

# SHIPS OF THE STAR FLEET

*Volume One/Revised*

*One hundred and third year of issue*

**2290-91**

**The standard reference guide to the vessels of the Star Fleet**

# **Ships of the Star Fleet**

ONE HUNDRED AND THIRD EDITION

**By Todd Guenther**

**Defense Forces Institute**



COPYRIGHT © 1991 MASTERCOM DATA CENTER

ALL RIGHTS RESERVED. NO PART OF THIS BOOK MAY BE TRANSMITTED, STORED IN A RETRIEVAL SYSTEM OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM THE PUBLISHER.

PUBLISHED BY MASTERCOM DATA CENTER, POST OFFICE BOX 4990, HOLYOKE, MASSACHUSETTS, 01041-4990.  
DESIGNED, WRITTEN AND ILLUSTRATED BY TODD GUENTHER.  
ADDITIONAL TEXT AND ILLUSTRATIONS BY DAVID NIELSEN.

A CATALOG OF OTHER PUBLICATIONS MAY BE OBTAINED BY WRITING TO MASTERCOM AT THE ABOVE ADDRESS.  
VISIT OUR WEB SITE AT [WWW.MASTERCOMDATA.COM](http://WWW.MASTERCOMDATA.COM)

LIBRARY OF CONGRESS CATALOG CARD NUMBER: 92-114105

**ISBN 0-9656016-0-9**

PRINTED IN THE UNITED STATES OF AMERICA  
FIRST EDITION: OCTOBER 1988  
REVISED EDITION: JULY 1991

INTERSTELLAR COPYRIGHT © 2290 BY THE DEFENSE FORCES INSTITUTE, UNITED AMERICAS, EARTH, IN ACCORDANCE WITH THE FOUNDING MEMBER PAN-GALACTIC AGREEMENTS OF 2179.

PREVIOUS EDITIONS COPYRIGHTED BY THE DEFENSE FORCES INSTITUTE: EARTH-YEAR 2248 THROUGH 2271 & 2274 THROUGH 2289.

MEMORY TERRA/MEMORY ALPHA MASTERCOMPUTER CATALOGING DATA: UFP ITP/TE 22862887

THIS EDITION OF SHIPS OF THE STAR FLEET IS PROVIDED IN HARD COPY FORMAT FOR USE BY THOSE BEINGS WITH LIMITED ACCESS TO COMPUTER DISPLAY IMAGING EQUIPMENT. UNDER THE LAWS OF THE UNITED FEDERATION OF PLANETS AND ITS MEMBERS, UNAUTHORIZED USE OR REPRODUCTION (IN WHOLE OR IN PART) OF THE INFORMATION CONTAINED IN THIS VOLUME WITHOUT THE PERMISSION OF THE DEFENSE FORCES INSTITUTE IS STRICTLY PROHIBITED.

THIS EDITION IS AUTHORIZED FOR SALE ONLY IN MEMBER STAR SYSTEMS OF THE UNITED FEDERATION OF PLANETS, ITS TERRITORIES AND POSSESSIONS, AFFILIATED STAR SYSTEMS AND SELECT INDEPENDENT OR NEUTRAL STAR SYSTEMS.

For Carol

# Contents

Preface

- 01** State of the Fleet
- 02** Ship Classifications
- 03** Glossary

Cruisers

- 04** Constitution class
- 05** Bonhomme Richard class
- 06** Coronado class
- 07** Acheron class
- 08** Enterprise class
- 09** Belknap class
- 10** Constitution (II) class
- 11** Endeavor class
- 12** Tikopai class
- 13** Enterprise (II) class

Frigates

- 14** Surya class
- 15** Coventry class
- 16** Avenger class
- 17** Daran class
- 18** Knox class
- 19** Endurance class
- 20** Cyane class

Appendix

Strike Cruiser - Belknap class

# Preface

This one hundred and third edition of *Ships of the Star Fleet* continues the long tradition of this publication by providing a significantly greater amount of data on the vessels of Star Fleet than any other reference work. The variety of information available on Class One Fleet units - their defense and navigation systems, weapon installations, enginery, performance specifications, builders - is expanded further with this current edition, which also continues the effort begun with the ninety-seventh edition to provide an improved order of coverage of the United Federation of Planets Star Fleet. (A similar format has been adopted for the reference work *Guide to the Klingon Fleet*, also available from the Defense Forces Institute.)

The buildup of the Star Fleet Operating Forces that is currently underway (and the corresponding increase in the number of Class One ship types to be examined) has made it necessary for the first time to divide this publication into three volumes. Installments two and three of *Ships* will provide additional coverage on various small craft, Star Fleet organization, TacFleet, the Rapid Deployment Force, the Star Fleet Reserve Force, and the numerous shipyards currently engaged in Star Fleet programs. All of these are of major importance to the effectiveness of Star Fleet.

The information in this reference work is organized to enable the reader to quickly locate the data desired. The individual vessel listings (which appear in chart form) display a ship's current navigational contact code number, name, builder (or alternately "converted" if the shipyard performed specifications uprating work only), date the ship's keel was laid (or alternately the date of drydocking), date the ship was launched (or relaunched), date of commissioning (or recommissioning) into the Fleet, and current status, respectively. The reader is reminded that "launch" dates do not necessarily refer to the date a particular vessel was completed, but instead to the point at which the ship was able to leave the drydock facility under its own power. Also, "commission" dates do not take into account a vessel's shipyard post-shakedown availability (PSA)

schedule, which takes place between eight and ten months after delivery (and is usually between two and three months long). Terran local calendar dates are used where applicable; standard stardates are used in all other instances.

The ship status codes used here were chosen to assist the reader in quickly identifying a vessel's current posture and general operating area. (The Official Star Fleet Vessel Register uses a more detailed - and complex - method.) The boldface **A** is used to indicate any ship currently in active service. (Ships on temporary operational stand down or those in port for short-term maintenance are listed as active.) This designation is followed by the ship's primary assigned mission territory, categorized by subquadrant (or quadrant). Thus, a listing appears as **A1N** (active, subquadrant one north), **A2S** (active, subquadrant two south), **AO** (active, quadrant zero), etc. The boldface **ATRA** indicates a ship currently serving as a line training vessel; such a ship may, at times, be assigned to one of the Star Fleet Academies for service on rotation as a midshipman training vessel. The status code **ATAC** indicates a vessel under the operational jurisdiction of TacFleet. (Ships assigned to service with the Rapid Deployment Force are not indicated as such since this is a short-term, rotational assignment.) The status note "Converted" indicates a vessel that has been uprated and is currently listed as a member of another class. Ships undergoing long-term overhaul or damage repair (but not conversion) are indicated by the term "Yard." The status note "Lost" indicates a vessel lost in the line of duty. Additional notations are "Reserve" (for ships assigned to the Star Fleet Reserve Force), "Building," "Planned," and "Decommissioned."

The illustrations accompanying most starship sections represent the distinctive insignia of those starship classes. These are not to be confused with individual vessel insignia, which vary from ship to ship. (Some examples of these are also included.) Serving as a somewhat limited identifying device, each insignia is unique to the starship class for which approved and is depicted as it currently appears. Where no illustration is

present, no insignia had been approved as of the date of publication. Additionally, some unauthorized distinctive insignia are included because they are routinely displayed by ships of a particular class even though they have not been approved by the Bureau of Spacecraft, Star Fleet Command. Such insignia are always labeled as "unauthorized."

This edition contains a specialized appendix detailing internal features of the *Belknap* (CS 2501)-class strike cruisers. This material is in response to many requests, partially from non-Federation readers, for more of a perspective on the current capabilities and components of Class One Star Fleet vessels. The information on the *Belknap* class is current through the date of publication (February 2290, Terran); however, the reader is encouraged to consult various sources since individual vessel configurations vary considerably and certain data is restricted under Star Fleet classification ratings (and is therefore unavailable).

The publishers of this 103rd edition of *Ships of the Star Fleet* are indebted to many individuals and organizations for helping with its preparation. Chief among these are Huss Randon, former director of the Star Fleet Office of Procurement, and Sir Kyle Greenleaf, former head of the Naval Construction Contracts Board. Timothy Farrar and Cols Freerson, publishers of *Defensik Ononduk (Defense Profile)*, have also been extremely helpful.

A large amount of the data necessary for the formation of the starship configurations contained in this edition was provided by our longtime associate, E. Van Skjolder. In addition, much of the material of Del Vyrsta, William Bratlaw, and Jonathan Kars and Amye Stalt (outstanding space flight imagers) was invaluable in determining the current arrangement and individual modification status of Star Fleet vessels.

The detailed information on the USS *Belknap* was prepared by Makita Recamier for the publication *Starship Tactics*.

Among the many individuals who have contributed valuable information to this edition are Benton Carlisle, Chief of Information at Matramel Ltd.; Drespi Sorah of Rapier

Dynamics Group; Lt. Douglas Prescott, Office of Public Relations, Starbase 17; Lt. Cmdr. Cameron Elsworth, USS *Swift*; H. Marie Sartell of Litton-Sedeco Shipbuilding; Dorn Winston and Allen Davies of Rodriquez Ingenieria; Cmdr. Warren G. Alder of Superscout Development Group 1; Lt. Cmdr. Julian E. Rypkos, Reveria Squadron, Starbase 21; William C. Guiss, editor of *Federation Merchantman*; Frederic Bosch of Hycor Defense Systems; Justin Haleford, Star Fleet Systems Command; Minas Prentel and Kusi Itega of *Starship Interstellar*; Alaric Montoja of Prentice-Schafer/Terran Division; Rear Admiral Joseph Keliher, Chief of Star Fleet Research; Commodore Richard E. Chang, commander, Starbase 9; Rear Admiral Roane C. Austin, Asst. Cmdr. for Logistics and Fleet Support; Suvish Kaln, Research and Development, Ag Murpeth; Commodore C. Paul Steele, Tactical Readiness Division, TacFleet; Malatin Ortai of the Advanced Systems Division, Cochrane Warp Dynamics; Capt. Y. C. Lujik, USS *Repulse*; Lt. Lyle Gevins, Helicon Squadron, Star Station Praeses; and Curtis T. Vieck, director, Strike Cruiser Development Project.

Special thanks go to Rear Admiral Aridas Sofia of the Star Fleet Bureau of Operations for his invaluable and timely assistance.

Finally, this reference work could not have been completed without the continued support and assistance of Carlson Rentee, director of the Defense Forces Institute; Jenifer Symms, editor for the hard-copy format of this publication; and Carolann Leviere, personal assistant to the compilation staff.

The second and third installments of this edition of *Ships of the Star Fleet* are scheduled for publication in April and June (2290), respectively. Compilation of the 104th edition (Terran calendar 2291) has already begun, and comments or additional data are welcome. Information or material should be directed to the Defense Forces Institute, Northeast Colonialdome, Bay Colony Centroplex, United Americas, Earth.

Calon Riel  
February 2290



# **Ships of the Star Fleet**

# State of the Fleet

Star Fleet is once again at the center of a whirlwind of rapidly changing public opinion. The decline of the Fleet in the period after the Kznti Incursion - which led to a low of about 1,260 active, Class One starships in 2284 - is in the process of being reversed. However, while the present Star Fleet Commissioner is committed to his predecessor's goal of a 1600-ship Class One fleet, other matters have since risen to the forefront of the public consciousness: the current controversy surrounding the secret development of the project code-named Genesis has settled on, among others, Star Fleet Division. In the midst of a ten-year buildup, it thus appears that the Fleet may be headed back into a period of "undernourishment."

This is not the first time the mission profile of Star Fleet has been threatened with dramatic alterations because of political developments within the Federation Council chamber. In the years following the Four Years War, the consensus supported a balance of offensive, defensive, and exploratory capabilities. Renewed hostilities with the Klingon Empire during the Organian Conflict bolstered this view. Toward the end of the 2260s, however, political strife swept the Empire as Bur Chak and Sta Mura kingdoms battled for the Emperor's seat. This rendered the border relatively quiet, and combined with the peace imposed by the Organians created a pacifist movement within the Federation that made its presence felt in the Council. Regular calls for large cuts in Star Fleet appropriations began to be heard. The brief period of warfare that followed the Kznti Incursion in 2272 momentarily stemmed this tide. It soon reappeared, however, strengthened by self-recriminatory claims that the Kzin were the victims of "hemming-in" by the Federation. The final blow came with the revelation of covert Star Fleet operations against the Kzin for three years prior to the latter's attack on Tau Ceti. A series of legislative acts followed that sharply reduced the Fleet's offensive potential.

