aft hull would be if the flight operations component (the 'backpack') were not attached. They continue right aft to the rearmost point of the flight operations component. A lattice of superdense girders radiates out from this structure to support the decks and hull of the vessel.

Rather than a conventional construction with command spaces forward, general systems in the middle and engineering aft, the Tigress is built out from this central structure and laid out in zones rather than having continuous decks right through the hull. Within each zone, decks are parallel to the main structural components, with heavy internal bulkheads and structural girders separating the zones. Fuel tanks, accounting for more than 40% of overall tonnage, are located around the inside of the armour belt and between zones where appropriate.

The hull is ruggedised and heavily armoured, on a variant all-or-nothing principle. The Tigress is designed to survive almost anything and remain an effective fighting platform even with massive damage. The entire hull is armoured sufficiently to be able to ignore threats of a modest level but such a large volume cannot be protected entirely without an enormous weight and volume of armour. Instead, the outer armour belt is intended to keep out most threats and the remainder of the armour is placed to protect critical areas against extremely potent weapons, accepting the possibility that more lightly armoured areas might be penetrated.

A section of the 'forward' hemisphere is more thickly armoured than the rest of the hull as this is where hits will occur most of the time. However, there is always the possibility of attack from a different quarter, or that a meson weapon will bypass the outer armour belt entirely. For this reason, some of the ship's armour is internal, creating compartmentalisation that will save the ship even in the event of an internal nuclear explosion. Heavy bulkheads are also in place around critical systems but these are not of the same order as the armour sections.

The weapons embrasure at the fore end of the spherical hull is theoretically a weak point but this must be accepted if the ship is to fire its weapons. Blocks of armour separate the weapon bays and meson beam generation apparatus, and a retractable screen can be deployed over the weapons to prevent missiles or small craft from entering. In action, the ship pivots slightly off the threat axis when not firing, enabling the heavily armoured overhang of the embrasure to protect its main weapon systems.

SECURITY AND THE TIGRESS

Publicly available information on the Tigress is sparse and largely misleading. In particular, details of weapon systems, crewing levels and construction are deliberately left vague and sparse. The detailed plans presented here are based on the best information available at the time and reflect the main-production Tigress. Some early examples may not have yet been upgraded to main production run standard and may be laid sci-fi therapist out differently.

Primary Structural Components (1)

The four primary structural components run fore-and-aft through the entire ship, providing structural rigidity and pathways for power and control signals, as well as life support conduits. Alongside them run the main arteries for personnel movement. The PSCs form the corners of the weapons recess and the 'backpack'. They are not entirely solid but constructed from a lattice of bonded superdense material. Where on many ships the outer hull can be considered the main structural element, that of the Tigress is effectively hung on these PSCs. It takes a lot to breach the outer hull but even blasting chunks off it will not cause structural collapse so long as the PSCs remain intact.

Lesser structural components radiate out from these main ones and are paralleled by lift shafts and access tubes. The latter have ladders but do not normally have artificial gravity. There are platforms at intervals which do have gravity. Personnel can step from the ladder to a platform and be properly oriented for the deck they are about to enter, enabling personnel to move rapidly, using the ladder as a guide and brake rather than climbing in the normal fashion. In addition to the platforms, artificial gravity fields from neighbouring decks have weak fringes which intrude into the shafts, creating 'drag zones' that can send a careless crewmember into the side of the tube and result in an undignified tumble along the rest of the shaft or a collision with the next platform. Personnel experienced with a particular class – and even specific vessels – can navigate the drag zones and even tell where they are in the ship by their characteristics. The equivalent of being shown the ropes aboard a Tigress is 'learning the tubes'.

Command Core (2)

The command core is located above the primary structural components, slightly forward of the spherical section's centre of mass. This area contains the main bridge and supporting areas, including the gunnery direction chamber and primary information centre. The latter collates data from all sources including communications with other ships and the vessel's own extensive sensor array. Real-time intelligence analysis takes place in the associated briefing rooms, with information passed to the gunnery officer and command crew in as much detail as necessary. The ship's primary computer core is located here, with the secure access programming room alongside.

This area includes cabins for officers stationed in this part of the ship. There are also junior and senior officer's messes and recreation areas, the officers' galley and associated working spaces. Access is not entirely restricted to officers as some enlisted personnel work here and some require access to perform their duties. However, security is tight and there will be armed sentries at the main access point under most conditions. The command core contains an 'officers' armoury' stocked mainly with handguns and snub pistols, plus a few laser carbines. Despite the name of the chamber it is more likely to be used to arm ratings for the defence of command spaces during a boarding action or mutiny – neither of which is likely.

The command core is located deep within the ship, heavily bulkheaded and protected in part by the two upper PSCs. Under normal circumstances the only entry point is the main one, accessed by way of a security chamber (2a) from the main personnel thoroughfares. A junior officer or senior petty officer will be stationed here along with at least two armed sentries. Those with normal business will be greeted but must state their reason for entry – which is usually that they are going about their normal duties. Anyone who does not work in the command or administrative centre will be challenged and must justify their presence to a professionally sceptical audience.

Administrative Centre (3)

The ship's main administrative centre is located aft of the command core and connected to it by the secure entry chamber. The admin centre contains offices and briefing rooms for use by administrative staff and the officer of the watch is stationed here. For this reason, most non-command personnel passing through the secure access chamber are headed for the admin centre rather than the command core.

Flag Command Chambers (4)

The ship's flag bridge is located on the opposite side of the primary structural components to the main command core and further aft. The chances of both being hit are low. The flag bridge is accompanied by a secondary command area which is the battle station of the first officer. The ship can be commanded from here at need, and there are information and briefing chambers similar to the main bridge. A secondary gunnery direction centre is also located within these chambers.

The flag chambers are intended for the use of a flag officer and include accommodation for officers and ratings associated with an admiral. Access is by way of a secure entry point similar to that at the command core but under normal conditions this whole area is closed down and locked out. It is only staffed during action stations or when a flag officer is present, unless the captain wants to use it for some other purpose. When cadets are carried, the flag chambers are sometimes used as a training area, allowing the cadets to shadow main bridge functions without being in the way.

Meson Gun Apparatus (5)

The main armament of the Tigress is a 66,000-ton meson weapon. Its meson pulse generation system and the associated particle accelerators are arranged fore-to-aft in the section between the four primary structural components. Heavily bulkheaded and protected by the walls of the embrasure as well as armour blocks between critical systems, this is an extremely powerful weapon with a significant crew requirement.

