



## STATE OF THE FLEET

In the nearly six decades following the founding of the Federation, rapid technological advances begat a period of malaise and complacency, giving rise to the *Pax Federationis*. The Starfleet that served the fledging Coalition of Planets had an impressive roster of starships at its disposal.

<i>DY-1100</i>	Transport (TT)
<i>J</i>	Freighter (FG)
<i>Y</i>	Freighter (FG)
<i>Durance</i>	Freighter (FG)
<i>Discovery</i>	Assault Transport/Scout (TA/ST)
<i>Mercury</i>	Corvette (CO)
<i>Daedalus</i>	Corvette (CO)
<i>Minuteman</i>	Destroyer (DD)
<i>Emmette</i>	Destroyer (DD)
<i>Iceland</i>	Heavy Destroyer (DH)
<i>Triton</i>	Light Cruiser (CL)
<i>Poseidon</i>	Cruiser (CA)
<i>NX</i>	Heavy Cruiser (CH)
<i>Columbia</i>	Heavy Cruiser (CH)
<i>Victory</i>	Dreadnought/Carrier (DN/CV)
<i>Yorktown</i>	Battleship (BB)

Of these, *Daedalus*, *Yorktown* and *Columbia* proved to be the most important. *Daedalus* entered service approximately 13 years prior to the outbreak of the Earth-Romulan War and was built with easy, efficient principles and methods in mind. It made for a ship that was both highly capable and could be fielded in numbers relatively quickly and also proved to be Starfleet's saving grace after several of its powerful, but over-engineered NX class ships were destroyed early on in the war. *Yorktown* was Starfleet's first battleship, a massive beast constructed using the same principles and methods that gave rise to *Daedalus*. In the same way that *Daedalus* replaced NX for a time, *Yorktown* was built to replace the equally massive *Victory* class Dreadnought. *Columbia* came after the war. Entering service in 2168, it was a radical reworking of the NX class design that used the same construction and engineering principles/methods used in *Daedalus* and *Yorktown* to both redeem NX itself and field a more capable explorer to complement the aforementioned pair.

However one of the principal problems was that *Mercury*, *Daedalus*, *Yorktown* and *Columbia* were the only front-line classes in service as of 2170. The *Minuteman*, *Emmette* and *Iceland* Destroyer classes as well as the *Triton* and *Poseidon* Cruiser lines were all retired at the war's end in surprisingly short order, owing to their relation with the ill-fated NX. Exacerbating this was that many of the NX class ships uprated to *Columbia* specs were in a severe state of disrepair prior to their uprating and thus were re-launched with poor projected lifespans. The other principal problem was purely logistical. Both the *DY-1100* class Transport and *J* class Freighter dated from the late 21<sup>st</sup> Century (2095) and even after several extensive refits, were considered only marginally capable at the war's outbreak. The *Y* class Freighter, introduced in the early 22<sup>nd</sup> Century (2114) was somewhat of an improvement and the *Durance* class (2130) a bit moreso, but still this was far from ideal for a Starfleet that considered exploration and expansion top priorities in the post-war period.

To Starfleet's credit, they did make some attempts at modernization, but those attempts (*Almeida* in 2170 and *Caracal* in 2189) were few and far between. The fact that none really caught on led analysts to question Starfleet's sincerity and speculate that with technologies like the 'warp 7' engine and deflector shielding (together with the still-formidable force of starfighters - now organized under a separate command), the admiralty had gotten dangerously complacent. A trio of classes—*Detroyat* (2208), *Baton Rouge* (2209) and *Anton* (2210)—did show promise, however they failed to usher in any significant technological breakthrough above and beyond those that had been introduced with *Yorktown*. A fundamental shift in philosophy was needed if the fleet was to successfully move forward.

By 2215, such a change had been brought about by designer W.M. Jeffries, engineer Mark Chausser and enthusiastically supported by noted Star Marshal Stephen Offutt. Instead of seeking out a new technological breakthrough that would revolutionize spaceflight on the same order of magnitude as warp drive, Jeffries and Chausser sought to leverage proven and existing technologies at scale to support three main areas—defense/offense, exploration & scientific study and support/logistics. Their first order of business was to modernize the old *PB-5* to the new *PB-18* standard to meet new standards of performance and longevity. Next came a new, 'fleet-standard' primary hull design. Smaller in diameter and more voluminous than that developed for *Baton Rouge*, it presented a smooth, austere appearance marred only by the somewhat bulbous bridge module. Once these commonalities were in place, work branched off in three directions that culminated in four separate classes. To provide some semblance of organization, front-line starships—irrespective of mission profile—were designated as 'Class I' units, while those intended strictly for support or logistical duties were designated as 'Class II' units. From a design/engineering standpoint, this is how the period came to be known as the 'Class I Era'. Concurrently though, due to the scope and promise of this new shipbuilding effort, many historians and analysts have referred to the period as 'The Great Awakening'.