As a result, by 2282 the Fleet was very different from the one that ten years earlier

had defeated the Kzin at Zetar. TacFleet and the Rapid Deployment Force (RDF) had suffered the sharpest reductions, while the subquadrant fleets had seen their resources concentrated in the various system defense forces and exploratory efforts. By 2284, the Class One starship fleet had fallen to 69 classes and 1,265 hulls, down from a high of 104 classes and 1,907 hulls in 2268. (It should be noted that these numbers refer to year-long averages of "front-line" classes which include some that move in and out of various states of ready reserve.)

The numbers cited above, however, tell only part of the story. Grave strategic weaknesses emerged from numerous individual cost-saving and mission-altering actions. Construction of the successful but costly *Ariel* (SC 2200)-class shuttlecarriers was halted at four hulls (of ten planned). With the exception of the *Ishtasse* (cruiser) and *Fury* (frigate) classes, plans for new medium starship construction (e.g. cruiser, light cruiser, perimeter action ship, etc.) were cancelled. Slated construction of additional mixed-use *Enterprise* (CH 1701)-class heavy cruisers was changed, with the result being enormous expenditures for the cheaper, limited-use, exploratory heavy cruisers of the *Tikopai* (CH 1800) class. Along a similar vein, eight *Avenger* (FH 1860)-class heavy frigates were refitted for limited-use, exploratory duty (*Endurance*/FR 1862 class). Insufficient funding also hindered research and development efforts. The most spectacular casualty here was the Space Control Ship (SCS) design program, which suffered its most serious blow when funding was curtailed on the connected trans-warp development effort. Less conspicuous were the innumerable problems confronted in efforts to design and build a battlecruiser (*Menahga*/DH 3100 and *Mitannic*/CG 3103 classes) and a single engine, linear warp driven scout/destroyer.

The diminished retaliatory capabilities of the Fleet soon led to problems on the frontier. By Earth-year 2283 the Bur Chak kingdom of Shanto K'tor had consolidated its hold over the Klingon Emperor's seat, and the political stability this provided -

coupled with the decline of the Star Fleet deterrent - soon prompted a new wave of adventurism along the border. Moreover, intelligence revealed evidence of renewed collusion between the Klingon and Romulan military establishments, with the apparent goal being the securing of uncharted space outside the "underbelly" of the Federation (external to subquadrants two south and three south). On 08 June 2283, Lars-Erik Valdemar was named Federation Commissioner of the Star Fleet Division, largely on the basis of his accurate predictions of the consequences of retrenchment. In accepting the post, he was assured of Council support to reverse the Fleet's downward slide. This he received, but not without continued resistance from a weakened but still vocal pacifist bloc.

Valdemar's plan was weighted more towards rectifying specific past mistakes than enacting a broad overhaul. To deal with personnel problems, he approved a number of incentives for re-enlistment, increased acceptances to the Academies, and made moves to improve morale (including a redesign of Star Fleet uniforms). To restore the ailing Class One Fleet, Valdemar put forth a plan for a "1600-ship" Star Fleet, a plan that would reverse the decline of a fleet that had reached a high of almost 2,000 active, Star Fleet-crewed ships during the late 2260s. He first reactivated numerous old cruisers, light cruisers, frigates, etc. to free newer, medium starship hulls for TacFleet and RDF service. Rapid progress was then made on clearing new construction of long-proposed starships of these types. The inflexibility of *Tikopai*-class heavy cruisers was dealt with through construction of an improved *Enterprise* (ex-*Levant*/CH 1843) class and uprating of existing starships of the older *Enterprise* class. The heavy frigate force was strengthened through construction of improved *Avenger* (*Cyanel*/FH 1890 class) starships. The *Kirov* (DN 2150) class, one of the dreadnought designs to emerge from the Avenger Design Refit Program (Project ADREFT), was also put into production, and five vessels have to date been built. Increases in the funding of trans-warp research, while not providing the new means of super-propulsion hoped for, did yield the advanced, circumferential warp engine (ACE), and thus made possible the development of a new generation of scouts and destroyers (*Cygnus*/ST 617, *Amerind*/ST 626, and *Cochise*/DD 530 classes). In related moves, the shipyard availability schedules of the two space control ships were modified. The *Ingram* (SO 2001) was fitted with advanced LN-72 linear warp engines earlier than originally planned, which allowed the *Excelsior* (SO 2000) to remain on station as a flagship in southern subquadrants two and three. *Ingram* has since left drydock and is active on flagship duty; *Excelsior* is currently scheduled for a complete overhaul to reflect design improvements built into her sister ship.

The goal of the ten-year, Class One fleet buildup is a "year-long average" of approximately 90 classes and 1600 active hulls by 2295. In 2288, with the buildup well underway, Valdemar retired his position as Star Fleet Commissioner to accept a seat on the United Earth Triumvirate. His successor, T. Sela Arno, was immediately confronted with the controversy that followed the detonation of the flawed "Genesis" device. Star Fleet was already facing the difficult problems of maintaining political support for new ship construction and finding sufficient personnel for an expanded shore establishment, mobile ground force, and operating forces. The change in public and political perceptions of the Fleet has only exacerbated these problems. Moreover, Arno has never had the close connections with the Council that so aided Valdemar in difficult times. It is therefore possible that the present efforts to bring Star Fleet back to top form will fall short of stated goals. With continued Klingon and Romulan activity outside the southern subquadrants, these are portentous developments.

## ACHIEVING A 1600-SHIP FLEET

The planned 1600-ship Class One fleet is shown in the last column of Table 1-1. These numbers may be influenced by many factors. The deactivation of older, front-line vessels ahead of schedule; the cancellation or cutback of some construction programs; and a change in the "direction" of the Fleet's primary mission profile in the coming five-year period are all possible occurrences that could affect Star Fleet's ability to maintain a "1600-ship" fleet.

**TABLE 1-1. STAR FLEET STRENGTH (January 2290)**

	2268	2270	2275	2280	2285	2290	2295
Active Ships	1,907	1,863	1,535	1,388	1,292	1,487	1,633
Battle Force Ships	1,716	1,594	1,385	1,232	1,164	1,325	1,491
<b>Active Ships</b>							
<b>Cruisers</b>							
CH	109	107	84	91	90	93	95
CS	—	—	3	15	28	35	37
CG	—	—	—	1	7	9	10
CD	—	6	6	6	10	15	15
CKE/CE	59	49	15	12	5	5	9
CA	88	83	57	33	21	38	40
CL	70	51	29	20	17	12	20
<b>Frigates</b>							
FH	—	—	11	21	15	23	28
FR	66	64	49	61	68	75	92
FF	43	36	17	25	29	29	41
<b>Destroyers</b>							
DH	20	15	14	12	5	5	3
DD	105	97	92	82	77	89	87
<b>Scouts</b>							
SS	30	27	22	30	32	42	55
ST	91	78	49	45	43	52	61
<b>Patrol Combatants</b>							
DN	14	12	11	23	28	30	30
CO	10	13	8	10	13	13	18
PKA/PA	237	248	250	233	216	268	291
CV	151	106	99	78	52	67	84
CP	307	271	268	205	211	218	229
CR	310	331	301	225	193	201	238
Shuttlecarriers	6*	—	—	4	4	5	6
Space Control Ships	—	—	—	—	—	1	2
<b>Fleet Auxiliaries</b>							
Transports	45	48	31	30	25	34	36
Transport/Tugs	52	55	40	33	30	29	43
Tenders	31	51	25	27	22	25	21
Combat Support	33	41	26	35	30	43	20
Other	30	74	28	31	21	31	22
<b>Star Fleet Reserve Force</b>							
CH	10	12	—	—	—	4	9
CL	21	14	—	—	—	2	5
FH	—	—	—	—	—	—	2
FR	—	—	—	3	5	8	12
FS	—	—	—	—	—	29**	29
DN	—	—	—	3	3	3	3
PKA/PA	7	7	8	15	15	19	30
Auxiliary Ships	10	9	17	21	10	11	18

\*Indicates the six *Coronado* class ships reclassified as "through-deck cruisers" in 2270.

\*\*Represents the 29 ships of the new *Fury* class.

## CRUISERS

The heavy cruiser continues to be the focal point of Star Fleet strategy. A total of 93 vessels of this type are currently listed as active on the Star Fleet Vessel Register: the seven ships of the *Enterprise (II)* class; the 18 *Ashanti*-class heavy cruisers; the *Tikopai* class ships (33); the *Enterprise* class (3); *Constitution (II)* class (7); *Endeavor* class (14); *Achernar* class (9); and one ship each of the older *Bonhomme Richard* and *Constitution* classes. By 2295 this number will stand at 95 after the *Enterprise (II)* class finishes building/converting and the *Essex* (CHT 1727) and *Potemkin* (CHT 1711) are retired. Long-range plans call for the design finalization and beginning of construction on the proposed *Reigate* heavy cruiser class by 2296 to replace the aging *Achernar* starships on active duty. Also, additional ships of the *Ishtasse* cruiser type may be procured to provide an improved, low-end heavy cruiser capability.

Star Fleet is planning a new class of exploratory cruisers, currently designated as the *Lng'we Chi* design. These ships will be smaller and slightly faster than the *Nineveh* (CKE 21050) class now in production. Three ships are scheduled to be active by 2295.

The eight ships of the new *Amchitka* (CL 1310) class will be in service by 2293, bringing the total number of active light cruisers to 20. Plans to supplement the current through-deck cruiser force with an additional 12 ships of the *Advance* (CD 1981) design have been shelved.

The *Excel* (CS 2545)-class strike cruisers are scheduled to begin building in late 2293, and two ships will be in service by 2295. These cruisers will supplement the current *Belknap* (CS 2501) and *Impervious* (CS 2530) classes. All ten ships will be in service by 2298.

## FRIGATES

Star Fleet is planning to have approximately 20 new frigate-type ships active by 2295,

at least 14 of which will be of the FR 2300 design. These ships are needed to replace the aging *Surya* (FR 1850) and *Coventry* (FR 1230)-class frigates, which will begin retiring at the turn of the century. The *Daran* (FF 3201) and *Darter* (FF 3213) classes will be supplemented by the *Decisive* (FF 3231)-class fast frigates, the first of which will join the fleet in January 2291. These ships will have a smaller profile and will be faster than the previous classes. Nineteen ships are planned.

The *Kresta* (FH 1966)-class heavy frigates are scheduled to begin building in mid-2292. These will be the last frigate-type ships constructed based on the *Avenger* (FH 1860) design. All nine vessels will be completed by 2296.

## DESTROYERS

No new destroyer-type construction is planned before the turn of the century. The reactivation of 12 older *Kovaris* (DD 460) class ships in 2287 and 2288 has increased the force to 89; Star Fleet's goal was 100 ships. (In the 2270s Star Fleet was not able to maintain a force of 100 destroyers.) The two remaining *Detroyat* (DH 1100)-class heavy destroyers will be retired in 2293 or 2294, leaving only three active ships of this type (*Menahga*/DH 3100 class).

## SCOUTS

Nine new ships of the *Amerind* (ST 626) design will be commissioned between 2293 and 2295, joining the four already in service. The new vessels will have an increased range and superior scientific capability. Also, additional ships of the *Darwin* (ST 652) class may be procured sometime after 2295.