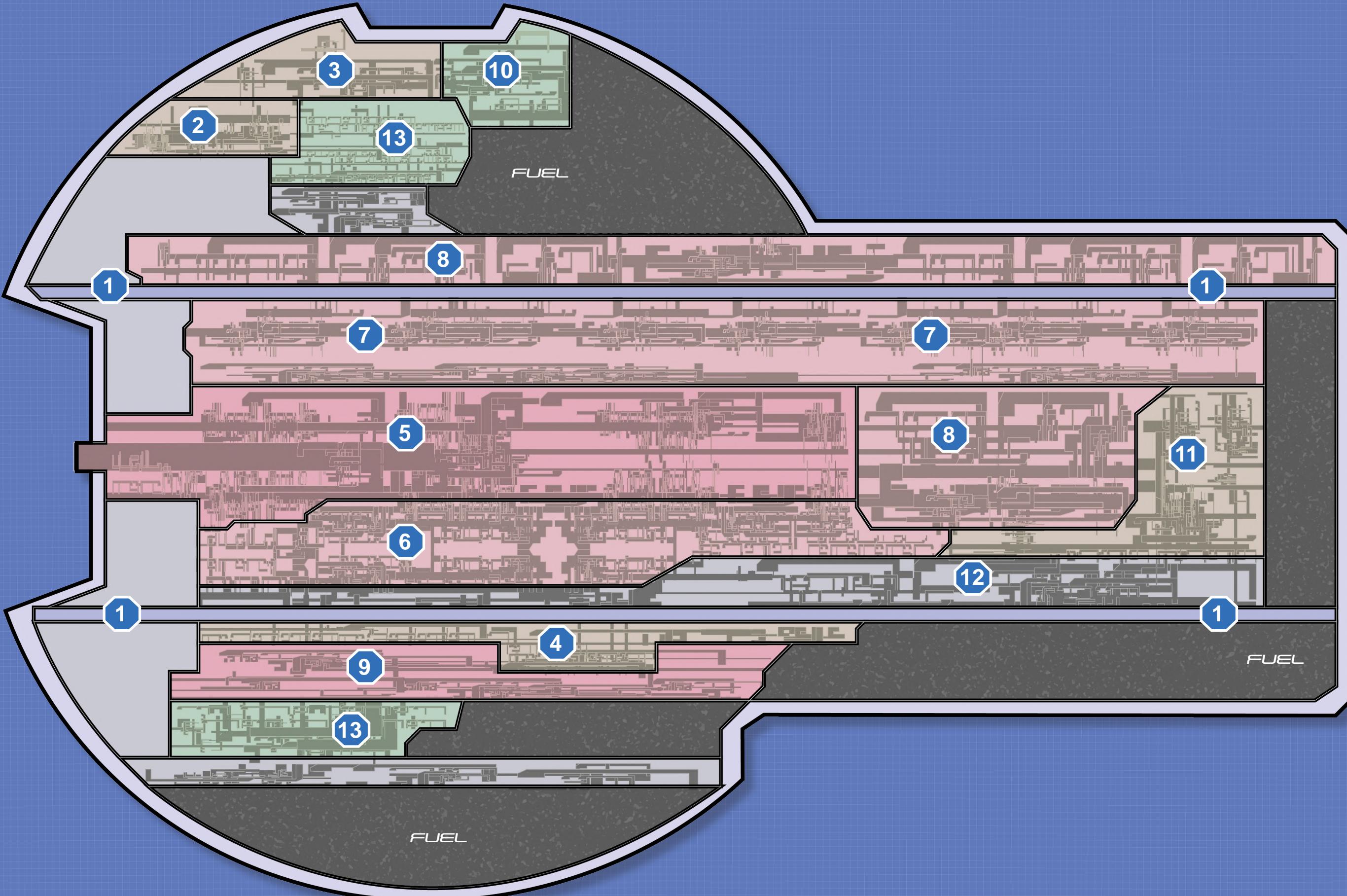
The meson gun apparatus is an extremely dangerous piece of equipment, consisting of multiple particle accelerator loops which feed into the central meson generation chamber. The particles created are not actually mesons but are referred to by their traditional misnomer, which was applied for security reasons. They are in fact super-exotic charged particles which exist in space-time for only picoseconds. Once created, they are aligned by a powerful magnetic field which causes them to be projected in a desired direction. Proper coordination of direction and decay causes the particles to dump their enormous energy at a point of the gunnery officer's choice.

Naturally, all this machinery is heavily shielded; a breach in the magnetic containment might result in an uncontrolled release of particles which, whilst not as devastating as a meson gun hit, would do significant damage to the vessel. The armour surrounding the meson gun is in part to protect the Tigress from its own main weapon. Access to this area is as strictly controlled as the command core.

Main Power Generation Centre (6)

The primary power generation system is located at the very heart of the ship, with armoured bulkheads and internal armour sections protecting the critical systems. Access is restricted to authorised personnel only. Sentries are normally posted on all access points that are not fully locked down. This is the engineering command centre for the entire ship and the duty station of the engineering officer. It contains an extensive damage control coordination suite. There are also engineering suit ready areas, where specialist vacc suits used by the ship's engineers are looked after and kept ready for instant use.

THE THREE



Power generation uses six identical TL15 fusion plants, each of which has its own small control area, surrounded by armoured bulkheads. Each reactor has a reactor chief, a junior engineering officer, who is overseen from the main control area by the highly experienced senior engineering team. This is designed for survivability as well as ease of maintenance; a Tigress can operate with one or more of her main reactors shut down or opened for maintenance.

The main power generation centre is the only part of the ship whose destruction could take it out of action in one blow. A rupture in the fusion containment systems of multiple reactors might flood the area with plasma, although contrary to many popular vid shows a reactor will not explode. Indeed, a breach should be contained by the surrounding bulkheads allowing the other reactors to continue operating unhindered. A single reactor going offline will weaken the ship's combat capabilities but not force it out of action.

Jump Drive (7)

The enormous jump drive of the Tigress is located aft of the power generation centre and fed directly from it. Internal access between drive systems and the power chambers is easy for personnel with the right authorisation, although this area is patrolled by the duty security team on a frequent basis. The jump drive is overseen by a specialist team led by the jump chief, an experienced engineering officer who will probably someday go on to be the chief engineer of a smaller vessel. It is standard practice for a qualified astrogator – although a junior officer more than likely – to be stationed in this area during an alert. This officer has one job in combat; to keep an emergency escape jump plot updated and ready to go. In the utmost extremity, this emergency astrogator and the jump chief can implement the process and save a crippled ship.

Manoeuvre Drive (8)

The manoeuvre drive is located in two main chambers, above and below the jump drive. It cannot be disabled by a single hit unless the ship is so shattered it is unable to move at all. The equivalent positions to port and starboard of the drive are occupied by fuel tanks and cargo holds. Each drive segment is commanded by an experienced engineering officer who answers to the manoeuvre chief, the latter having a duty station in the main engineering centre.

Both manoeuvre drive chambers – and also the main engineering centre – have backup controls for the ship and are assigned a pilot when the vessel is at action stations. Any of these individuals can guide the vessel out of trouble if necessary, although more commonly their task is to advise the manoeuvre drive officers of what the bridge is likely to command next and monitor the correlation between what the manoeuvre drive is doing and what it is being commanded to do. Anomalies can often be corrected before they become serious problems.

Primary Screens Control (9)

The ship's main screen generation machinery and the control areas used to operate it is located more or less opposite the command core on the other side of the meson gun apparatus. More than half of the screen generation equipment is scattered about the ship, mostly close to the outer hull. The screens control complex has a dedicated sensor operations chamber; as with most systems this can be switched to supporting other functions such as navigation or weapons at need, but specialisation is more efficient.

It is claimed that some Tigress dreadnoughts are fitted with black globe generators. Depending on the story these are either advanced systems created by the Imperial Navy's excellent Research and Development staff or artefacts found in a cache of alien hardware. The navy does not confirm or deny the presence of these advanced systems aboard its ships. If they were present they would be commanded from this chamber.

Medical Centre (10)

The ship's main medical centre is located aft, close to the flight operations centre. It is likely that casualties will be among small craft crews rather than personnel from the Tigress herself, or may be incurred during boarding and planetside operations. The medical centre is well-equipped and staffed by highly qualified officers supported by a nursing staff and sick bay attendants who may be 'borrowed' for general-crew duties when the medical centre is not running at capacity.