Given historical trends, the first product of this revitalized modernization effort was the successor to *Baton Rouge*, the *Constitution* class (CH 1700) Heavy Cruiser. It paired the new primary hull with a highly-evolved secondary hull design dominated by a powerful new deflector dish at the fore end and a large hangar bay at the stern. With a scientific capability that approximated 70% of *Yorktown*'s (including 14 laboratories instead of 20 principally) while featuring improved endurance and operating range ratings, *Constitution* became the fleet's principal exploratory platform—the prototype (CH 1700) being completed in 2220 and full fleet production commencing in 2223.

One of the features of the new primary hull design were common weapon hardpoints, 1 on the ventral surface covering the forward arc with 2 more on the dorsal surface, 1 each covering the port and starboard arcs. Together with the rather ingenious auto-loading torpedo launch system incorporated into the standard bridge module (at the O3 level), it removed the question of armament entirely and made the development of independent variants entirely dependent upon the internal arrangement of this and any other hull sections. Compared to *Constitution*, Starfleet's design for a mass-produced fleet picket was relatively simple and straightforward. The *Saladin* class, like *Constitution*, utilized the primary hull and connecting dorsal, but dispensed with a secondary hull section entirely and attached the nacelle directly to the bottom of the dorsal. As such, what would normally be habitable volume was instead filled with plasma conduits, antimatter storage and other utilities. Another, more noticeable side effect was the relocation of the navigational deflector dish to the primary hull's underside, in place of the main sensor dome. Running parallel to *Saladin*, the *Hermes* class Scout was also developed. Sharing the same design, it omitted the 2 dorsal phaser banks and both torpedo launchers in favor of highly sophisticated sensor and communication systems, helping to coordinate a fleet still trying to perfect joint/integrated operations.

Support and logistical operations typically got the least amount of attention but oftentimes remained the most important. For a Federation that prioritized exploration & expansion and a Starfleet that was just beginning to find its footing, a strong logistical base was something that couldn't be ignored. Rather than produce one or more ship types dedicated to carrying freight or transporting passengers, Starfleet's solution was to create a carrier or 'mothership' of sorts that could be used to transport multiple types of both cargo and passengers concurrently via a tractor-tow pad. Attached to this pad would be a common series of interlockable containers. 200 meters long with a gross capacity of 319,149 metric tons, the

*Cumberland* series Containers together with the *Ptolemy* class (TT 3801) Transport-Tug would be able to transport 10 times the cargo at greater speeds and over greater distances than the *J* class Freighter. All three classes entered service concurrently in 2224.

From here, things branched out slowly, Starfleet initially focusing on core areas of traditional strength. Replacing the *Minuteman* and *Emmette* Destroyer classes was the *Marklin* class (DH 1200) Heavy Destroyer. Originally the last *Baton Rouge* era design to be proposed by the ASDB, following the success of the *Detroyat* class (replacing the *Iceland* class DH) which had been converted to Class I specs itself, *Marklin* was brought back, converted and ordered into production in 2228. While in the same general size bracket as its older forbearers, it introduced concept of the 'heavy firepower forward combatant', that is, a forward-deployed combatant or fleet picket featuring the armament and associated systems of a much larger capital ship. *Marklin* embodied this by featuring a total of 8 torpedo launchers, 2 aft and a staggering 6 forward.

Likewise, the *Kearsarge* class (CL 1500) Light Cruiser emerged in 2230 to replace the *Triton* class CL and *Poseidon* class CA. With a trio of phase cannon batteries mounted at three points on the dorsal surface of its primary hull and a separate phase bank on its ventral surface both complemented by a torpedo battery (3 launchers), the 'Light' in Light Cruiser in *Kearsarge*'s case referred moreso to its size than anything else.

Starfleet's logistical capabilities received a welcome boost in 2229 and 2235 with the introduction of the *Independence* (FG) and *Sherman* (FGD) classes respectively. More traditional replacements for the old *J* and *Y* classes, the rated capacities of both (77,200mT – *Independence*, 74,600mT—*Sherman*) allowed Starfleet to finally retire the elderly duo. Additionally, *Sherman* was the fleet's first 'cargo drone'. Equipped with highly sophisticated sensors to provide all-around situational awareness as well as a highly sophisticated computer system that automated nearly all major ship functions, it took the burden of inter-system resupply and colony support off of classes like *Ptolemy*. Unfortunately, the malaise that prevented the emergence of a coherent shipbuilding strategy in the *Baton Rouge* days still lingered, limiting the production totals of *Ptolemy*, *Independence* and *Sherman* to paltry numbers, something that the admiralty would rue in years to come.