The three superscout classes will be supplemented by ships of the new *Ianetos* (SS 710) class beginning in early 2292. Sixteen ships will be built; all are scheduled to be active by 2296. The long-awaited *Arusha*-class superscouts are slated for construc-

TABLE 1-2. STAR FLEET SHIPBUILDING PROGRAM\*

Number/Type		2290 (Actual)	2291	2292	2293	2294	2295
CH 1701	Heavy Cruiser/ <i>Enterprise (II)</i> class	1	1	1	—	—	—
CS 2545	Strike Cruiser/ <i>Excel</i> class	—	—	—	—	—	2
CG 3112	Battlecruiser/ <i>Andernach</i> class	—	—	1	—	—	—
CKE 21050	Large Exploratory Cruiser/ <i>Nineveh</i> class	1	1	—	—	—	—
CE 23005	Exploratory Cruiser/ <i>Lng'we Chi</i> class	—	—	—	—	—	2
CL 1310	Light Cruiser/ <i>Amchitka</i> class	2	3	2	1	—	—
FH 1966	Heavy Frigate/ <i>Kresta</i> class	—	—	—	1	2	3
FR 2300	Frigate	—	—	4	4	5	5
FF 3231	Fast Frigate/ <i>Decisive</i> class	—	1	2	3	3	4
SS 710	Superscout/ <i>Ianetos</i> class	—	—	3	3	3	4
ST 626	Scout/ <i>Amerind</i> class	—	—	—	3	3	3
CO 2131	Command Ship/ <i>Etna</i> class	—	—	—	1	2	2
PKA 1170	Large Perimeter Action Ship/ <i>Kirsanov</i> class	3	1	1	—	—	—
PA 1125	Perimeter Action Ship/ <i>Engage</i> class	2	3	2	3	2	1
PA 1010	Perimeter Action Ship/ <i>Akyazi</i> class	10	9	6	4	4	3
CV 3340	Corvette/ <i>Riga</i> class	—	2	3	4	4	4
SC 2204	Shuttlecarrier/ <i>Fredrikstad</i> class	—	—	1	—	—	—
TT 3831	Transport-Tug/ <i>Doppler</i> class	—	2	3	5	7	7
TT 3900	Transport-Tug/ <i>Dollond</i> class	—	—	3	3	5	5
<b>Total New Ships</b>		19	23	32	35	41	45

\*Figures are dates of commissioning.

tion beginning in 2294. These ships will have a sleek, sophisticated design and a 23% greater range than the current ships. An impressive 32 vessels are planned.

### PATROL COMBATANTS

Construction of dreadnought-type ships was completed in late 2289 when the last of the *Kirov* (DN 2150) class ships was launched at Arcturus. These five ships join the *Komsomolsk* (DN 2600), *Ascension* (DN 2520), and *Federation (II)* (DN 2100) classes to bring the number of deployed dreadnoughts to 30. Further dreadnought construction is not considered necessary by Star Fleet's leadership, and the force should remain constant at 30 vessels into the early part of the next century (with three older *Federation* class ships in reserve).

Star Fleet already has more perimeter action ships in service (268) than at any time in the last 25 Earth-years; by 2295 the number of these ships will have increased by 23 to 291 vessels. Of the currently active ships, 189 are of the Four Years War-era *Kiaga* (PA 820) and *Agilis* (PA 855) classes, many of which will begin retiring before the year 2300. The remaining 79 vessels are of the *Akyazi* (PA 1010), *Engage* (PA 1125), and *Kirsanov* (PKA 1170) types. Each of these classes is still in series production; when completed they will number 102, 28, and eleven vessels, respectively. All new-build ships are scheduled to be in service by 2305.

The *Renner* (CV 3250), *Daring* (CV 2394), *Juliet* (CV 3300), and *Lautaro* (CV 3317) corvette classes will have their numbers supplemented by 17 when the *Riga* (CV 3340) class finishes building in early 2295 (construction began in December 2289). Also, "small craft" construction (corsair and clipper types) will proceed at a modest level, and additional command ships of the successful *Etna* design will be constructed, bringing the number of those vessels to 18 by 2295.

### SHUTTLECARRIERS

Few Fleet programs capture the imagination of the Federation civilian populace as do the commissioning of shuttlecarriers. Federation Councillor DuBarr spoke at the *Adjuvant* commissioning ceremonies on 30 March 2280 and Councillor Previtaz at the *Fredrikstad* ceremonies on 11 August 2287. The other *Fredrikstad* class ship, the

*Malverne*, will be completed in early 2292, and the ceremonies at Earth already promise to surpass the previous two in pomp and grandeur. The *Adjuvant's* initial deployment saw her operating in troubled space in subquadrant four south off Zeta Reticuli and supporting Star Fleet operations in the Teltonis region; the *Malverne* is being fitted with additional weapons emplacements and is scheduled to permanently embark one regiment of surface action specialists.

### SPACE CONTROL SHIPS

The space control ship issue continues. The Military Staff Committee refuses to consider the construction of new space control ship-types for any mission; Star Fleet is still pushing for more *Excelsior/Ingram* class ships (despite their generally accepted design flaws) and has recently begun promoting the new SOX (experimental) design. The *Excelsior* (SO 2000) will return to active service sometime in 2292 after extensive modification work is completed. She will join the *Ingram* (SO 2001) on special assignment to TacFleet. The space control ship issue will continue for some time.

### FLEET AUXILIARY VESSELS

A large number of auxiliary ships are scheduled to begin building during 2293-95, especially tenders and support vessels. A total of 51 new tender-type ships will be constructed before the year 2300, most notably the *Grin'ki* class (27 ships). Seventy-four ships will be built to augment the Fleet's combat support role, including the *Fjon* (17), *Krasnoyarsk* (23), and *Pakokku* (21) classes. These ships are necessary since many of the currently active vessels of this type are reaching the end of their operational lives.

The long-awaited *Doppler* (TT 3831) and *Dollond* (TT 3900) transport/tug classes began building in May and September 2289, respectively. Long-range plans call for a total of 110 vessels; however, there is some opposition to each of these designs, and only 48 ships have been ordered to date. With the remaining *Ptolemy* (TT 3801) class ships already scheduled for sequential decommissioning by the turn of the century, the Military Staff Committee will be forced to make a decision on the construction of new transport/tugs soon.

# Ship Classifications

Star Fleet ships and small craft are classified by type and by sequence within that type. The list of classifications (by approval of the Federation Commissioner of the Star Fleet) is issued periodically, updating a system that began in Earth-year 2208. Star Fleet's current list, based on a format developed in 2250, seeks to better define ship types and missions and to facilitate comparisons with Klingon ship types.

The letter 'T' may be used as a suffix with any classification to denote a training vessel. Likewise, the letter 'X' is used unofficially as a suffix to indicate new or experimental designs or classes.

The following classifications are contained on the current list.

## Class One Vessels

### *Cruisers*

CH	Heavy Cruiser
CS	Strike Cruiser
CG	Battlecruiser
CD	Through-Deck Cruiser
CKE	Large Exploratory Cruiser
CE	Exploratory Cruiser
CA	Cruiser
CL	Light Cruiser

### *Frigates*

FH	Heavy Frigate
FR	Frigate
FF	Fast Frigate
FS	Small Frigate

### *Destroyers*

DH	Heavy Destroyer
DD	Destroyer

### *Scouts*

SS	Superscout
ST	Scout

### *Patrol Combatants*

DN	Dreadnought
CO	Command Ship
PKA	Large Perimeter Action Ship
PA	Perimeter Action Ship
CV	Corvette
CP	Clipper
CR	Corsair

### *Specialized*

SC	Shuttlecarrier
SO	Space Control Ship

## Class One Auxiliaries

### *Support Ships*

TR	Transport
TT	Transport/Tug
TE	Tender
SP	Combat Support Ship
ET	Escort

# Glossary

ACE	Advanced Circumferential Warp Engine	PSA	Post-Shakedown Availability; refers to a vessel's return to the builder after approximately 6-10 months for systems and performance evaluation
ADREFT	Avenger Design Refit program	QASR	an Alpha Centaurian acronym for a Scarbak particle beam maneuvering thruster system
ASD	Anti-Ship Defense	QEV	Quadrillion Electron Volt
CGCP/SCDS	Cloaking Generation, Cloaking Penetration/Stasis Countermeasure Defense System	RAV/ISHAK	a Coridianian acronym for a Tlixis Ramab Warp Celestial Guidance system
CIDSS	Close-In Deflector Shield System	RDF	Rapid Deployment Force
CQM	Close-Quarters Maneuvering	RSAT/HIRAM	an Izarian acronym for a Trestis ar Trestis deflector/force field system
FOB	Frequency of Operational Breakdowns	SANTH	an Andorian acronym for an Orage Ijek improvement to the Scarbak RS impulse engine configuration
FSTR/TAC	Fleet Strategic/Tactical Data System	SCS	Space Control Ship design program
KWIL	a Deltan acronym for a Mandor Industries short-range, precise sensor configuration	SFD	Star Fleet Division shipbuilding subsidiary
LD	Li Donus; Deltan term meaning "all-knowing," used in reference to the L.D.-series add-on to the "Artos" Warp Celestial Guidance system	SFRF	Star Fleet Reserve Force
LN	Manufacturers' standard prefix for linear warp engine model numbers	SPE	Sentry Protective Envelope deflector/force field system
LRDP	Long-Range Data Pod	SRA	Selected Restricted Availability; refers to a vessel's "drydocking" at selected periods during her service life for systems rejuvenation, overhaul, etc.
MDPC	Multi-Directional Phaser Cannon	SSDGI	Sciential Sensory Data-Gathering and Interpretation system
Mk	Mark	TACAR	Target Acquisition Center Accelerated Response
MSC	Military Staff Committee	TEV	Trillion Electron Volt
NAVCAS	Navigational Control And Sequencing	WADE	Wide-Angle Deflector Emitter
NAVTA	Navigational System, Tactical Priority		
NCC	Naval Construction Contract and/or Navigational Contact Code number		
ODPC	Omni-Directional Phaser Cannon		
PB	Manufacturers' standard prefix for circumferential warp engine model numbers		
PRA-TAK	a combination Terran/Andorian acronym for the Peripheral Range Actuated-Tul Adas Kaana fire control system		



# CONSTITUTION

## Class Heavy Cruisers

### 1 HEAVY CRUISER: "CONSTITUTION" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1700	<i>Constitution</i>	Star Fleet Division, San Francisco Yards, Earth	27 Nov 2214	16 Mar 2217	03 May 2218	Converted
NCC-1701	<i>Enterprise</i>	Star Fleet Division, San Francisco Yards, Earth	16 July 2218	04 July 2220	05 Jan 2221	Converted
NCC-1702	<i>Farragut</i>	Star Fleet Division, Puget Sound Yards, Earth	08 Sept 2220	17 Aug 2222	12 Feb 2223	Converted
NCC-1703	<i>Lexington</i>	Star Fleet Division, Puget Sound Yards, Earth	13 Sept 2220	21 Aug 2222	08 Feb 2223	Converted
NCC-1704	<i>Yorktown</i>	Star Fleet Division, San Francisco Yards, Earth	19 Oct 2220	19 Sept 2222	20 Mar 2223	Converted
NCC-1705	<i>Excalibur</i>	Star Fleet Division, San Francisco Yards, Earth	03 Jan 2221	12 Jan 2223	03 July 2223	Converted
NCC-1706	<i>Exeter</i>	Star Fleet Division, Singapore Naval Yards, Earth	11 Mar 2221	01 Feb 2223	10 Aug 2223	Converted
NCC-1707	<i>Hood</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	14 May 2222	28 Feb 2223	15 Aug 2223	Converted
NCC-1708	<i>Intrepid</i>	Star Fleet Division, Port Copernicus Yards, Luna	SD 2105.07	SD 2437.1	SD 2459.82	Lost
NCC-1709	<i>Valiant</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	21 June 2222	14 Apr 2224	10 Sept 2224	Lost
NCC-1710	<i>Kongo</i>	Star Fleet Division, Port Copernicus Yards, Luna	SD 2107.34	SD 2445.68	SD 2478.21	Converted
NCC-1711	<i>Potemkin</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	07 July 2222	21 Apr 2224	06 Nov 2224	<b>ATRA</b>

The *Potemkin* is the only "old-type" *Constitution* (CH 1700)-class heavy cruiser still active in what is basically her original configuration. This ship saw extensive action during the Duchiai Expansion and the Mal Satz conflict of 2232, and was severely damaged in an encounter with two Klingon-allied vessels during the Four Years War. As a result of the last action, the *Potemkin* was in drydock at Rigel for nearly two Earth-years during which time major structural repairs were made to her primary hull. She is presently an active line training vessel with numerous modifications in her command and primary operations centers. Her home port is Starbase 4.