Interface Support Centre (11)

The interface support centre fulfils a number of functions. It contains a command area for boarding actions and planetside personnel excursions, and is the initial reporting-aboard area for personnel arriving through the flight decks. In addition, the ship's main armoury is located here, ready to outfit boarding parties and anyone else leaving the ship. Armed sentries are always present.

Cargo and stores are processed through the ISC and conveyed into the cargo handling areas, and thence the holds. Necessary items are then broken out of their shipping containers and conveyed to whatever parts of the ship require them. Munitions handling has a separate and dedicated system running around the inside of the main hull to the magazines, whilst minor items are distributed by crewmembers pushing grav-trolleys. In all, this is one of the busiest parts of the ship and as the main entry point it is secured by armed sentries and overseen by an assigned officer. This position is unpopular and is informally referred to as the ORC – ‘Officer Responsible for Chaos’.

Flight Operations Centre (12)

The flight operations centre contains control and coordination facilities for the ship’s extensive small craft contingent. Accommodation for pilots and support crew is also present, along with briefing and training chambers. The FOC leads aft into the ‘backpack’ which contains hangars and docking spaces for small craft, along with launch and recovery systems.

During small craft operations the FOC is very busy, with craft direction officers overseeing the launch, docking and actions of individual or groups of craft. The flight logistics chamber is staffed by a group of unsung heroes who constantly monitor craft fuel and supply levels, maintenance requirements and all other aspects of smallcraft administration, and in addition send parties to physically check that cargo manifests actually match what is being brought aboard.

General Operations Area (13)

General operations areas contain accommodation for crew, as well as supporting areas like galleys and storage. Crew are, where possible, accommodated close to their duty station. There are some exceptions; survivability concerns require that some flight and engineering crew be at the other end of the ship to their duty station, ensuring the vessel does not lose all its specialists in one disaster. For the most part, however, personnel will live, work and take recreation with the same colleagues and may not visit other parts of the ship unless an emergency or special task requires it.

ARMAMENT

The Tigress is built around its spinal meson weapon and will engage all but the most trivial targets with this by preference. The meson gun is one of the most advanced systems available to the Imperial Navy and all information about it is closely guarded. In the event a Tigress were crippled, at the very least its main weapon would be put out of action by the removal or destruction of key components. Ideally, the most specialist equipment would be completely slagged with incendiary devices to prevent reverse engineering. However, naval ships do not go into action with demolition charges primed in case of defeat; rigging the main gun for destruction would take at least a few minutes. The specialist targeting and generation software associated with the gun is restricted to the gunnery computer and its backups; slagging these will not take long.

Secondary armament takes the form of 430 small missile bays, distributed in groups around the hull. Each bay cluster has its own dedicated missile magazine which feeds into the bays through a bulkheaded feed system. There is no central missile magazine but munitions can be passed from one magazine to another through the munitions handling system or sent back to the interface support centre for reallocation. Manual recovery of missiles from a crippled bay is practiced regularly, although usually it is possible to simply reverse the hoists and send missiles back to the magazine. Armed weapons must be made safe by reinserting their arming pins before the system will receive them.

Most missiles carried aboard are conventional ship-killers or carry support payloads. Each Tigress has ‘an unspecified, non-zero’ number of nuclear warheads aboard. Most are ship-to-ship weapons but city-killers are routinely carried by all capital ships. Use requires special authorisation known as nuclear release, which can be granted by the ship’s captain or a flag officer aboard. Any use of nuclear munitions, or weapons against non-military targets, would be grounds for a court of inquiry. Nuclear warheads are held in only some of the ship’s magazines, which have enhanced security and protection. The navy has not released any information about which magazines are so equipped.

Although some older battleships of greater displacement remain in service, the *Tigress* dreadnought is the largest line-of-battle vessel currently in service with the Imperial Navy in the Spinward Marches. Each BatRon of *Tigress*-class vessels is virtually a fleet unto itself, as each ship carries 30 squadrons of heavy fighters (with 10 FHs per squadron). A BatRon of eight ships carries 2,400 heavy fighters.

At present, only one *Tigress* BatRon is deployed in the Spinward Marches, assigned to 212th Fleet, at Rhylanor. Additional *Tigress* BatRons are generally assigned one per sector.

Within the sphere, layered decks hold the various on-ship functions such as quarters, computer and electronic equipment, fuel treatment and maintenance areas. Appended to the back of the sphere is a large heavy fighter launch and recovery installation. Fighters are launched to the rear, to starboard, and recovered from the rear, to port; this arrangement prevents them from entering the meson beam when it is in use, as well as providing some armoured bulk between the fighters and the enemy.

Note all the software cannot run at its full rating together. What is running is determined by the needs of the crew at a given time. A full crew is carried but virtual software may be used, if necessary, due to losses.

TL15

		Tons	Cost (MCr)
Hull	500,000 tons, Standard	—	25000
	Reinforced	—	12500
	Military	—	6250
Armour	Bonded Superdense, Armour: 17 Radiation Shielding	68,000 —	34000 12500
M-Drive	Thrust 6 (size reduction x3)	21,000	90000
J-Drive	Jump 4, (fuel efficient x2)	50,005	93759.375
Power Plant	Fusion (TL15), Power 440,000	22,000	44000
Fuel Tanks	J-4, 20 weeks of operation	191,000	—
Bridge	Holographic Controls	140	3125
	Command Bridge	40	30
Computer	Core/100	—	130
Backup	Core/90	—	120
Sensors	Advanced x3	15	15.9
	Distributed Arrays	10	10.6
	Enhanced Signal Processing	2	8
	Military Countermeasures Suite	15	28
Weapons	Meson Spinal Mount (TL15)	66,000	28600
	Small Missile Bays (size reduction x3) x430	15,050	7740
	Medium Repulsor Bays x22	2,200	1320
	Triple Turrets (long range beam lasers) x100	100	287.5
	Triple Turrets (sandcasters) x100	100	175
	Double Turrets (high yield fusion guns) x100	100	490
	Single Turrets (intense focus particle beam) x100	100	520
	Point Defence Laser Batteries (Type III) x50	1,000	1000
	Missile Storage (7,680 missiles)	640	—
	Sandcaster Canister Storage (6,000 canisters)	300	—

Crew

Captain, Pilots x3,
Small Craft Crew x600,
Astrogator, Engineers
x922, Maintenance x339,
Medics x23, Gunners
x509, Administrators
x165, Officers x262,
Sensops x65

Hull: 366,666

Running Costs

MAINTENANCE COST

MCr29.735911/month

PURCHASE COST

MCr356830.9335

Screens	Meson Screens x7 Nuclear Dampers x9	70 90	140 90
Armoured Bulkheads	Bridge	14	2.8
	Jump Drive	5,000.5	1000.1
	Manoeuvre Drive	2,100	420
	Power Plant	2,200	440
	Missiles	64	12.8
	Meson Screen	7	1.4
	Nuclear Damper	9	1.8
	Sensors	4.2	0.84
	Small Missile Bays x430	1,505	301
	Meson Spinal Mount (TL15)	6,600	1320
Craft	Docking Spaces (50 tons) x285 Full Hangars (50 tons) x15 Heavy Fighters x300	15,675 1,500 —	3918.75 300 22974
Systems	Armoury	117	29.25
	Briefing Rooms x20	80	10
	Fuel Processor (50,000 tons/day)	2,500	125
	Launch Tubes x3	1,500	750
	Medical Bays x25	100	50
	Recovery Decks x3	1,500	750
	Repair Drones	5,000	1000
	Workshops x12	72	10.8
Staterooms	Standard x1,775 High x3	7,100 18	887.5 2.4
Software	Advanced Fire Control/3	—	18
	Anti-Hijack/3	—	10
	Auto-Repair/2	—	10
	Battle System/3	—	36
	Broad Spectrum EW	—	14
	Electronic Warfare/3	—	24
	Evade/3	—	3
	Jump Control/4	—	—
	Launch Solution/3	—	16
	Library	—	—
	Manoeuvre	—	—
	Intellect	—	—
	Screen Optimiser	—	5
Common Areas		1,780	178
Cargo		7577.3	—
Total: MCr396478.815			