With small-craft/fighter operations being one of the few highlights to stick with Starfleet once they emerged from the shadows of war, replacing the lumbering *Victory* class (CV 950) Carrier and agile, yet sorely outdated *Thunderbolt* class Attack Fighter became a top priority. *Thunderbolt*'s replacement emerged first, in 2234. A heavily-reworked version of the *Class D* shuttlepod, the new *D-17* class lacked the graceful aesthetics and didn't quite match the raw kinetic performance of *Thunderbolt*, but featured much better in-atmosphere performance and could also be built and fielded in a fraction of the time. Initially referred to as a 'through-deck cruiser' upon its launch in 2236, *Independence* was classified as a Light Carrier, rated to embark up to 36 small craft (1 group). Heavily armed, it featured a radical design for the day that later was extensively modernized to become the modern-day *Akira* (CB 62497) class.

The last cruiser class to be launched during the decade, *Pyotr Velikiy* (CA 1670) emerged in 2239 and foreshadowed the shift from cruisers to frigates. Intended to fulfill the same general roles as *Constitution*, it was built as a strategic 'insurance policy' of sorts intended to protect the fleet in the case of any political or technical interference with that larger class.

Between 2240 and 2249, the fleet experienced its biggest growth spurt yet, introducing a record 13 classes—5 Transports, 4 Destroyers, 3 Frigates and 1 Shuttlecarrier. Most significant were the Frigates, a ship type never before operated by Starfleet in any of its incarnations. One of the most pressing needs that emerged following the launch of first three Class I designs was for a deep-space convoy escort with a comprehensive armament, sizeable shuttlebays, advanced fire control systems as well as various other improvements introduced with *Constitution*. The existing *Detroyat* class (DH 1100) Heavy Destroyer had attempted to fill that role thus far, but as with its relative the *Anton* class (CA 1825) Cruiser, *Detroyat* was underpowered and lacked the speed and range to effectively operate with the newer generation of starship being introduced. The *Surya* (FF 1850) and *Coventry* (FH 1230) classes (entering service in 2242 and 2245 respectively) filled these intended roles perfectly, as did the unconventional *Loknar* (FF 2700) class that, like *Pyotr Velikiy*, was intended as a hedge.

Inexperience with single-nacelle designs led to a number of unforeseen problems with both *Saladin* and *Hermes*. The narrow warp field created by the single set of warp coils within the nacelle as well as nacelle placement itself contributed to field instability above warp 6 as well as severely diminished maneuverability. Computer control modifications as well as the installation of more powerful impulse fusion reactors solved the latter problem, but could do little to address the former. This led to the truncation of the *Saladin* class production run and to the introduction of the *Larson* (DD 4300) class in 2240 as the 'mainline' replacement as well as the *Burke*, *Kiaga* and *Seawolf* classes in 2245, 2247 and 2249 that were simpler, but more combat oriented.

The introduction of Frigates as well as the trouble in trying to effectively field a single Destroyer class both proved to be fortuitous to Starfleet overall however. Continued Klingon antagonism led to a gradual decline in relations and escalation in tensions that culminated in the outbreak of a full-scale war in 2245. Highly agile and armed with immensely powerful pulse phaser cannons, *Kiaga* and *Seawolf* were potent offensive and defensive tools while the stripped-down *Burke* complimented *Larson* and *Saladin* the same way *Daedalus* did to *NX* during the Earth-Romulan War.

Starfleet's strength in small-craft/fighter operations received an additional boost in 2245 with the introduction of the *Santee* class (CVS 1925) Shuttlecarrier. The smallest of the three Carrier types that Starfleet would go on to operate, *Santee* was an answer to *Independence*—yet another class with uncomfortably long construction times. While only able to embark up to 12 craft/1 squadron, these ships still took advantage of an area the Klingons didn't bother to exploit.

When it came to small craft, by 2245, Starfleet's inventory of such was fully fleshed out. In 2243, they introduced a new standard shuttlecraft. Retaining boxy, utilitarian lines, the *Class F* shuttle could embark up to 7 (flight crew of 2 + 5 passengers), performed exceptionally well in space or various atmosphere types and was well suited for a full spectrum of missions ranging from VIP and personnel transport to short-range research and survey. In 2245, the larger *Class G*/'*Voyager*' Heavy Shuttle entered service. Slightly more than twice the length of the *Class F*, it featured more powerful engines (making it capable of attaining a warp 5 cruise speed) and an extremely sophisticated set of sensors and communications equipment housed in a low profile 'bulge' situated dorsally. The standard *Class G* itself could embark up to 9, plus a flight crew of 2. With its size and capabilities however, cargo transport, assault and medical variants were all quickly developed and inducted into service.