*Class:* The *Horizon* (CA 1000)-class cruiser *Constellation* (CA 1017) was uprated to *Constitution* class specifications and was active as a heavy cruiser (CH 1017) until

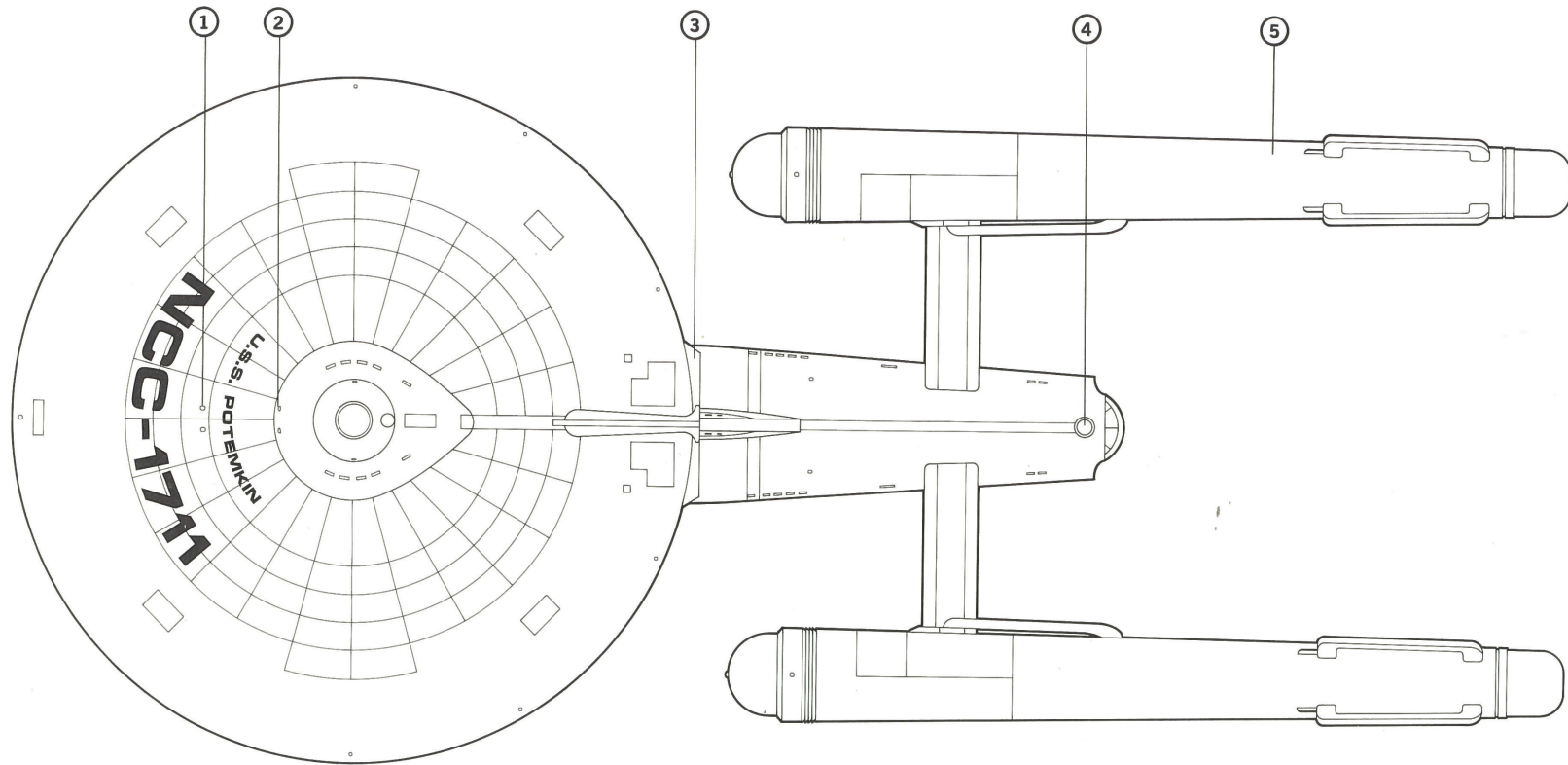
she was lost on stardate 4203. The *Archon* (CA 1370)-class cruiser *Republic* (CA 1371) was also uprated and served as an active line vessel until 30 May 2238 when she was reclassified as a heavy cruiser training ship (CHT 1371). She was decommissioned on 10 September 2257.

The *Valiant* (CH 1709) was lost in the line of duty in the vicinity of the Eminiar star system only eight months after commissioning. All other ships of the class were uprated to *Bonhomme Richard* specifications after the Four Years War. The *Intrepid* (CH 1708) was subsequently lost with all crew aboard on stardate 4307.

*Classification:* All *Constitution* class starships were originally classified as cruisers (CA 1700-11); they were changed to heavy cruisers on 30 June 2217. The *Potemkin*



# CRUISERS



**Potemkin in 2290**

1. 447/54 retractable phaser banks 2. Mk 10 Mod 1 torpedo tubes 3. SBA impulse engines 4. navigational beacon 5. PB-31 Mod 3 warp drive units

Current specifications of U.S.S. *Potemkin*:

Displacement: 181,000 metric tons standard  
(177,000mt light, 185,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	285.9m	126.8m	153.8m
Beam:	125.6m	125.6m	19.2m
Draft:	71.5m	32.8m	18.8m

Propulsion: Two (2) PB-31 Mod 3 dilithium-energized antimatter circumferential warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)

Two (2) SBA subatomic unified energy impulse units  
(System contractor: Scarbak Propulsion Systems, Cairo, Earth)

SC44B chemical combustion precise control package  
(System contractor: Dennison/Westinghouse, San Francisco, Earth)

Velocity: Warp 5, standard  
Warp 7, maximum

Acceleration: Rest-Onset Critical Momentum: 30.30 sec  
Onset Critical Momentum-Warp Engage: 3.91 sec  
Warp 1-Warp 3: 1.12 sec  
Warp 3-Warp 5: .76 sec  
Warp 5-Warp 7: 5.52 sec

Duration: 3 Earth years, standard  
15 Earth years, maximum

Complement: 402 (38 officers + 364 crew)

Embarked craft: 2-3

Navigation: TSS Warp Celestial Guidance  
(System contractor: Mandor Industries Ltd., Dalhalm, Delta IV)

Computers: "Daystrom" Duotronic II  
(System contractor: Daystrom Computer Systems Inc., Lunaport, Luna)

Phasers: 4 banks - 447/54 single surface mount (retractable)  
(System contractor: Lockheed Associated Industries, Seattle, Earth)

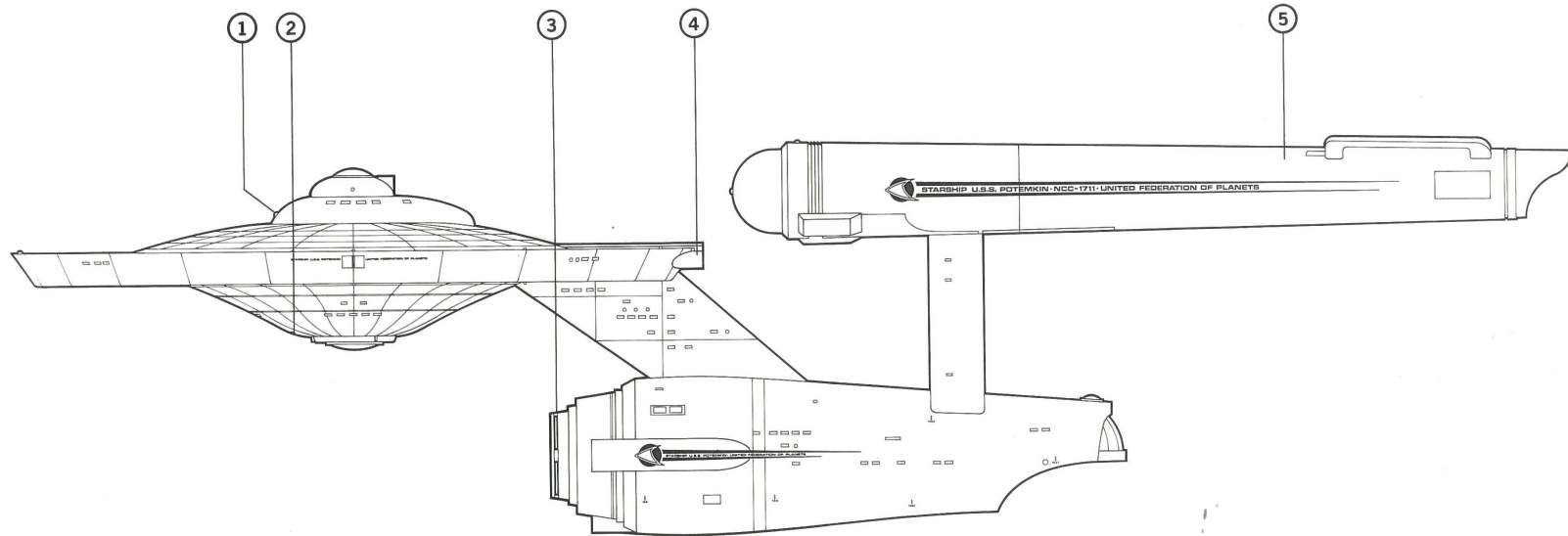
Photon torpedoes: 2 tubes - Mk 10 Mod 1 indirect  
(System contractor: Selenia Sistemi S.P.A. Inc., Rome, Earth)

Defense: Hycor Modular Adaptive force field and deflector system (linked to original trititanium-alloyed field projection plates)  
(System contractor: Hycor, Woburn, Earth)

"Tektar" weapon system; "Conus" sensor and fire control system  
(Systems contractor: Raakuv, Gaziwahaida, Andor)

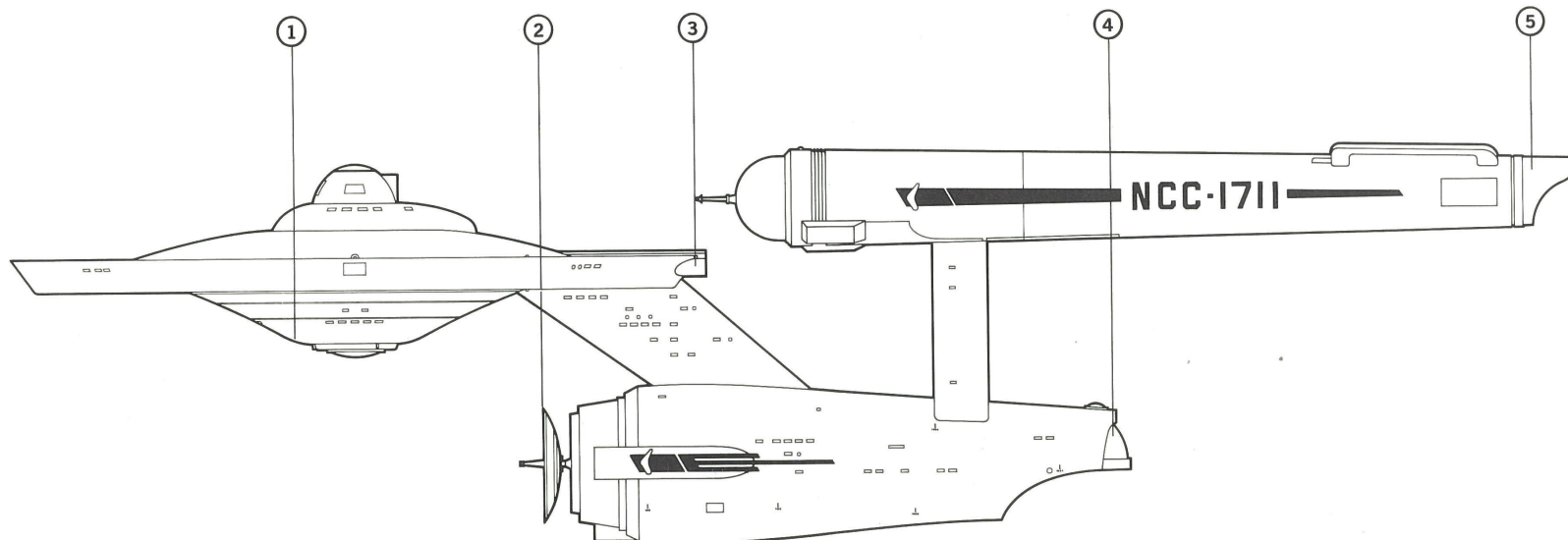
Life support: 3T/Centris replacement gravity generator  
MP-4A Integrated Radiation Shielding add-on  
(Systems contractor: Cristobal SM/S, Manila, Earth)

SARS Synthesizing and Regeneration system  
(System contractor: Triax Medifore, Villa Carlos, Bolivia, Earth)