Power Requirements

Basic Ship Systems

100,000

Manoeuvre Drive

300,000

Jump Drive

200,000

Sensors

34

Weapons

21,650

Screens

390

Fuel Processor

2,500

Medical Bays

25

Launch Tubes

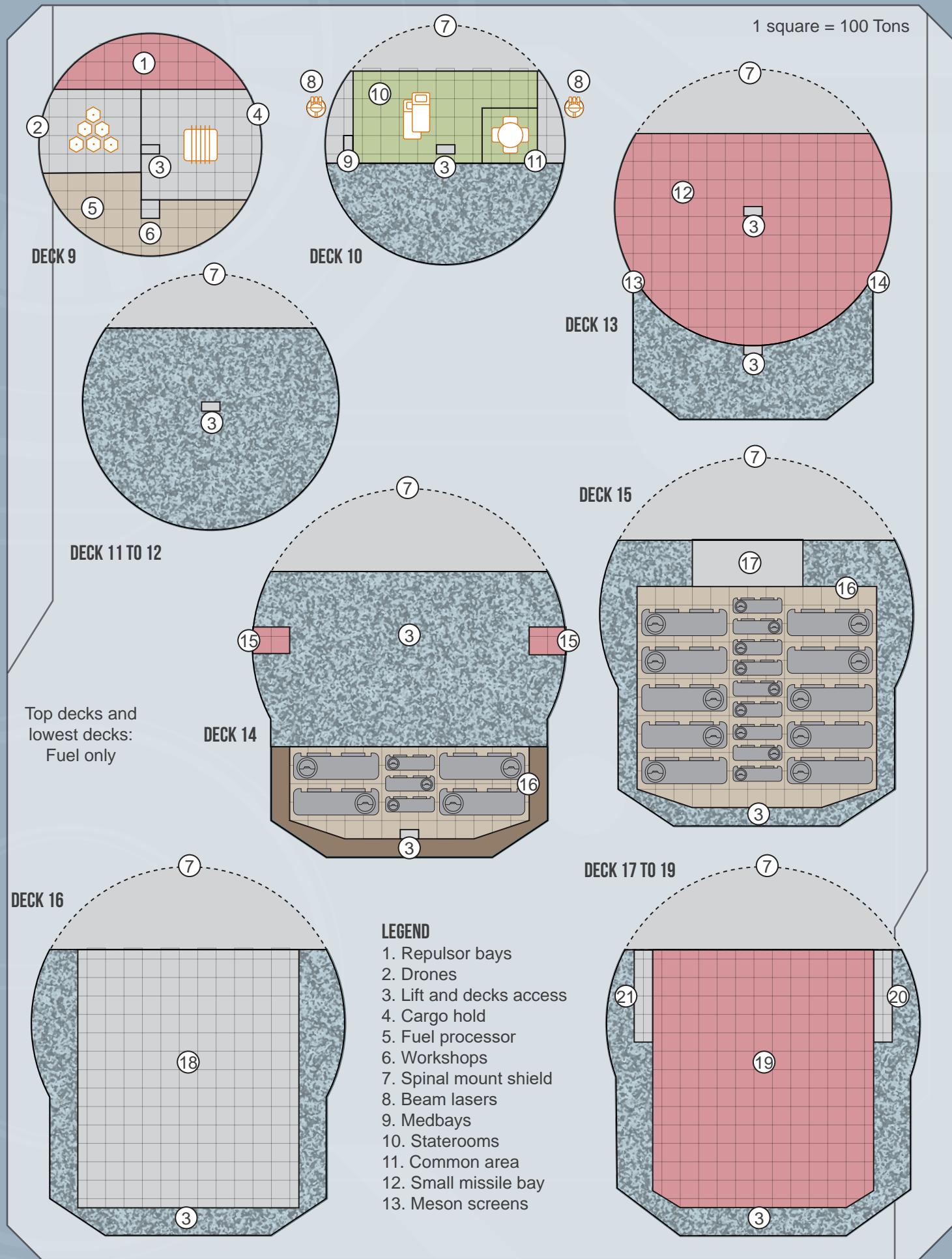
1,500

Recovery Decks

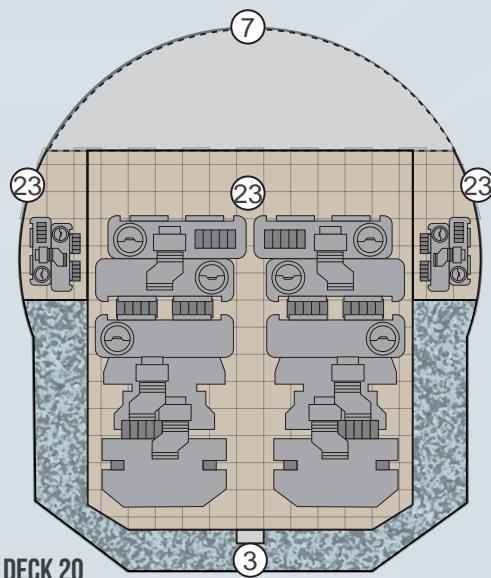
1,500



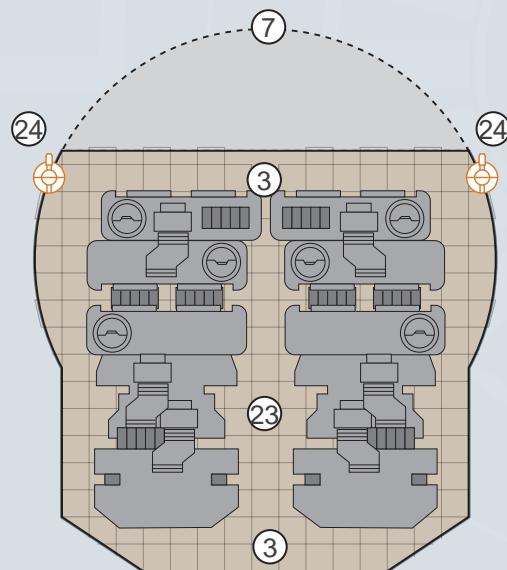
1 square = 100 Tons



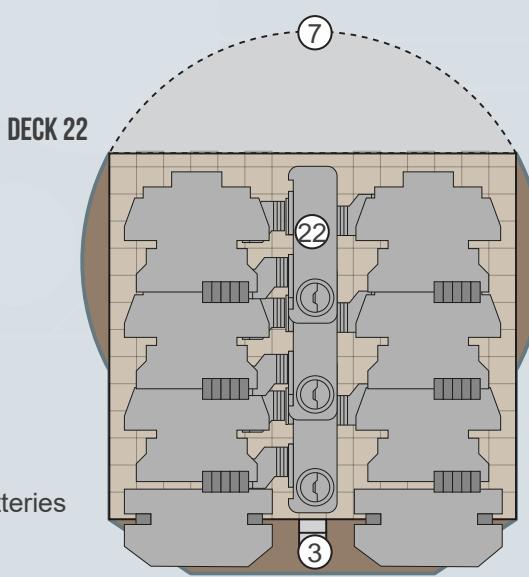
1 square = 100 Tons



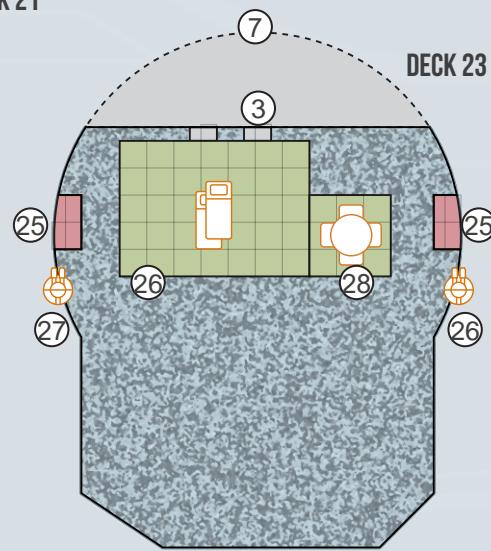
DECK 20



DECK 21



DECK 22

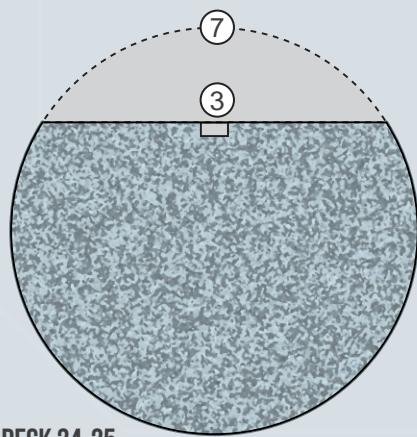


DECK 23

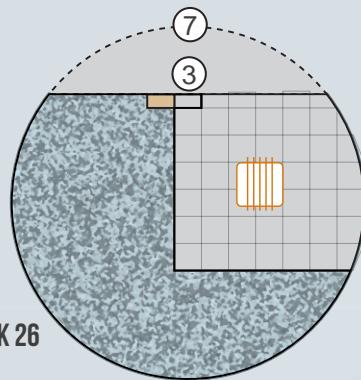
- 14. Nuclear dampers
- 15. Point defence batteries
- 16. Power plant
- 17. Full hangars
- 18. Docking space
- 19. Spinal mount
- 20. Launch
- 21. Recovery deck
- 22. Manoeuvre drive

- 23. Jump drive
- 24. Particle beams
- 25. Point defence batteries
- 26. Fusion guns
- 27. Staterooms
- 28. Common area
- 29. Cargo hold

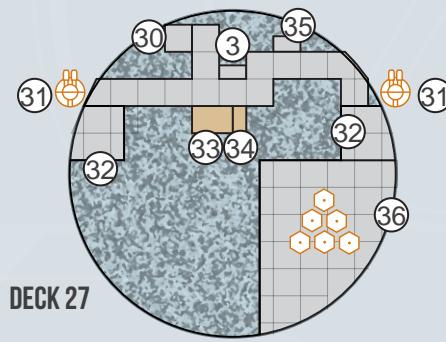
- 30. Command bridge
- 31. Command bridge
- 32. Sandcaster barrels storage
- 33. Bridge
- 34. Sensors
- 35. Briefing rooms
- 36. Drones