As Starfleet continued building up its defensive/offensive assets, its exploratory commitments continued unabated, placing a heavy strain on its logistical support structure. To further strengthen this structure and also relieve the strain on its various freighter and transport classes, they deployed the *Kepler/K-Type* Space Stations. Not exactly a fitting replacement for the gargantuan *Ticonderoga* series stations, they quickly fell into the role of supply depot and logistical hub. Owing to their pre-fabricated nature, these stations could be completed and brought online in record time (1 month to complete basic construction, utility installation; 2 months to complete interior outfitting, systems integration). Despite the fact that 4 were in service by the end of 2245, they could do little to make up for the short-sightedness that led to short production runs of both *Ptolemy* and *Independence* and nearly crippled Starfleet during the subsequent conflict with the Imperial Klingon Defense Forces (IKDF).

The 'Four Years War' as it came to be known saw Starfleet caught woefully unprepared. Unlike the Romulans, once the Klingons were engaged, they attacked relentlessly and pressed their principal advantage of numerical superiority. Starfleet's efforts early on were hampered by their persistent desire to keep the *Constitution* class out of the fighting, forcing them to rely heavily on their imposing, but antiquated *Yorktown* class (BB 400) Battleships and their slowly expanding force of *Independence* (CVL 1590) and *Santee* (CVS 1925) Carrier classes, in addition to their motley assortment of Destroyers and smaller types. While competent on the surface, such a haphazard strategy was hardly ideal, let alone sustainable. Enter the Frigate. What Starfleet needed was a starship with weaponry, fire control systems and sizable shuttlebays seldom seen on ships smaller than Cruisers as well as one that incorporated various duotronic computing advances introduced with *Constitution* itself. They did have ships of the *Detroyat* class that, as with her larger *Yorktown* class brethren, was easily upgradable, however a new strategy required a new ship class of which they eventually received two, *Surya* (2242) and *Coventry* (2245). Along with *Loknar* (2242), they formed the core of a force that gradually settled into the general-purpose or 'workhorse' role in the years that followed.

As part of the Federation's general expansion efforts, transports gradually grew larger, faster and more adaptable. The *Cochrane* (2242) and *Aaken* (2248) classes introduced the concept of the 'Colonial Transport' (TC), starships designed expressly to transport large numbers of colonists and their supplies. The *Dolland* class (TTH 3900, 2247) was a rushed response intended to address the lack of *Ptolemy* class ships. A conversion of the *Coventry* class, it could carry the same number of containers as *Ptolemy*, but at vastly higher speeds, able to tow up to three containers at a nominal speed of warp 7. The *Wasp* (TA 6000) was Starfleet's first Assault Transport. Designed from lessons learned in the Four Years War, it featured multiple shuttlebays, long range transporters and was able to embark up to an entire battalion (1,296) of troops. It would also lead to the introduction of a number of other specialized transports in the decades to come.

The post-war era saw fleet expansion slow to a trickle. The introduction of the *Yorktown* class (CV 2200, 2251) Carrier and *Federation* class (DN 2100, 2253) Dreadnought cemented the new cold war had been gradually taking hold, while the *Proxima* and *Yamato* Battleship classes—massive in size and controversy—prefaced the dangerous and unprecedented escalation that would accelerate within two decades.

The fleet's commitment to exploration and scientific study remained unchallenged however. Central to these efforts were the *Cahuya* (AGS 740) and *Antares* (AGS 2071) Surveyor classes as well as the *Archer* class (CU 1890) Cutter. All three were designed to expressly replace the now-ancient *Daedalus* and compliment the larger *Constitution*, greatly expanding the fleet's exploratory capabilities with a comparatively minimal amount of effort.

With every mission field and possible use case addressed sometimes by one, but more often, by multiple starship classes, the Class I era rapidly gained momentum. Technological advancements and breakthroughs provided further boosts, but by the end of the 2260's, with astro-political winds shifting and proverbial storm clouds gathering on the horizon, the promise and optimism that beckoned over the last four decades began to give way to a colder, bleaker reality. Nevertheless, developments made during this period laid the foundation for the Federation and Starfleet we know today and it is very unlikely we would be where we are without them.