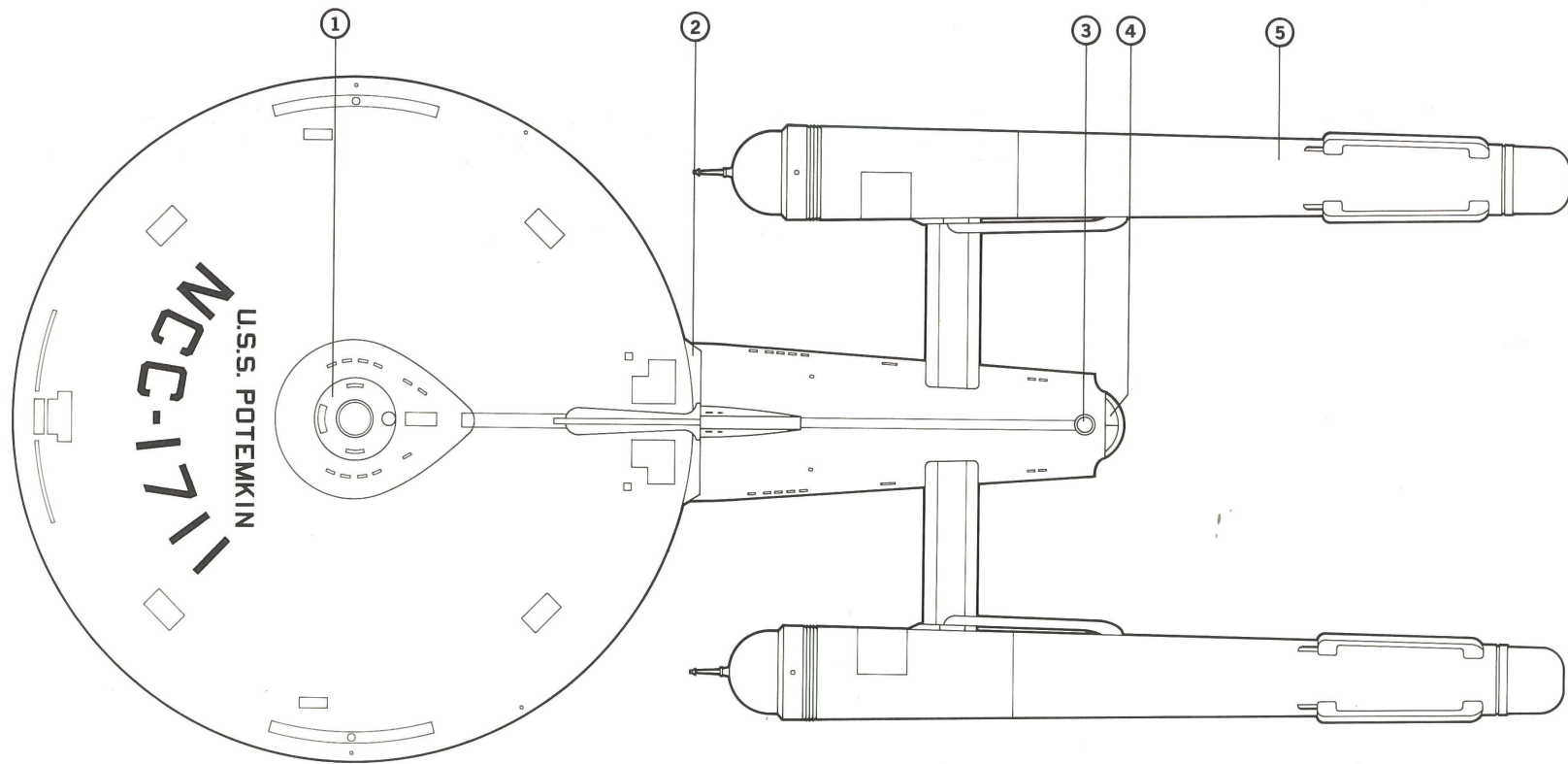
**Potemkin in 2290**

1. Mk 10 Mod 1 torpedo tubes 2. 447/54 retractable phaser banks 3. Borge deflector mount 4. SBA impulse engines 5. PB-31 Mod 3 warp drive units



**Potemkin in 2223**

1. 4680 TEV laser units 2. Dor Ayela deflector mount 3. SBA impulse engines 4. landing bay 5. PB-31 Mod 3 warp drive units



**Potemkin in 2223**

1. primary bridge 2. SBA impulse engines 3. navigational beacon 4. landing bay 5. PB-31 Mod 3 warp drive units

was reclassified as a training vessel (CHT 1711) on 3 July 2253.

*Design:* CH 1700-11 were initially proposed as considerably smaller vessels of some 150,000 metric tons (standard displacement); their design was subsequently enlarged to accommodate additional scientific and data-gathering systems and a larger hangar for additional embarked craft.

The *Potemkin* had her original Monotronic computer system replaced with a "Daystrom" Duotronic system in 2248; this was subsequently upgraded to a Duotronic II system in 2269. "Tektar" and "Conus" were installed during this same period, replacing the "Stalt" defensive system fitted during the training ship conversion.

The *Constitution*-class heavy cruisers represented a major advance in starship development. The use of modular-type components and the general excellence of the *Constitution* design resulted in few changes for later ships of this type. The *Bonhomme Richard*, *Coronado*, *Achernar*, *Enterprise*, *Constitution (II)*, *Endeavor*, *Tikopai*, and *Enterprise (II)* starship classes evolved directly from the basic *Constitution* design.

*Conversion:* The *Potemkin* was converted to a training ship during 2251-52. The TSS Navigational Guidance System was added and a modular deflector shield sys-

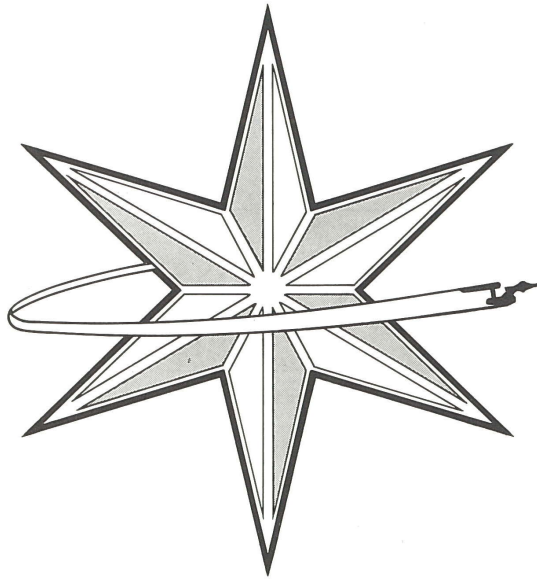
tem was installed to tie-in with the ship's primary projection plates. Additionally, all three command centers and the engineering operator consoles were modified.

Repairs were being made to the *Potemkin's* primary hull during this same period; major design improvements were made in the ship's infrastructure, the O1 bridge level was reduced, and added sensor capability was incorporated, including the installation of first-generation "Eagle Eye" Mk 201 sensor units.

*Engineering:* Minor changes were made in the SBA impulse units during the *Potemkin's* conversion, resulting in improved power-curve ratios. The PB-31 series warp engines are basically unchanged from the date of her commissioning.

*Weapons:* The *Potemkin* was originally fitted with two 4680 TEV rarium laser banks on her primary hull underside. These were replaced in 2256 with 447 series retractable phaser units (4 banks). Plans were developed in 2268 to arm the ship with four RIM-10C phaser banks; however, these weapons were not installed.

No torpedo system was provided until the *Potemkin's* training ship conversion. Mk 12 torpedo tubes were to have been installed but were changed to MK 10s to take better advantage of the available power sources.



# BONHOMME RICHARD

## Class Heavy Cruisers

The *Essex* is the only *Bonhomme Richard* (CH 1712)-class heavy cruiser that was not radically altered from her original design. She retains the same basic "lines" as when she was originally commissioned in 2252. Her entire propulsion package remains unchanged from the date of her launching; however, virtually all of her internal systems have been updated at various times during her operational life.

The *Essex* was part of the infamous Grijalfe Squadron during the period of Romulan expansion in the early 2260s. She was also employed extensively as a task group leader on various strategic assignments outside Federation space. While on stand down at Rigel in April 2266, the *Essex* was the victim of sabotage by Orion pirates: explosions occurred simultaneously in her upper primary hull, hangar bay, and engine support pylons. The resultant damage was significant enough to compromise the ship's structural integrity. As a result, *Essex* was not updated to *Achernar* (CH 1732) class specifications like her sister ships. Instead, she was repaired, fitted with improved systems, and placed on auxiliary status. She is currently a heavy cruiser training ship, home ported at Starbase One.

**Class:** The *Bonhomme Richard*-class heavy cruisers were authorized almost immediately after the outbreak of the Four Years War; however, only six ships were completed in time to see action in the conflict. Star Fleet persuaded the Military Staff Committee and the Procurements Board to continue to fund the ten remaining ships on the basis of providing an increased, viable deterrent factor. Additionally, funding was approved for the upgrading of ten *Constitution*-class heavy cruisers (CH 1700-08, 1710) to *Bonhomme Richard* specifications.

The *Monitor*, *Merrimac*, *Endeavor*, and *Defiant* all engaged numerous enemy vessels during the Four Years War, and the *Bonhomme Richard* was the only member of an entire task force to survive an encounter with the Klingon dreadnought *Maj'akan*.

The *Defiant* (CH 1717) was lost in dimensional interphase near Tholian space in

2263. There were no survivors.

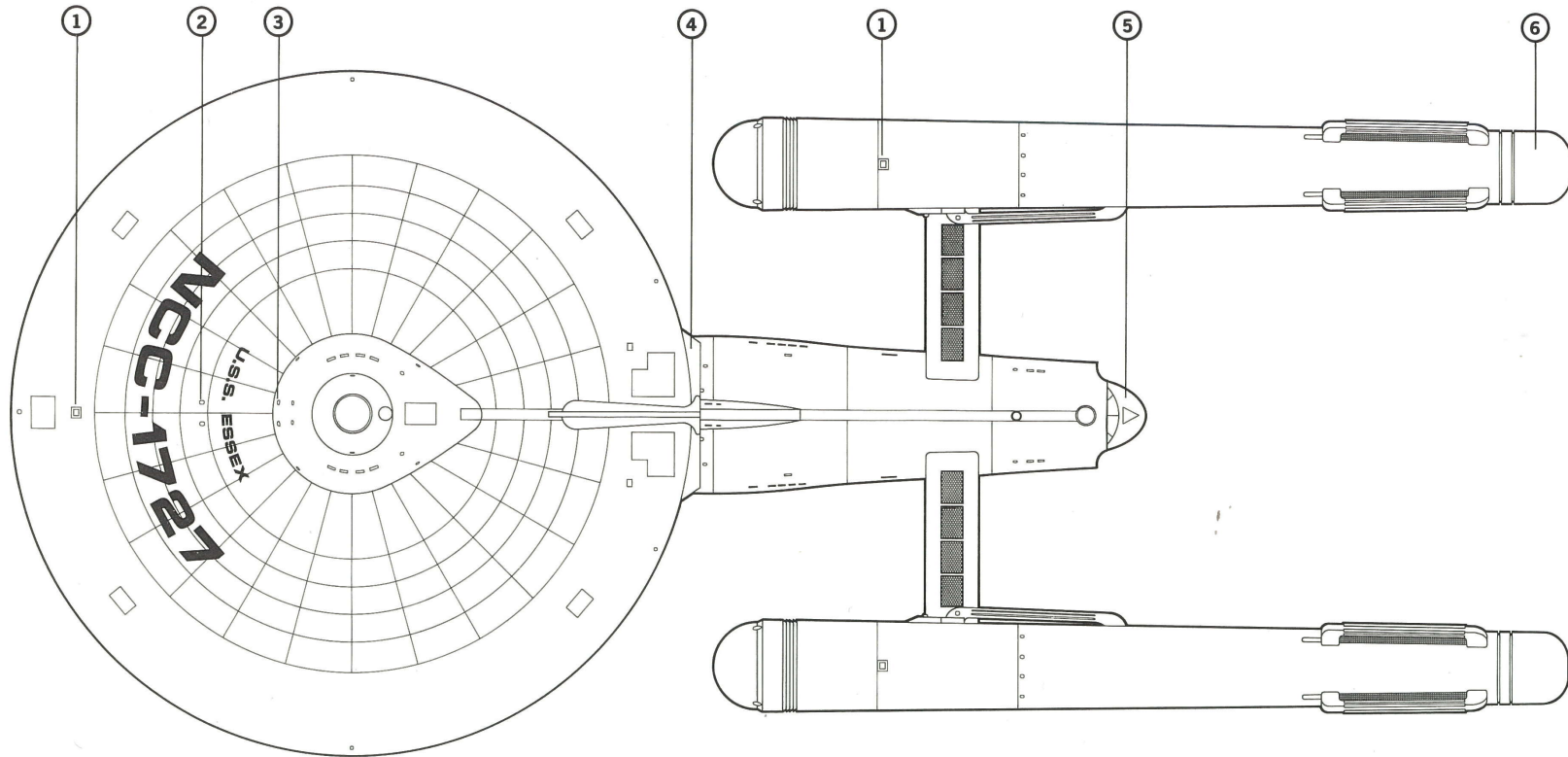
**Classification:** The *Bonhomme Richard* class starships were classified as heavy cruisers and authorized on 28 January 2246. The *Essex* had her classification changed to a training ship (CHT 1727) on 20 October 2267.