DECK 24-25

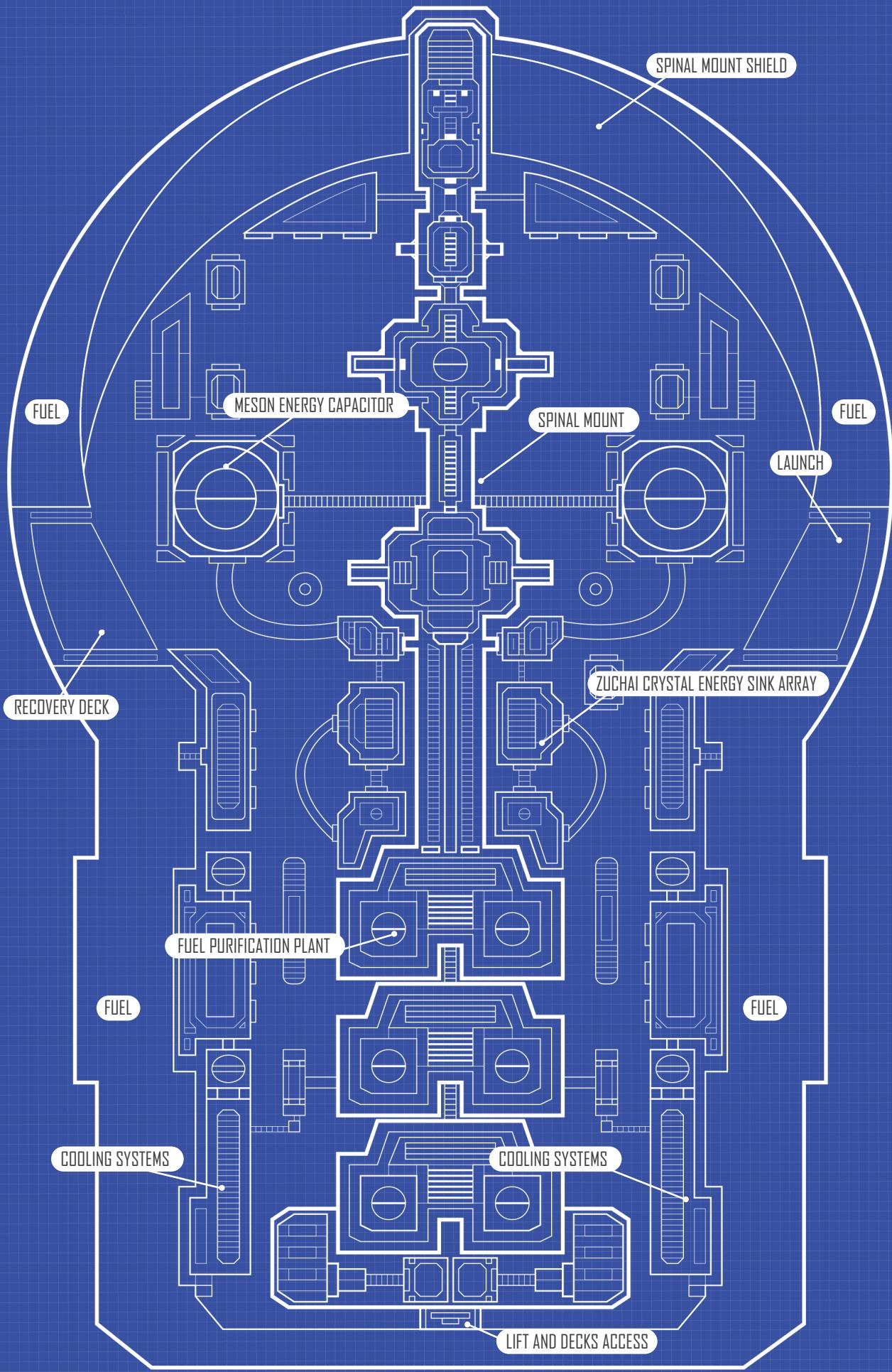


DECK 26

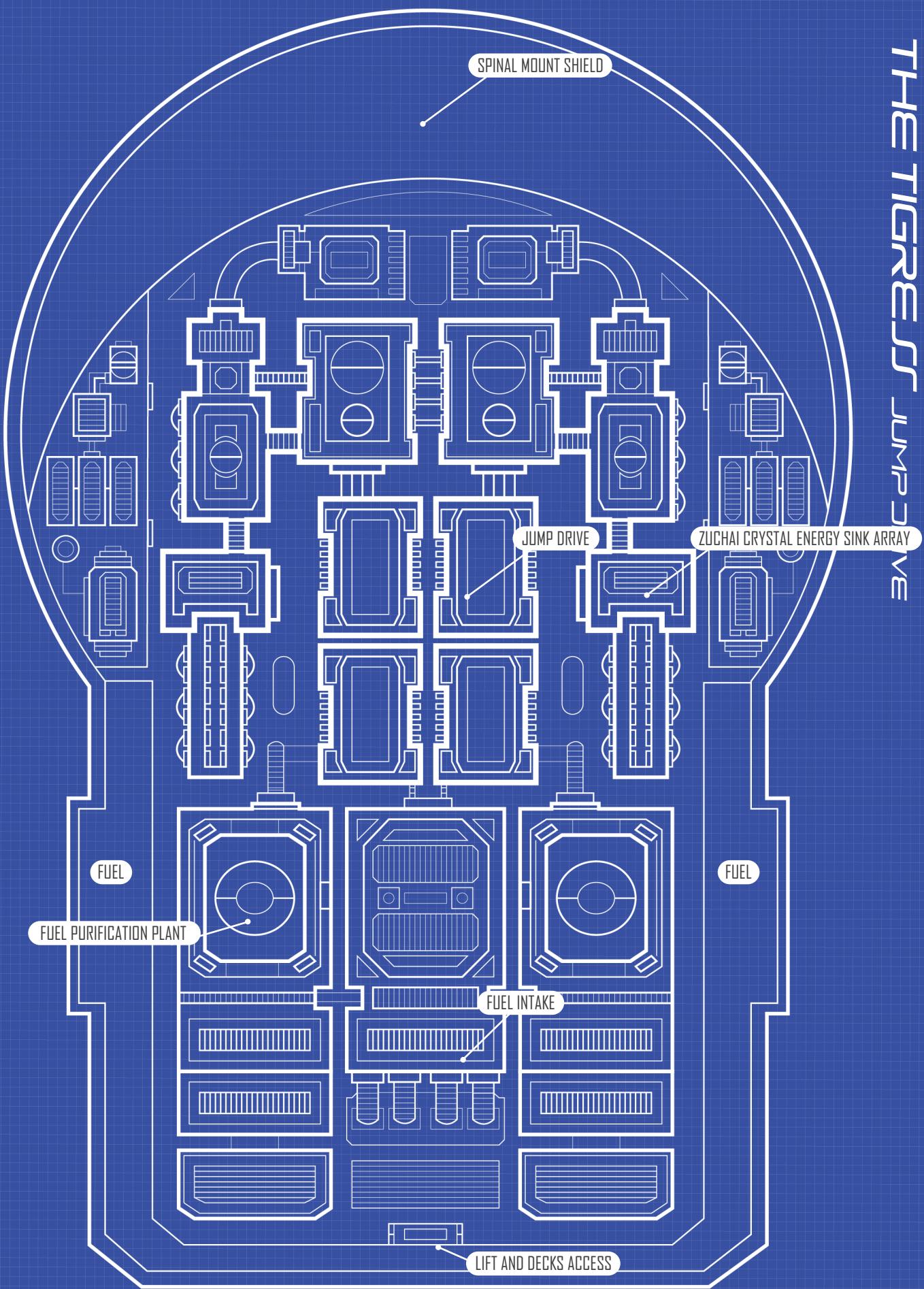


DECK 27

THE TIGRESS SPINAL MOUNT



THE TIGER JUMP DRIVE



Tertiary armament consists of two weapons systems. The first is intended for short-range engagements, typically when finishing off a crippled enemy ship or repelling an attack by destroyers. It consists of one 100 dual-mounted high-yield fusion guns grouped in batteries of four turrets. For engagements at longer range, 100 single-mount intense-focus particle accelerators are mounted, also grouped into batteries of four.

Tertiary weapons are mounted in two strips, at right angles to one another, slightly recessed into the main armour belt. Whilst this does slightly limit arc of fire, enemy vessels are likely to pass through the engagement envelope of multiple batteries during an attack pass. Batteries alternate; fusion guns then particle accelerators, then another fusion battery. Elements of the tertiary armament can bear in almost all directions, although the main weapons embrasure and the flight operations 'backpack' may obstruct some arcs.

Whilst fusion guns and particle accelerators are offensive armament, albeit of a modest sort compared to the spinal and missile systems, the ship's laser armament is considered defensive in nature. It consists of 100 triple-mounted long-range beam lasers. Turrets are grouped as batteries of two and dispersed across the outer hull to protect against missiles and small craft. These are backed up by 50 point-defence batteries made up of fast-traverse light laser turrets.

Missile defence consists of multiple layers, of which the point defence systems are the last before the ship's armoured hull. Missile salvos can be countered using electronic warfare and 22 medium repulsor bays distributed singly around the hull. These might also be used against small craft but are not especially effective in that role. The laser armament provides another layer of defence. Against most other weapons, the Tigress relies on agility to be a hard target – for its size – and 100 triple-mount sandcaster turrets. These are grouped into batteries of four, each fed from a dedicated magazine in the same manner as the missile bays.

Additional protection is provided by an array of nuclear dampers distributed around the outer hull and controlled from the screens chamber, and a battery of meson screens. These are placed to protect critical areas inside the ship; the power generation chamber, command core and drives. Depending on the direction