## Cruisers

As they were during the heady days of the 22<sup>nd</sup> Century, Cruisers remained central to Starfleet's strategy well into the 23<sup>rd</sup> Century. Politics, a shift towards combined operations and a renewed emphasis on exploration increased their importance and made Starfleet more selective about their usage and deployment however. 30 examples of the *Baton Rouge* (CA 1300) class made it the most numerous example of the type in service while 12 ships of the *Anton* (CL 1825) served with the Starfleet Reserves (SFR). By 2226, the initial production lot of *Constitution* class Heavy Cruisers had been completed consigning the oldest *Baton Rouges* to the SFR. The introduction of the *Kearsarge* (CL 1500) class in 2230 precipitated the reassignment of the remaining ships and the removal of *Baton Rouge* from front line service. Though it took the burden of many defensive/offensive related mission types off of *Constitution*, *Kearsarge* was still comparatively small and somewhat ill-equipped for support operations, having insufficient cargo space, only basic medical/scientific facilities and a poorly-designed hangar bay. The acknowledgement by some in the admiralty that it came about as somewhat of a knee-jerk response to perceived tactical deficiencies led to the development of the *Pyotr Velikiy* (CA 1670) class which entered service in 2239.

From this point forward, Cruiser development focused solely on the *Constitution* class, technological breakthroughs in many areas leading to the development of several subsequent sub-classes—*Bonhomme Richard* (2245), *Achernar* (2260) and *Endeavor* (2263). Symbolic of the shift toward exploration and expansion, *Constitutions* were assigned to missions of this sort exclusively. Advancements introduced at or following the end of the Four Years War in 2250 such as phaser weaponry and the ubiquitous PB-47 series warp engine were first introduced aboard *Constitution* and served to further unify the fleet.

## Frigates

A new development for Starfleet, Frigates were born partly out of necessity, but also reflected the changing nature of Cruisers and the modern fleet/combined operations ethos that introduced a new level of cohesion to the force. The first to enter service was *Surya* (FF 1850), in 2242. During the opening stages of the Four Years War, Starfleet Command was highly reticent to send *Constitutions* into combat, instead relying on its proven, but seriously aged *Yorktown* class Battleships. What was sorely needed was a starship with Cruiser-level capabilities that could be easily fielded in serious quantity. In many ways, what the ASDB provided could be considered a '*Constitution-lite*'. *Surya*'s armament, hangar bay space and computer/sensor systems all equaled *Constitution*, cargo capacity and scientific/support capabilities coming up slightly short owing to its more compact design.

Coming mere months later was *Loknar* (FF 2700). With the Andorian Imperial Guard absorbed into Starfleet, there were calls by former Imperial Guard officials (now part of the admiralty) for Starfleet to field a replacement to the indigenously designed *Kumari* class, *Loknar* being the result. Being of slightly unconventional design and featuring the same general capabilities as *Surya*, it initially fulfilled Andorian self-defense requirements, but gradually became a competent rapid-reaction platform. In the eyes of the admiralty, it also became a convenient hedge against *Surya*, albeit one that was predominantly crewed by Andorians themselves.

The final Frigate class to enter service, *Coventry* (FH 1230) was also the largest, cannibalizing many of its older *Anton* class cousins. Entering service in 2245, it was little more than a modified *Surya*, featuring enlarged hangar bays and other interior design changes to better accommodate ground assault operations. Given Starfleet's logistical challenges, it also formed the basis for the *Dolland* class Transport-Tug which given its higher tow-speed ratings and better tactical accretments, was better suited for independent operations on the frontier and elsewhere.

Taken together, these three classes were quite tactically formidable, yet due to conscious decisions made in their design and construction, they also excelled in many 'general-purpose' roles, becoming the workhorses of the fleet as time marched on. The Frigate type itself would become the most numerous in service by the end of the century and would heavily influence the 'multi-mission' design philosophy that would become predominant in the decades that followed.

## Destroyers

The most predominant ship type of the Class I era, spanning 8 classes both standard (DD) and heavy (DH), Destroyer development tracked the larger evolution of Starfleet overall with the technologies employed and the doctrine that guided their deployment. A contemporary of *Baton Rouge*, 10 ships of the *Detroyat* (DH 1100) class were in service as of 2220. Well armed and outfitted, it was much like the *Surya* and *Coventry* Frigate classes that would eventually succeed it, but like the *Yorktown* class, it was designed during a different era and very much 'out of time'.