**Design:** These ships were built to an improved *Constitution* design, retaining the same basic features and overall shape of the earlier ships. The biggest improvement came with the fitting of PB-32 series warp engines, considerably superior to the PB-31 units of the *Constitutions*. Other improvements included additional subsurface deflector protection and a lower profile for the primary bridge; slightly larger landing and hangar bays; a redesigned and reinforced structural support configuration; and additional auxiliary subsystems.

The *Essex* was fitted with the "Saber" fire control system and Tri-Tel unit (a variant of the "Claw One" system, also designed by Signaal) and "Lynx" weapon system in 2255. These were also fitted in CH 1712-18 and 1722. The Hycor-designed deflector system was fitted in 2267 while the *Essex* was in drydock for repairs. Numerous other improvements were incorporated during this period, including the upgrading of power supply and support systems and the installation of improved fabrication units and internal security features. The *Essex* had her Duotronic computer system replaced with a Duotronic II system in 2269 to facilitate the training of midshipman crews.

**Engineering:** The *Essex* had her PB-32 warp engines updated with internal modifications twice: once during her repair period in 2267 and again during a standard systems overhaul in 2274. Each set of modifications provided improved acceleration times and increased endurance at specific warp speeds.

The 3CM chemical combustion system was updated with Dennison/Westinghouse "superfiring" CQM supplemental units in 2279, providing response and performance similar to "Trentis" and other current reaction control systems.

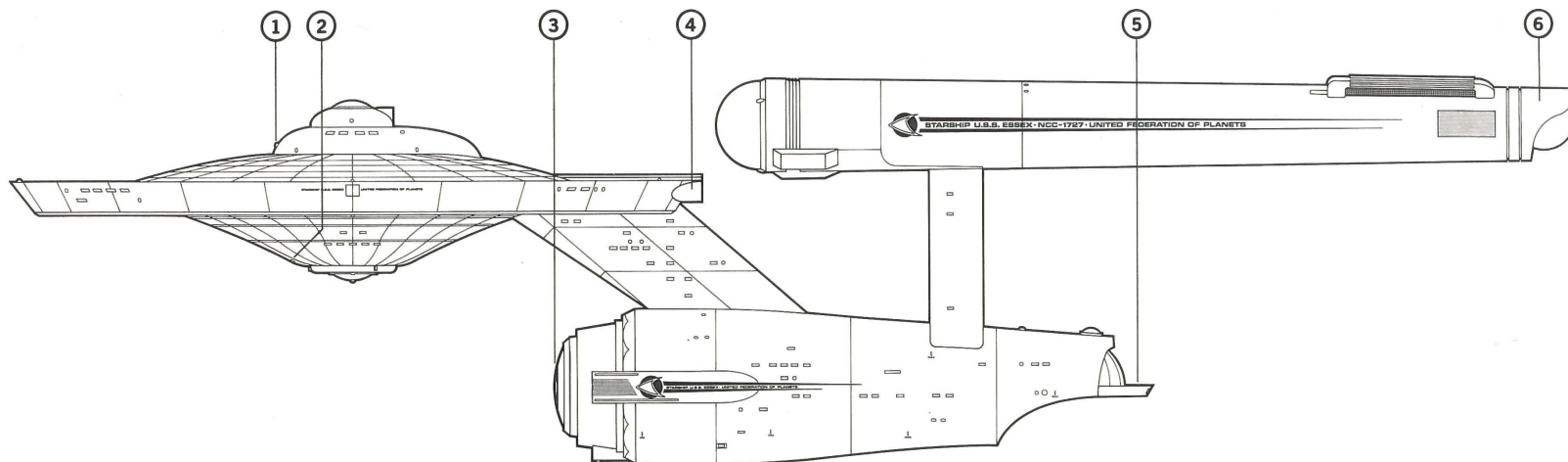


Essex in 2290

1. 3CM control system 2. 447/54 retractable phaser banks 3. Mk 12 Mod 2 torpedo tubes 4. SBA impulse engines 5. enlarged landing platform 6. PB-32 Mod 3 warp drive units

**1 HEAVY CRUISER: "BONHOMME RICHARD" CLASS**

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1712	<i>Bonhomme Richard</i>	Star Fleet Division, San Francisco Yards, Earth	06 June 2246	21 Feb 2248	08 Dec 2248	Converted
NCC-1713	<i>Monitor</i>	Star Fleet Division, San Francisco Yards, Earth	19 July 2247	12 Dec 2248	21 Sept 2249	Converted
NCC-1714	<i>Hornet</i>	Star Fleet Division, San Francisco Yards, Earth	10 May 2248	01 Dec 2249	24 July 2250	Converted
NCC-1715	<i>Merrimac</i>	Star Fleet Division, Singapore Naval Yards, Earth	21 May 2248	14 Nov 2249	10 Aug 2250	Converted
NCC-1716	<i>Endeavor</i>	Rodriquez Ingenieria, Lima, Earth	17 Aug 2248	10 Feb 2250	30 July 2250	Converted
NCC-1717	<i>Defiant</i>	Cosmadyne Corporation, Houston Division, Earth	10 Oct 2248	14 Apr 2250	15 Nov 2250	Lost
NCC-1718	<i>Excelsior</i>	Cosmadyne Corporation, Houston Division, Earth	27 Dec 2248	21 June 2250	07 Jan 2251	Converted
NCC-1719	<i>Eagle</i>	Rodriquez Ingenieria, Lima, Earth	04 Feb 2249	14 Aug 2250	28 Mar 2251	Converted
NCC-1720	<i>Lafayette</i>	Abou-Ghazala Ltd., Cairo, Earth	04 Mar 2249	10 Sept 2250	14 Apr 2251	Converted
NCC-1721	<i>Wasp</i>	Star Fleet Division, New Aberdeen Naval Yards, Aldebaran	SD 4950.07	SD 5090.31	SD 5150.38	Converted
NCC-1722	<i>El Dorado</i>	Abou-Ghazala Ltd., Cairo, Earth	16 Aug 2249	21 Feb 2251	14 Sept 2251	Converted
NCC-1723	<i>Ari</i>	Star Fleet Division, Alfras Naval Yards, Deneb V	SD 4984.31	SD 5137.04	SD 5174.91	Converted
NCC-1724	<i>Saratoga</i>	Abou-Ghazala Ltd., Cairo, Earth	07 Dec 2249	03 June 2251	30 Jan 2252	Converted
NCC-1725	<i>Tori</i>	Star Fleet Division, Vlastikov Support Base, Colony Five	SD 5004.82	SD 5178.44	SD 5208.47	Converted
NCC-1726	<i>Krieger</i>	Rodriquez Ingenieria, Lima, Earth	19 Mar 2250	01 Sept 2251	17 Mar 2252	Converted
NCC-1727	<i>Essex</i>	Star Fleet Division, New Aberdeen Naval Yards, Aldebaran	SD 5048.97	SD 5194.36	SD 5233.67	<b>ATRA</b>



### Essex in 2290

1. Mk 12 Mod 2 torpedo tubes
2. 447/54 retractable phaser banks
3. Korian deflector mount
4. SBA impulse engines
5. enlarged landing platform
6. PB-32 Mod 3 warp drive units

#### Current specifications of U.S.S. Essex:

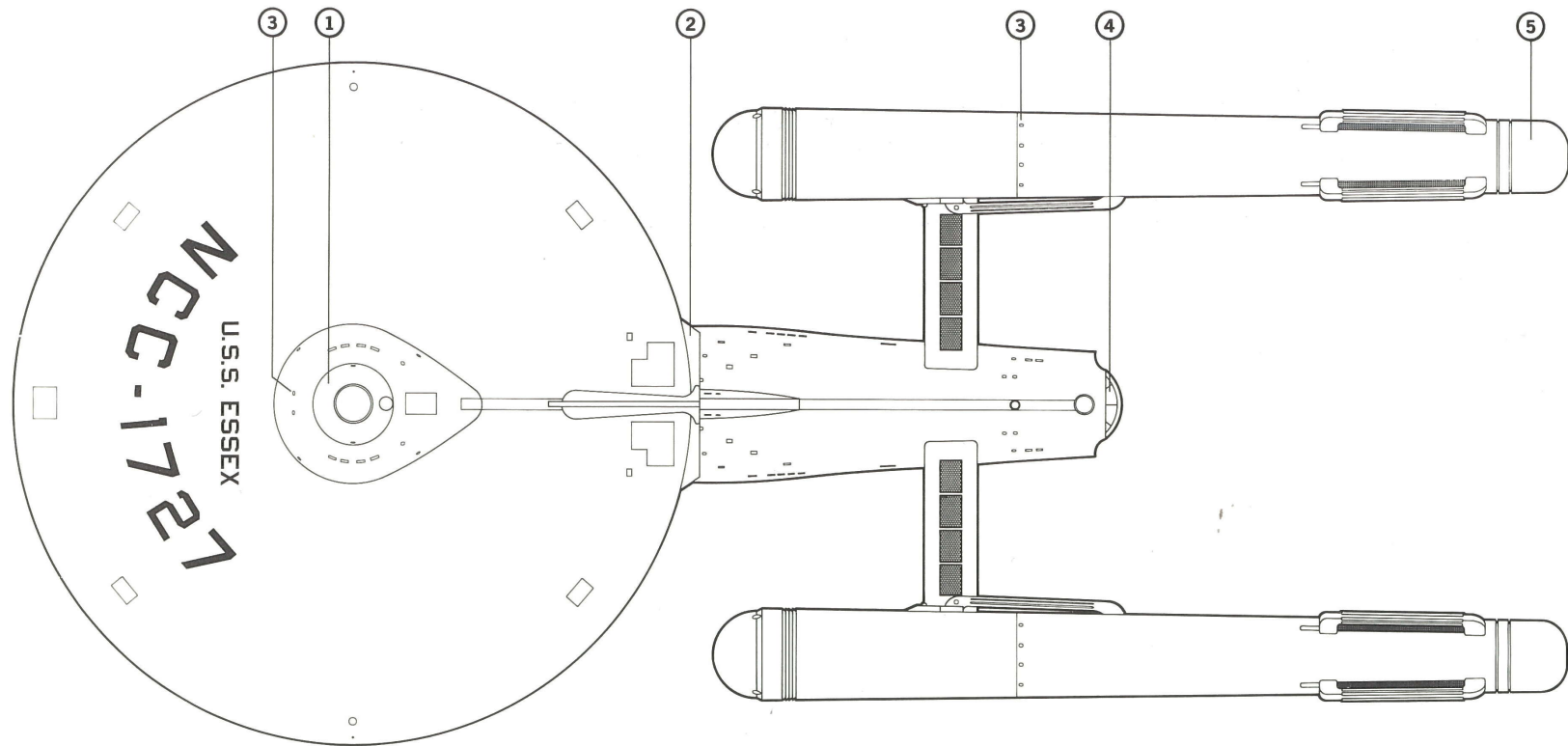
Displacement:	186,000 metric tons standard (182,000mt light, 190,000mt full load)
	Overall            Primary Hull            Nacelles
Length:	286.7m            127.2m            157.1m
Beam:	125.7m            125.7m            19.1m
Draft:	70.9m            33.1m            18.5m
Propulsion:	Two (2) PB-32 Mod 3 dilithium-energized antimatter circumferential warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII) Two (2) SBA subatomic unified energy impulse units (System contractor: Scarbak Propulsion Systems, Cairo, Earth) 3CM chemical combustion precise control package (System contractor: Dennison/Westinghouse, San Francisco, Earth)
Velocity:	Warp 6, standard Warp 8, maximum
Acceleration:	Rest-Onset Critical Momentum: 24.17 sec Onset Critical Momentum-Warp Engage: 3.04 sec Warp 1-Warp 4: 1.74 sec Warp 4-Warp 6: .78 sec Warp 6-Warp 8: 3.78 sec
Duration:	5 Earth years, standard 18 Earth years, maximum
Complement:	430 (40 officers + 390 crew)
Embarked craft:	6+
Navigation:	TSS Warp Celestial Guidance (System contractor: Mandor Industries Ltd., Dalhalam, Delta IV) "Daystrom" Duotronic II (System contractor: Daystrom Computer Systems, Inc., Lunaport, Luna)
Computers:	
Phasers:	4 banks - 447/54 single surface mount (retractable) (System contractor: Lockheed Associated Industries, Seattle, Earth)