a meson attack comes in from, it may have to pass through multiple screens before reaching the targeted particle decay point.

CRAFT

The Tigress is normally quoted as carrying 300 50-ton fighters but this is rarely the case on deployment, as doing so would leave the ship with no interface or liaison craft. The '300 fighters' figure is a propaganda and publicity quote, although some ships do carry a large contingent. Craft are normally grouped into squadrons of 10, on the assumption that having 10 of a given craft means being able to field a small craft squadron of eight. Other craft are likely to be in for maintenance or repair, or down due to a fault. Over the course of a deployment, 80% serviceability is a good performance.

Typically small craft are 50-ton types, although smaller vessels such as the military gig might be carried. The launch tubes, located to starboard, can handle craft of up to 50 tons as can the recovery decks to port. Craft operations are conducted to the rear of the ship to place its armoured bulk between them and possible hostiles, and to prevent craft from straying into the fire arcs of major weapons. A complement of about 60% fighters to 40% utility craft is considered suitable for peacekeeping and interdiction operations, with the balance shifting more towards fighters for warfighting deployments. This gives 18 squadrons of nominally 10 fighters, translating to about 144 available fighters at any given time.

Non-fighters are usually naval cutters configured in a variety of ways. The standard 'some personnel and some cargo' approach is a workhorse that will typically make up about half the cutters aboard a Tigress, with pure transport variants making up most of the others. Specialist designs optimised for electronic warfare, crew training, parent-vessel inspection and repair, search and rescue, and other tasks will normally make up about 20% of cutter strength.

These allocations and availability percentages can vary considerably but at any given time a typical Tigress has available about 140–150 fighters, 45–50 general-purpose cutters, around 24–32 cargo cutters and perhaps 16–18 specialist cutters. Naval cutters may or may not be armed. Those intended to carry boarding parties tend to be and are always escorted by fighters.