*Saladin* (DD 500) was the first of the type to be built during this era, one of the original three Class I designs. As an anti-ship platform, it was competent and able to be fielded in quantity, yet it lacked the 'punch' of *Detroyat* and its single-nacelle design would prove to be problematic. The *Marklin* (DH 1200) class emerged next, in 2228. Like *Kearsarge*, it was a rushed response designed to address a deficiency, however unlike *Kearsarge*, *Marklin* was executed with much more care and foresight. Fast and highly agile, it was also exceedingly



well-armed and pioneered the concept of a 'heavy firepower forward combatant' with its 8 total torpedo launchers. In 2240, the deficiencies of *Saladin* were finally corrected with the introduction of the *Larson* (DD 4300) class. Like *Saladin*, *Larson* exploited economies of scale and could be fielded in quantity despite dispensing with the fleet-standard saucer. Warp field issues were solved by inverting the field itself and flattening it slightly. The single nacelle was now mounted dorsally, supported not by a single connecting dorsal, but by two canted pylons to port and starboard. Combined with computer and control system modifications that simulated a dual-lobed (two nacelle) warp field, *Larson* had outstanding FTL performance making it a much more worthy complement to *Constitution*. Its performance during the Four Years War would also help it to supplant *Saladin* as Starfleet's 'mainline' Destroyer class for the rest of the era.

The next three Destroyer classes to be introduced—*Burke* (DD 301) in 2245, *Kiaga* (DD 820) in 2247 and *Seawolf* (DD 1400) in 2249—were direct responses to Klingon aggression, helping to win the Four Years War and then playing key roles in Starfleet's new defense strategy. All were 'stripped down' and built strictly for combat, warships by any other name. *Burke* was the most conventional and thus, able to be built the quickest. *Kiaga* was the most complex of the three, featuring highly advanced engines and sensors while also leveraging new, immensely powerful pulse phaser cannons and an experimental sensor-scattering hull coating. *Seawolf* was a blend of the two, featuring a more conventional appearance and systems loadout, but with a slightly heavier armament—featuring the same two pulse phaser cannons, but adding 3 separate phaser emitters and 1 torpedo launcher over *Kiaga*. Though quite radical in both design and philosophy, astro-political changes and technological advances would make all three somewhat superfluous by 2268.

*Akula* (DH 278) was the last Class I Destroyer to be launched in 2252, foreshadowing the future shift towards multi-mission designs after overcoming a tumultuous development history. Its unique over-under warp nacelle arrangement presented the most conventional solution to the instability problems inherent with *Saladin*, however it was never intended to serve as a replacement, initially ordered in 2240 as the fleet's original perimeter action ship. Problems fitting the experimental pulse phaser cannons to the standard saucer section, the impact of such weapons on the ship's warp field and finally the emergence of the competing *Kiaga* design in 2245 led to it being shelved. 2 years after *Kiaga*'s launch however, *Akula* was brought back. As Starfleet was also seeking a replacement for the single-nacelled *Hermes* class scout, it was decided to incorporate improved communications, sensor and electronic warfare systems. The end result saw *Akula* emerge as an integrated solution that was supremely capable functioning on its own or as a 'destroyer leader' in concert with other fleet elements.

## Scouts

The shift away from independent and toward combined fleet operations was made without paying the proper attention to how the various fleet elements would interact and how their activities would be coordinated. Thus, there now existed a need for a starship of high speed and extended endurance that could act as a communications and sensor relay as well as a SIGINT (signals intelligence) and electronic warfare platform. Given that the requirements and associated systems did not come with the kind of size or power prerequisites as other specialized vessels, the decision was made to undertake a conversion of the *Saladin* class to allow for maximum commonality in operation and maintenance, the result launching in that same year. To this end, the armament was drastically reduced to just a single forward phaser bank. The elimination of extensive weapons stores and fire control systems gave space to various types of sensors, communications equipment and associated coordination & monitoring systems. This new *Hermes* class was extremely capable and proved popular with crews, however as with *Saladin*, it suffered from the same warp field instability issues. Being more specialized however, combined with the changing nature of fleet operations in the post-war years meant that *Hermes* did not receive a dedicated replacement, being judged perfectly adequate for routine patrol and surveillance/overwatch duties. *Hermes* overall was consigned to these and other similar supporting roles after 2252 when it was superseded by the *Akula* class.