Photon torpedoes:	2 tubes - Mk 12 Mod 2 indirect (System contractor: Selenia Sistemi S.P.A. Inc., Rome, Earth)
Defense:	Hycor Modular Adaptive force field and deflector system (linked to original sub-surface hull grid) (System contractor: Hycor, Woburn, Earth) "Saber" fire control system with Tri-Tel "Lynx" sensor and weapon system (Systems contractor: Signaal Electronic Enterprises Inc., Mediterranea, Earth)
Life support:	3T/Centris replacement gravity generator MP-4A Integrated Radiation Shielding add-on (Systems contractor: Cristobal SM/S, Manila, Earth) SARS Synthesizing and Regeneration system (System contractor: Triax Medifore, Villa Carlos, Bolivia, Earth)

**Weapons:** As originally built, the *Essex* was equipped with two 17.7 QEV dilithium laser banks on her lower primary hull. These were replaced with Lockheed 447/54 retractable phaser banks in 2258. It was planned at one time to install a sophisticated RIM phaser system in the ship; however, this was later deemed impractical.

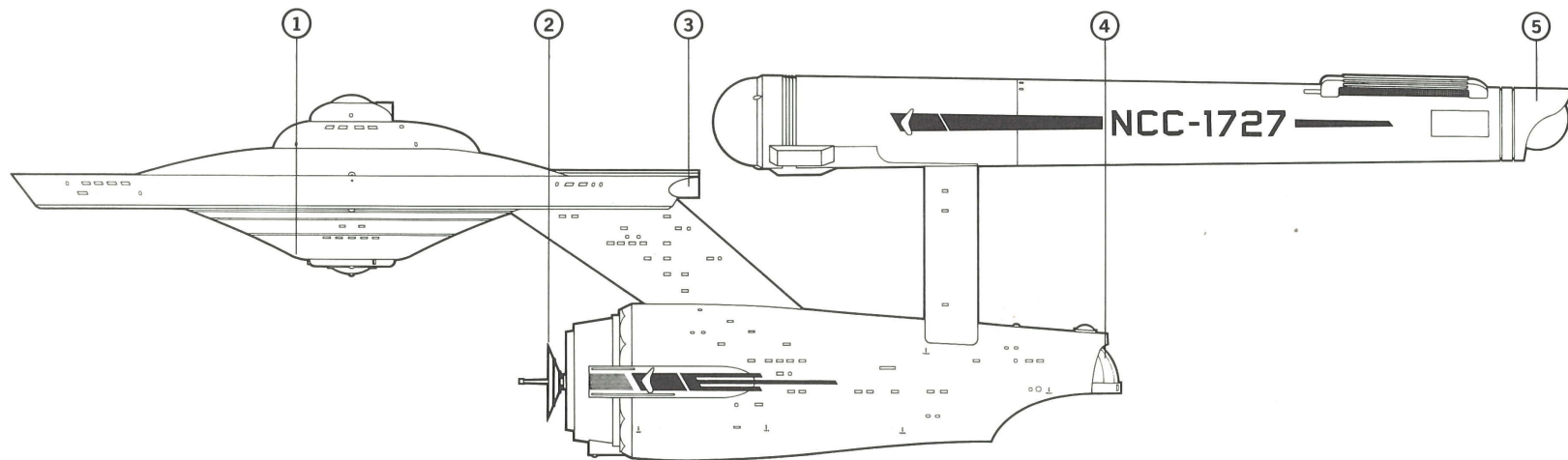
The "Wolf" Model 2 indirect photon torpedo system was replaced with a MK 12 indirect system in 2255. The new system was closely coordinated with the "Saber" and "Lynx" defensive suites that were fitted at the same time.

**Operational:** The *Essex* has been assigned to training shuttle and fighter pilots in landing aboard starships since 2268, supplementing her basic training mission role. This differs her from her contemporary CHT sister ship, the *Potemkin* (CHT 1711), which is not outfitted for training large numbers of pilots in alighting techniques. The *Essex* has landed more small craft than any other cruiser-size vessel in history; on 17 September 2289 she recorded her 150,000th small craft recovery.



Essex in 2257

1. primary bridge 2. SBA impulse engines 3. 3CM control system 4. landing bay 5. PB-32 Mod 3 warp drive units



Essex in 2257

1. 17.7 QEV laser units 2. experimental Hobbs 41 deflector mount 3. SBA impulse engines 4. landing bay 5. PB-32 Mod 3 warp drive units





# CORONADO

## Class Through-Deck Cruisers

### 6 THROUGH-DECK CRUISERS: "CORONADO" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1975	<i>Coronado</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	01 Mar 2256	30 Sept 2257	12 July 2258	AO
NCC-1976	<i>Oriskany</i>	Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars	SD 3951.4	SD 4100.8	SD 4176.12	AO
NCC-1977	<i>Clemenceau</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	11 Oct 2256	09 Mar 2258	30 Oct 2258	A3S
NCC-1978	<i>Bennington</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	19 Jan 2257	29 May 2258	11 Dec 2258	AO
NCC-1979	<i>Devonshire</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	23 July 2257	09 Jan 2259	26 Sept 2259	ATAC
NCC-1980	<i>Kiev</i>	Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars	SD 4123.55	SD 4272.68	SD 4309.14	AO

These ships were designed specifically to operate large numbers of small- to medium-size craft from a typical cruiser-size hull. They are extremely effective in tactical situations (such as at the Battle for Kastela, where large numbers of small attack ships and fightercraft were needed) and can act as area command ships for their own embarked craft or those of an entire task force. *Coronado* class ships are also useful in "showing the flag" because of the variety of craft they can embark. They have increasingly been used in situations where a capable presence or show of force is desired, but where the use of a ship such as a shuttlecarrier would be too provoking.

*Class:* Early Star Fleet planning provided for approximately 30 ships of this class. That number was cut due to doubts about the future effectiveness of this design. The service record of the *Coronado* class eventually proved such doubts unwarranted, but by that time plans for much larger designs of this general starship type (such as the *Ariel*/SC 2200-class shuttlecarriers) were already under development, and no further ships of this class were considered.

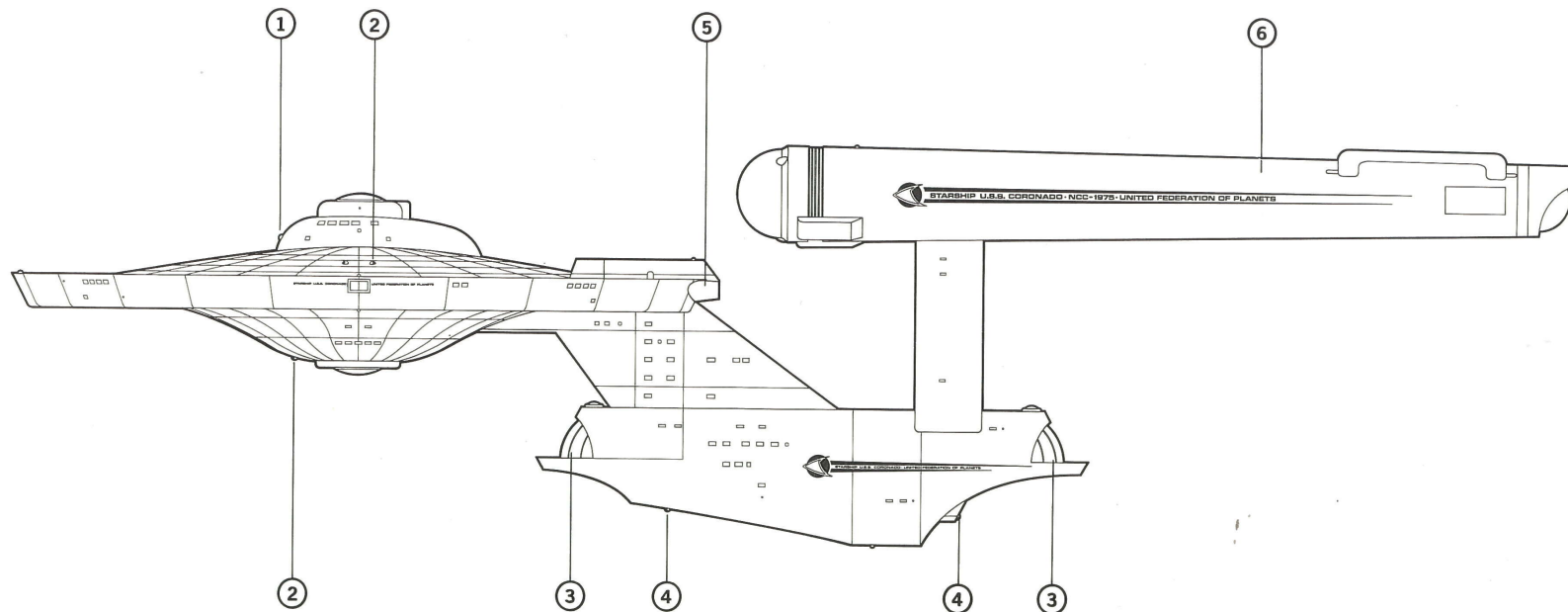
*Classification:* When conceived these ships were classified as heavy cruisers. Re-

classified during construction to SC 1975-80 (shuttlecarriers). Their classification was changed again on 30 June 2270 to "through-deck cruisers" (CD 1975-80) after the introduction of much larger ships (such as the *Ariel* class) designated shuttlecarriers.

*Design:* Originally proposed as much larger vessels with far greater small craft capacity, these ships eventually came to represent an improved *Bonhomme Richard*-type cruiser design with a unique "double-ended" secondary hull. Their effectiveness when operating embarked craft in hostile conditions is greatly improved because of this full-length hangar design, which allows one end of the ship to be used as a recovery station and the other as a launch point. They officially can embark 12-14 medium-size craft, but at times have left port with as many as 25 craft of similar size.

These ships are equipped with the Vulcan-built "Sanshar" computer system (equivalent to Duotronic III). This unit integrates the primary operations of the ship (navigation, sensors, engineering, weaponry, etc.) on a much higher level than in most classes, resulting in extremely sophisticated vessels.