CREW

The crew of a Tigress dreadnought is intended to be resilient and capable of absorbing casualties without greatly impacting effectiveness. Virtual crewmember software is available but wherever possible the navy prefers to have people manning the stations. There is always a need for semi-skilled hands to assist with maintenance, food preparation and cleaning, and sentry posts must be staffed. Personnel may also be involved in planetside operations or aboard small craft carrying out boardings. Likewise, officers and petty officers have administrative duties and will rotate through posts such as officer of the watch. Senior command officers do not do so, nor do department heads, but other officers will spend at least some of their time on general running-the-ship duties.

Command and Administration

A Tigress requires a large command crew and a great deal of administrative assistance to keep track of everything from stores levels to which crewmembers are on report for misbehaviour. Enlisted personnel assigned to command and administration are usually from the Crew branch whilst officers are from Line. They may have started out as specialists but by the time they join the command crew of a dreadnought they have become very much generalist leaders.

Commanding Officer – The commanding officer of a top-end dreadnought is always a full captain and usually one of considerable seniority. This officer will have commanded a number of ships, probably starting with a humble corvette or courier as a promising lieutenant. It is extremely rare for a non-warship commander, such as the captain of a tanker, to return to commanding warships, so those who get a non-fighting command know they will never be captain of a dreadnought.

Executive Officer – The XO will be a highly experienced officer holding the rank of commander. Most of those who are ever going to command a warship get one earlier in their career, so this officer will almost certainly be someone better suited to a supporting role rather than being in charge. However, they will be highly competent and capable of taking over the ship at need.

Master-at-Arms – A senior enlisted crewmember with the rank of master chief petty officer, the master-at-arms is the only enlisted person aboard a dreadnought with complete access to the entire ship. The master-at-arms is responsible for crew discipline and also for representing their interests to the captain and command team.

Logistics Officer – The role of logistics officer is unglamorous but essential. The post is usually held by a commander or lieutenant commander, and much can be learned about this officer from their rank. A lieutenant commander is probably on the road to command, and will probably go on to a stint as XO of a smaller ship before getting a destroyer or light cruiser to command. Someone who makes commander in this post is either serving as squadron logistics officer or destined to remain forever a supporting officer.

Intelligence Officer – A dreadnought will usually have a dedicated intelligence officer holding the rank of lieutenant commander, occasionally a Line officer but more commonly someone headed for a staff assignment. The intelligence officer will be in the ship's chain of command but is likely to be the last command-rank officer chosen to take over before working through the lieutenants.

Intelligence, Logistics and Administrative Personnel

Personnel – The logistics and intelligence officers are assisted by a staff of junior officers and enlisted personnel including accountants, legal specialists and clerical staff, as well as experts in intelligence analysis. These mostly work in the admin centre or run errands for the command crew. In action they are assigned to damage control parties or act as emergency replacements for casualties.

Officer Cadets – Some ships carry a varying number of officer cadets and sometimes more senior officers undergoing a period of specialist training. These additional officers are made use of according to their skills, either leading small groups or assisting other officers. Some may be attached to the ship's specialist departments, while others are non-specialists in Line.

Flag Officer Aboard

Not all dreadnoughts have a flag officer present. One that does not is known as a 'private' ship, in the sense that the captain makes all the decisions. A flag officer might be an admiral in charge of a fleet or a segment of it, and in some cases a division (half-squadron) of two dreadnoughts might be led by a commodore. The flag officer, if present, is in charge of the fleet and its mission but the commanding officer is still responsible for the ship. Good officers understand each other's requirements and remit, and learn to work together. However, friction is likely when the flag officer wants to micromanage the ship or the captain disagrees with the way the mission is to be carried out.

Squadron Commander – A squadron of four dreadnoughts might be commanded by a commodore if for some reason it is operating detached from a fleet, but would normally have at least a rear-admiral aboard if it is the flag squadron of a larger force. The presence of a rear-admiral suggests the dreadnoughts are part of a force containing perhaps another capital ship squadron, a fleet carrier and a cruiser squadron plus escorts. Supporting squadrons will likely be commanded by commodores.

Flag-Captain – The rear-admiral is assisted by a staff officer holding the rank of captain, who may or may not ever have commanded a ship. An XO who is not selected for command may end up following this path to flag rank.

Flag-Lieutenants – Additional officers assisting the admiral are known as flag-lieutenants even if they hold commander or lieutenant commander rank. As with the flag-captain, these officers are not in the ship's chain of command but are empowered to speak for the admiral in some cases. They cannot give orders but can phrase suggestions as 'the admiral would like you to...'

Admiral's Staff – The admiral will be assisted by several petty officers or able spacehands who carry out administrative or security work, and possibly a personal steward.

Flight

Flight personnel operate the ship's bridge systems and pilot auxiliary craft. Flight is considered the most command-worthy of the specialist departments and is very officer-heavy due to its highly technical nature. A ship with no or few small craft might have quite a small Flight branch but a Tigress dreadnought needs pilots and other crewmembers for 300 small craft.

Senior Bridge Officer – The senior bridge officer will hold the rank of commander or possibly lieutenant commander. They head Flight and are often a qualified astrogator. Typically this officer is the third in command of the vessel.

Astrogator – The astrogator of a dreadnought will be a senior officer, probably holding the rank of lieutenant commander or perhaps commander if this is the lead ship of the squadron. The position of astrogator is arguably the most important of all specialist posts and generally leads to a transfer from Flight to Line as the XO of a smaller ship. Since many command officers pass through this post on the way to command, a dreadnought will have additional qualified astrogators among its senior officers but be assigned two or more assistant astrogators as backups and trainees for the primary astrogator.

Chief Pilot – A dreadnought's most senior pilot is usually a lieutenant commander. This individual will rarely control the vessel but is responsible for overseeing the day-to-day piloting operations and training personnel in the role. The chief pilot may serve as a 'sevenday-best' pilot when something particularly complex must be done.

Flight Operations Officer – The flight operations officer will usually be a lieutenant commander. This officer oversees the maintenance and operations of the ship's craft and liaises with other vessels in the vicinity. The flight operations officer is usually a qualified pilot but may not be – they are an administrator and coordinator rather than a doer.

Communications Officer – The communications officer will usually be a lieutenant commander and is responsible for both routine communications and ensuring a proper sensor watch is maintained. Just as the chief pilot trains and oversees operations in that area, the comms officer is responsible for all internal and external communications, as well as relevant fields such as attempting to penetrate enemy cyphers.

Flight Crew – Additional junior officers and enlisted personnel make up the rest of the flight crew. Craft pilots are usually petty officers, with the lead boat of a squadron commanded by a sublieutenant. Capital ship pilots are usually officers or senior petty officers.

Boat Crew – Typically fighters are single-seaters with just a pilot assigned but naval cutters generally have a second crewmember, usually someone with technical skills rather than a second pilot, although it might be a gunner or other specialist. Boat crew are under the command of Flight – specifically the flight operations officer – but remain in their own branch of service and will assist with that branch's work aboard the dreadnought.

Gunnery

The ship's weapons and defensive systems are operated by the gunnery crew, under the command of the gunnery officer and their subordinates. The gunnery officer is usually the fourth in command of the ship, after the senior bridge officer. As a rule, gunnery personnel are either screens or weapons experts, though cross-training is common. It is possible to reach the rank of gunnery officer through either the 'weapons' or 'screens' path, providing the officer has a good understanding of both.