## Patrol Combatants

With the clear and present threat posed by the Klingons, a singular solution that would keep Starfleet ahead of this threat and thwart any future ones proved to be elusive. The introduction of phasers turned the tide of the Four Years War and proved to be the tactical trump card that brought the Federation their victory. That trump card could only take Starfleet so far though. The deployment of the IKDF's *B-1/Jul'Kar* class—larger than other Klingon capital ships and featuring heavier disruptor weapons and drone missiles—foreshadowed the direction in which their fleet would head. Despite the widely held belief that the Klingons would never again initiate a full-scale conflict (especially after the defection of Admiral Komex and the continued insurrection by Admiral Kamato), Starfleet felt compelled to respond, if only to present a credible measure of deterrence. Their response came in the form of the *Federation* (DN 2100) class Dreadnought, launched in 2252. Larger than *B-1* (but smaller than Starfleet's own *Yorktown*), stripped of all exploratory accretions and featuring an imposing defensive/offensive arsenal, *Federation* might have seemed a bit of a token gesture, but one that proved eminently effective during the infamous 'Clash of the Dreadnoughts' in 2267.

Remaining active for nearly a century, the *Yorktown* class, having only been moderately refitted over its lifetime, served throughout the entirety of the Four Years War. The decision to remove all 19 examples from active service in 2255 in deference to *Federation* was met with some controversy. *Yorktown* was larger, had extensive scientific & exploratory facilities and if brought up to full Class I standards, had the potential to seriously eclipse *Constitution* as the fleet's 'flagship' class. For a little more than a year however, Starfleet Intelligence had been gaining alarming new information regarding the development of a new Klingon Battleship that promised to outclass every starship that Starfleet currently fielded and even some that had just made it onto the drawing boards.

This in turn prompted the development of two of the most radical designs of the era—*Yamato* and *Proxima*. These triple-hull, quad-nacelle leviathans were not practical in any normal sense, their exotic power systems along with manpower and resource requirements being completely off the charts. Both easily qualified as the most powerful starships fielded in the Federation, if not known space. To Starfleet though, they served dual-purposes, deterring the Klingons and other potential threats and also serving as technology testbeds. Both were homeported at Starbase 1 and conducted alternate deployments, with one always on station in the Federation's core. Though neither would play any significant role during this era, they would go on to indirectly influence future Dreadnought development and have a strong influence on future Battleship development.

## Carriers

A carrier force had long existed since before the founding of the Federation, however in this new Class I era, they received a great deal more attention. Replacing the elderly *Victory* class Carrier was the *Independence* (CVL 1590) class in 2236. With a design clearly influenced by the preceding *NX* and *Columbia* classes and embarking the new *D-17* class Attack Fighter, it was the most powerful tactical asset the fleet had. To some observers both military and civilian, in the face of the Klingon threat, *Independence* was a clear sign that Starfleet had not yet broken free from the past and was playing it too safe rather than innovating. Either way, during the Four Years War, these ships more than proved they worth, participating in several vicious space battles, while also showing versatility in the convoy escort and amphibious assault roles.

Unfortunately, like certain other Class I shipbuilding programs, Starfleet brass was far too shortsighted in matters of procurement and by the time war broke out in 2245, they only fielded 18 carriers, too few to support their offensive strategy that seemed to change by the day. Enter the *Santee* (CVS 1925) class. Secondary hull sections originally intended for a new class of neutronic fuel carriers were gutted and fitted with unique 'over/under' hangar bays. Fitted to a fleet standard saucer with an improvised mounting structure for the warp nacelles, *Santee* provided the boost in capability that was needed, though at a price. With fuel and weapons stores along with other consumables all concentrated in such a confined space, kamikaze attacks could inflict significant, if not fatal damage, the ambush of the *Santee* and *Suwanee* (CVS 1928) demonstrating this in 2248. Such weaknesses and deficiencies aside, the *Santee* class amassed a rather unremarkable wartime record and in the post-war years, became widely utilized in the rapid response role.

The third and last carrier class to be launched during this era was also the most controversial. The *Yorktown* (CV 2200) class, launched in 2250, dwarfed every other mainline class then in service, coming in at 352 meters long and displacing 1,079,800 metric tons. Able to embark a full wing's worth (72) of small craft, it was built not as a strict weapon of war, but to take advantage of the increased utility afforded by the new generation of small craft—principally, the *Class G* 'Voyager' Heavy Shuttle. It proved controversial mainly due to the fact that the large shuttle—produced in cargo, medical and assault/troop transport variants, in addition to the base model—was perfectly capable of operating from the wide array of frigates, assault transports and freighters then in service and also because the range of missions expected to be performed was predictably narrow. A full production lot of 12 ships would ignite a debate regarding the utility of carriers overall that would not be resolved until the dawn of the next century.

## Fleet Auxiliary Vessels

The so-called 'Class II' fleet, Starfleet's logistical assets that comprised mainly Freighters (FG) and Transports (TT), had been organized into and operated under the auspices of a separate, semi-autonomous command since 2218. Under its control were a motley assortment of old *J* and *Y* class Freighters and *DY-1100* class Transports, plus a smaller number of newer *Durance* class Freighters. Following the introduction of the *Ptolemy* class, Admiral Azkoa advocated for a full 10 production blocks of 15 ships each. With their *Cumberland* series containers able to carry between 300,000 and 375,000 metric tons of cargo in their basic configurations, these would form the fleet's new logistical backbone. The plan was to supplement the class with 5 production blocks of the smaller *Independence* class Freighter and 5 production blocks of the *Sherman* class Cargo Drone that entered service in 2229 and 2335 respectively. Given their vastly smaller cargo capacities, these were intended to operate in the Federation's core and between starbases and other outposts, taking the burden of shorter range and more routine transport assignments off their larger compatriots.

Naturally, like many other procurement issues the Admiralty did not look kindly on any requests that had, or presented the impression of having, high resource requirements. To put it simply, their priorities were too narrowly focused. The advent of the Klingon threat had caught them unprepared and lacking the capability or foresight to think and plan too far ahead, their singular focus was on fielding as many combat capable starships as they could. The head of Transport Command therefore saw his request severely curtailed. While the *Independence* and *Sherman* production blocks remained at 5 each, *Ptolemy* saw its production cut in half to just 5 total blocks. Bureaucratic consternation, while frustrating on the surface, forced the development of supplemental alternatives, *Montejo* (TTL 1590) in 2240 and *Dolland* (TTH 3900) in 2245. Providing the fleet with capability both lighter and heavier than *Ptolemy*'s baseline, they helped bring the Transport-Tug concept to full maturity and helped prevent Starfleet's logistical collapse once conflict came.

A more tightly-focused development was the *Wasp* class Assault Transport (TTA 6000). Entering service in 2246, it was a more agile, purpose-built replacement for the *Texas* (CL 900) class, a number of which underwent extensive conversions and became known as 'commando cruisers'. Rather unremarkable in design, it featured all the accretions to transport and

support operations for up to two full regiments (2,592) of marines. These included numerous high-capacity (24-man) long-range transporters, 8 hangar bays able to embark a maximum of 16 assault or 32 standard shuttles and the ability to land on a variety of planetary surfaces.

The need for extensive logistical assets would not be necessary if not for the existence of various colonies, outposts and bases in regions that were getting farther and farther from the Federation's core. The general focus on expansion and establishment/support of colonies stood at odds with the resources Starfleet had allocated and so in 2220, the Department of Colonial Operations was established. While many colonies were established by independent, civilian concerns, many of these did not have the ships or resources to fully support their endeavors. Therefore, to respond to the demand, Starfleet commissioned two new 'colonial transports' (TTC's), *Cochrane* (TTC 600) in 2242 and *Aaken* (TTC 400) in 2248. Radically different from any existing or proposed Starfleet design, both were products of a hybrid design team made up of both ASDB and civilian personnel. Given the demand, *Cochrane* was purposely designed to accommodate a large number of colonists (up to 2,400) and was the largest starship built for civilian use to that point (at 370m in length). *Aaken* was somewhat smaller (270m in length) and designed to accommodate colonies of up to 1,000. Both featured multiple high-capacity transporters, numerous hangar bays, generous cargo space and made use of the latest propulsion technology.

The *Star's End* expedition in 2261, the largest colonial expedition to date, made use of 42 *Cochrane* class ships and transported a record 100,800 people. It also marked the end for both *Cochrane* and *Aaken*. Though the addition of generous civilian input had resulted in both classes being quite capable, it had precluded them from sharing in the benefits of interoperability (namely, shortened construction times and greatly simplified maintenance) afforded to other starship classes in service. Additionally, the general tempo of colonization proved highly variable and given the fleet's relative weakness when it came to logistics, Transport Command felt that dual-use replacements that could switch seamlessly between roles (not an easy task for either *Cochrane* or *Aaken*) would be more suitable.

Entering service late in that year then were the *Edward* (TTC 1200) and *London* (TTC 1125) classes. Conceived over 18 months, they were essentially the same design produced in two sizes—a 205m, 357,041mT version (*London*) and a 420m, 731,500mT version (*Edward*). Aside from the bridge, main engineering and areas dedicated to personnel accommodations and support, the interiors of both classes featured highly modular interiors that could be reconfigured while deployed or docked at a starbase. This flexibility also enabled both to carry substantially more passengers and cargo—up to 5,000 and 575,000mT for *Edward* and 2,500 and 280,650mT for *London*. Replacing their predecessors on a 2:1 basis, the older ships were gradually sold off and found new life in civilian service, with none left in Starfleet's inventory by mid 2269.