Gunnery Officer – The gunnery officer of a dreadnought is almost always a commander, who may also serve as squadron gunnery officer responsible for maintaining and raising the standard of weapons operations throughout the squadron. A few gunnery officers become non-specialists and go on to command by way of a stint as logistics officer, then XO of a smaller ship. Most of those who make captain become fleet gunnery officers who oversee the gunnery training of squadrons and even whole fleets.

Spinal Weapon Officer – The spinal mount of a dreadnought is arguably its reason for existence. The officer in charge of that weapon usually holds the rank of lieutenant commander or possibly commander. Specialist training is required to be able to operate a meson gun and most gunnery officers in the Imperial Navy have not received it. It is not necessary to pass through this post to become gunnery officer for a whole vessel but it is considered the most direct and effective path. As a result, places on the Meson Gunnery Course are subject to hot competition.

Missile Officer – The missile officer is the second most important specialist gunnery officer and will usually be a lieutenant commander. Missile gunnery is a well-respected specialist area, although not as likely to lead to big things as command of a spinal weapon.

Beam Weapons Officer – The beam weapons officer is in overall command of the fusion and particle accelerator batteries but not the laser turrets. Although these are technically 'beam' weapons, they are considered defensive systems aboard a Tigress and placed under the command of the defensive weapons officer. The beam officer will usually hold the rank of lieutenant commander.

Defensive Weapons Officer – The defensive weapons officer is responsible for keeping small craft at bay and destroying missiles. The holder of this post usually holds the rank of lieutenant commander, and controls the laser turrets, point defences, sandcasters and repulsors.

Screens Officer – The screens officer will be a lieutenant commander and is responsible for nuclear dampers and meson screens. If the vessel has a black globe generator, the screens officer will receive additional training and take responsibility for it.

Electronic Warfare Officer – The electronic warfare officer holds the rank of lieutenant commander and is responsible for a range of electronics-related tasks. The use of sensors for intelligence gathering is part of this role, with information fed to the intelligence officer. Gunnery sensors are also under this officer's command, as well as systems designed to deny the enemy information or interfere with weapons guidance.

Gunnery Crews – All gunnery personnel, commissioned or enlisted, are specialists in the operation and maintenance of their own systems. They will often be cross-trained in other weapons as well. As a gunnery officer becomes more senior, they need to see more of the big picture; a battery commander need only optimise fire at targets they are given but the gunnery officer must prioritise targets according to multiple criteria in a rapidly-changing situation. Enlisted personnel do not need such a wide perspective. Gunners are usually spacehands, with petty officers commanding a battery. Gunnery personnel are sufficiently skilled to assist with general maintenance when not looking after their own systems.

Engineering

The engineering department, which also contains the ship's technical experts, is the least prestigious of the specialist branches. Command usually 'moves aft' in navy parlance, with the senior flight officer, then the gunnery officer, taking precedence over the chief engineer. However, engineering and technical personnel are vital to the operation and even survival of a naval vessel. Engineering ratings are the ship's foremost rescue and damage control experts and their actions are usually coordinated by one of the senior engineers.

Chief Engineer – The chief engineer will usually hold the rank of commander and aboard the lead ship of a squadron will be responsible for engineering throughout the squadron. Few engineering officers leave their branch to become ship commanders; most progress to Staff, becoming shipyard supervisors, repair, and salvage experts, or vessel designers rather than fighting captains.

Power Systems Officer – The senior power systems engineer will be a lieutenant commander. Aboard most ships which use a three-watch system, the power chief heads one of the watches and oversees all engineering and technical tasks. Progress to chief engineer requires a solid understanding of all aspects of shipboard engineering but it is rare for an officer to cycle through all sub-specialities. Instead, cross-training and experience create a working knowledge of the whole ship.

Manoeuvre Drive Officer – the manoeuvre drive officer will be a lieutenant commander and usually lead one of the three engineering watches.

Jump Drive Officer – The jump drive officer will be a lieutenant commander and lead one of the engineering watches. Jump drive operations aboard a dreadnought are particularly complex as it is virtually certain to be operating with a squadron and must make coordinated jumps. As a result, 'J' engineers are more highly regarded than 'M' engineers.

Support Systems Officer – The officer in charge of life support systems will usually be a senior lieutenant, who will move up to head the power, jump or manoeuvre team of their next ship. It is navy policy that all engineering officers spend at least some time in the specialist life support field due to its importance to the survival of ship and crew.

Engineering Crew – The branch heads are supported by junior officers and enlisted personnel, all of whom understand at least the basics of the whole engineering role. Engineering personnel are trained to a high standard in vacc suit and damage control operations, and often detached to assist with problems elsewhere in the ship. Some engineering crew may be assigned to small craft operations either as crewmembers or to maintain the vessels.

Technical

The Technical branch of a dreadnought exists in parallel to Engineering and answers to the chief engineer. It is subdivided into 'hard' technical fields such as gravitics and electromechanical engineering, and 'soft' fields such as cyber security.

Chief Technical Officer – The CTO holds the rank of lieutenant commander and is equivalent in importance to the drive or power chiefs. Very few technical officers leave the branch to become non-specialists but some are promoted into a training role or to head a highly specialised formation such as a fleet cyber-warfare unit. Others go to Staff to assist and advise flag officers.

Technical Crew – The ship's technical complement includes junior officers, whose field tends to be highly specialised and enlisted personnel. Some of the latter are also very focussed such as gravitic systems technicians, whilst others are more generally skilled and maintain or troubleshoot complex equipment.

Crew

The Crew branch is a catch-all for general-duties personnel and a range of specialists without whom the ship or its crew could not function for long. Crew is the most varied of the ship's branches, with several specialist areas all answering to the operations officer.

Operations Officer – The position of operations officer is normally held by a lieutenant commander who takes overall responsibility for everything necessary to keep the ship and crew functioning. This includes cargo handling, watch assignments and the deployment of internal security patrols. The operations officer is usually behind the chief engineer in the ship's chain of command but far more likely to eventually become a commanding officer. The usual progression in this case is to logistics officer and XO of a small ship.

Deck Officers – The operations officer is assisted by various lieutenants and sublieutenants who are collectively termed deck officers. They perform general duties as needed and take charge of damage control operations. Deck officers belong to Line but may cross-train into one of the specialist fields. If so, a transfer to that specialism is possible.

Medical Personnel – The ship's medical complement is led by the medical officer, who may be a commander or lieutenant commander aboard such a large ship. Medical officers are not in the chain of command and are assisted by junior officers and enlisted personnel who may be highly trained nurses. Some medical personnel are termed sick bay attendants and have only basic medical training. These individuals perform routine monitoring and odd jobs as needed and may be assigned to boarding parties as an emergency medic.

Stewards – Stewards prepare and serve food, which is a huge task aboard a large ship. They are trained in diplomacy and etiquette as they advance in rank and experience, and may be selected to assist officers in making a good impression on foreign diplomats.

Welfare Personnel – A dreadnought carries a small complement of personnel whose task is to look after the mental and spiritual wellbeing of the crew. This may include one or more chaplains, who are usually junior officers. Navy chaplains are usually secular, in that they are trained to assist in a range of religious observances but are not necessarily believers themselves.

CREW NUMBERS

The official crew complement for a Tigress dreadnought, not counting cadets and flag officer staff, is 3,080 personnel of all ranks. This is broken down as shown on the Tigress Crew table.

Tigress Crew

Department	Command Officers	Junior Officers	Enlisted Personnel
Command and Admin	4	22	188
Flight	5	62	496
Gunnery	7	42	538
Engineering	4	48	1,141
Technical	1	28	58
Crew	2	38	396
Total	23	240	2,817



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