The *Coronado*, lead ship of the class, is also the largest at 179,000 metric tons (stan-



### Coronado

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. landing bay 4. RIN-9 phaser banks 5. SBE impulse engines 6. PB-47 Mod 3 warp drive units

Current specifications of *Coronado* class:

Displacement: NCC-1975: 179,000 metric tons standard  
(175,000mt light, 182,500mt full load)  
NCC-1976, 1980: 174,500 metric tons standard  
(170,000mt light, 178,500mt full load)  
NCC-1977-79: 176,000 metric tons standard  
(171,000mt light, 180,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	245.1m	153.5m	152.6m
Beam:	127.1m	127.1m	19.9m
Draft:	72.1m	32.5m	18.1m

Propulsion: Two (2) PB-47 Mod 3 dilithium-energized antimatter circumferential warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Four (4) SBE subatomic unified energy impulse units  
(System contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Asaks" chemical combustion reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 6, standard  
Warp 8, maximum

Acceleration: Rest-Onset Critical Momentum: 16.58 sec  
Onset Critical Momentum-Warp Engage: 2.00 sec  
Warp 1-Warp 4: .98 sec

Duration: Warp 4-Warp 6: .51 sec  
Warp 6-Warp 8: 1.87 sec  
5 Earth years, standard  
15 Earth years, maximum

Complement: NCC-1975: 317 (39 officers + 278 crew)  
NCC-1976, 1978-80: 305 (36 officers + 269 crew)  
NCC-1977: 312 (36 officers + 276 crew)

Embarked craft: 14+

Navigation: "Picket II" Warp Celestial Guidance  
(System contractor: Plessey Group, Essex, Earth)  
"Sanshar" Integrated System  
(System contractor: Ag Murpeth, Surak, Vulcan)

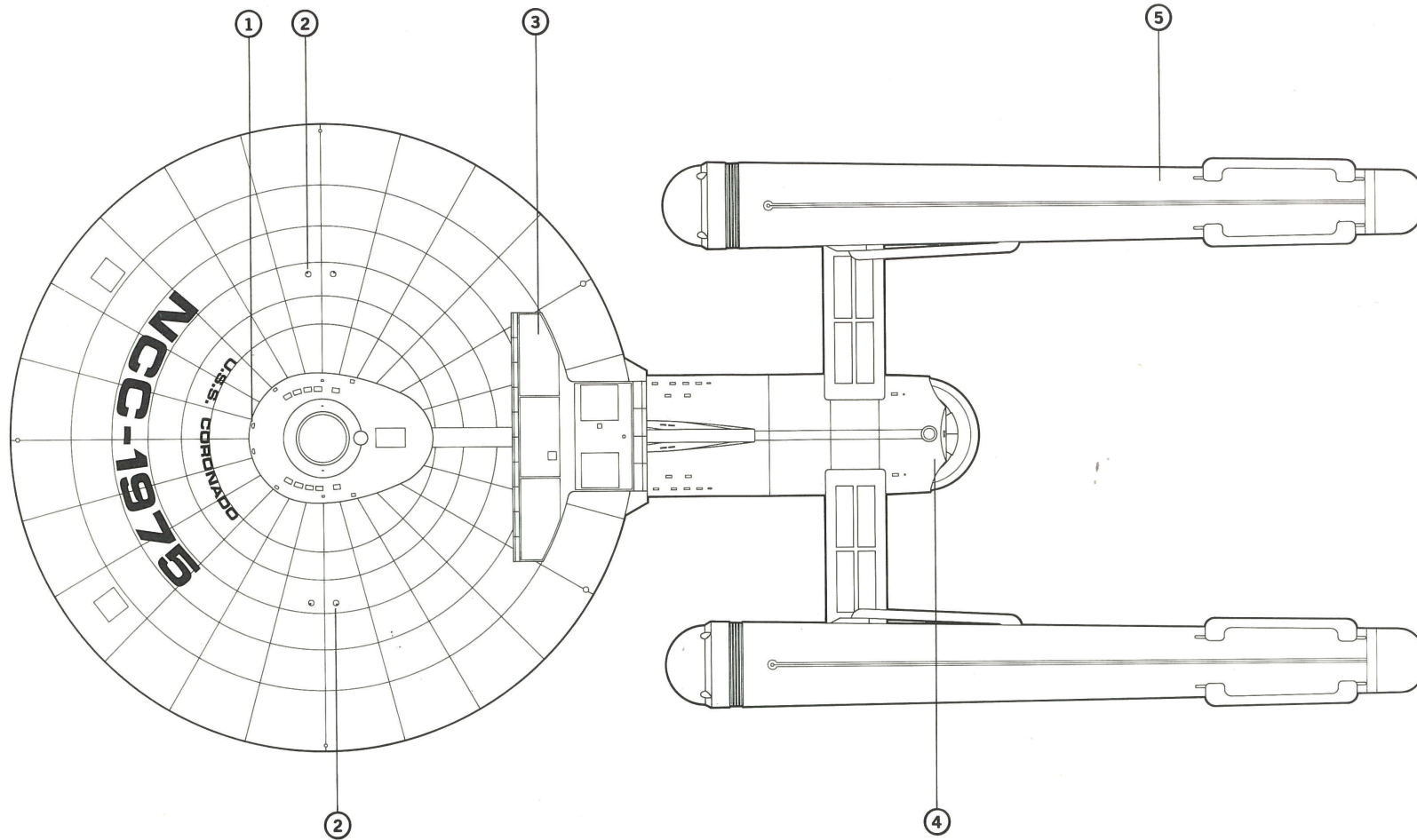
Computers: "Sanshar" Integrated System  
(System contractor: Ag Murpeth, Surak, Vulcan)

Phasers: 3 banks of 2 each - RIN-6 independent twin mount  
2 banks of 2 each - RIN-9 independent twin mount  
(Systems contractor: Augusta Anasado Inc., Fuzes, Venus)

Photon torpedoes: 2 tubes - "Awalt" direct  
(System contractor: Racial Werft F.M.C., Stratos, Ardana)

Defense: RSAT/HIRAM force field and deflector system  
FSTR/TAC Fleet Strategic/Tactical Data System  
(Systems contractor: Trestis ar Trestis, Pangaeear, Izar)

Life support: CT-3/Centris artificial gravity generator  
"Coraza" radiation shielding  
(Systems contractor: Cristobal SM/S, Manila, Earth)  
"Ambrix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



**Coronado**

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. engineering deck 4. landing bay 5. PB-47 Mod 3 warp drive units

dard). She is fitted with additional berthing facilities and a slightly larger hangar than her sister ships.

The *Devonshire* is fitted with a "drop bay" on centerline in her main flight deck. This enables her to operate larger numbers of fightercraft than the other ships. It was installed after her assignment to TacFleet.

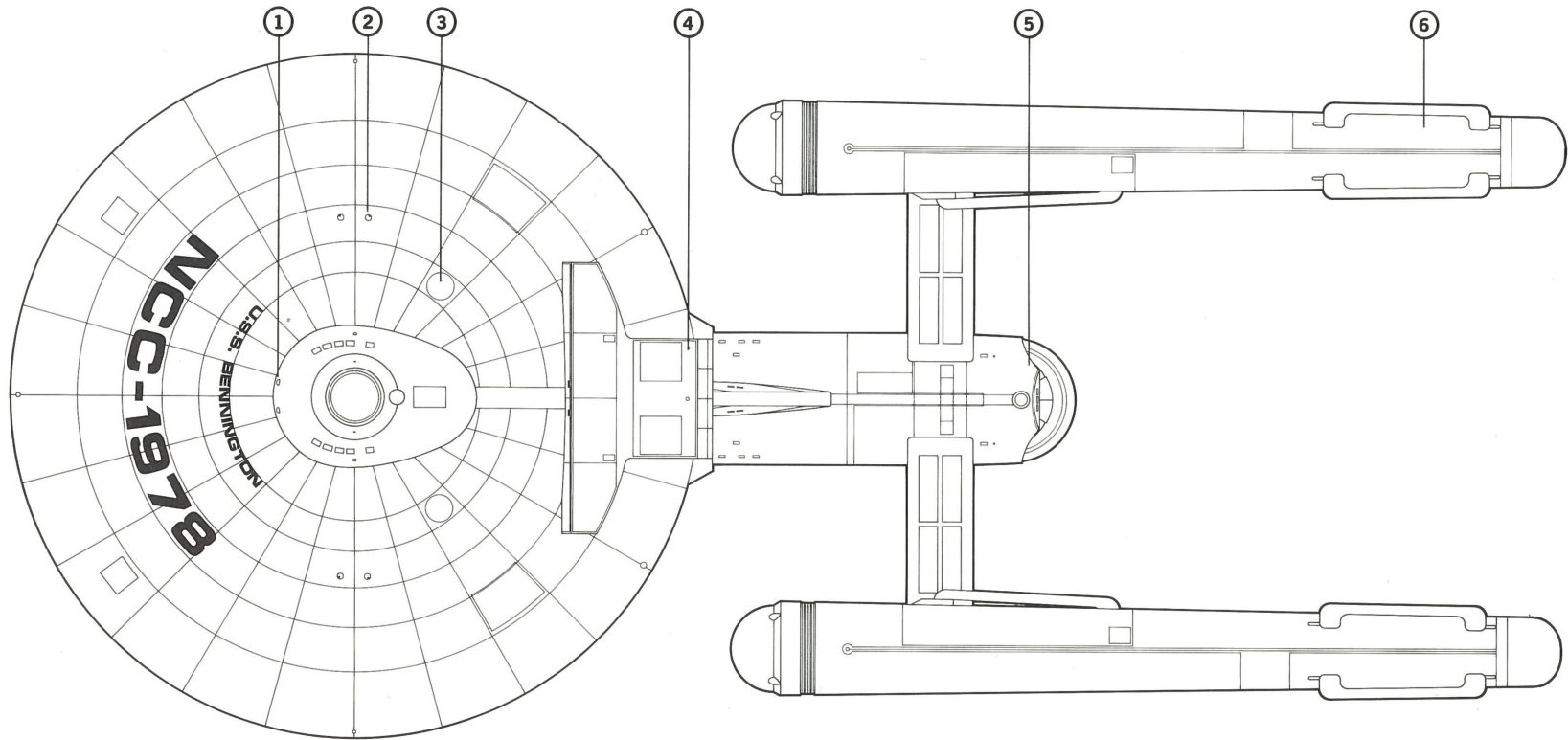
**Builders:** All ships were built by Vickers, which submitted a winning design and production schedule in September 2254.

**Engineering:** Because the secondary hull is devoted almost exclusively to flight operations, the *Coronado* class is equipped with an expanded engineering section in

the primary hull. All warp drive engineering functions are handled from this location.

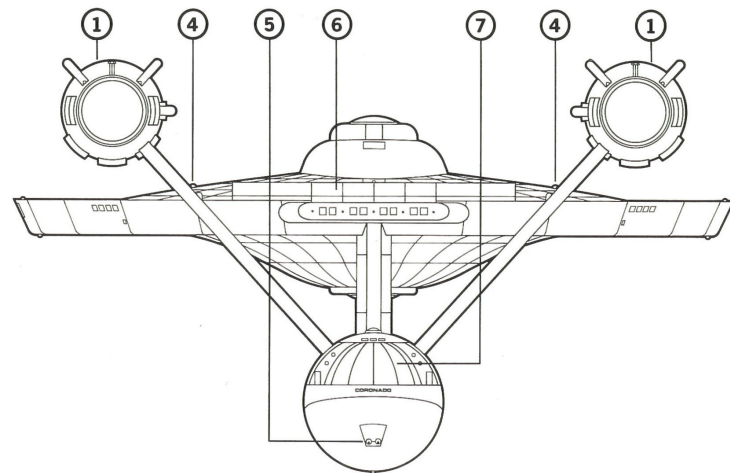
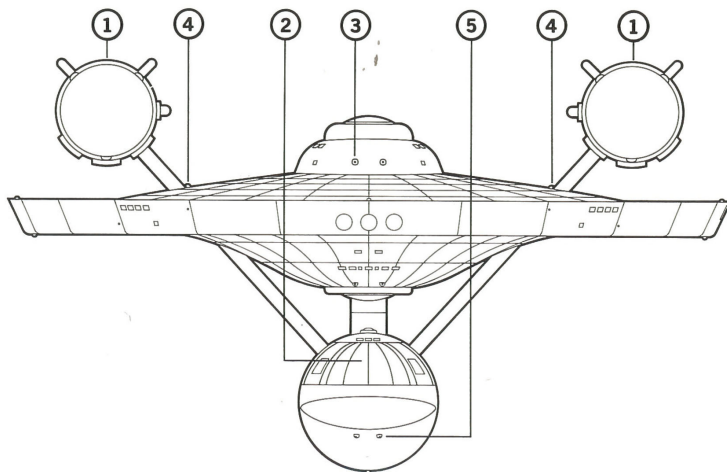
**Weapons:** These ships were originally fitted with the high-power Shasta phaser system at their rear, secondary hull emplacement. However, after extensive evaluation these units proved ineffectual and were replaced with standard RIN-series twin-banks in 2264.

**Embarked craft:** These were the first Star Fleet vessels provided with the *Benares* Class 3 "jumpship" and the *Kadiri*-class scoop. They initially embarked three of each in addition to their regular assigned craft. The jumpship and scoop types were removed in 2265.



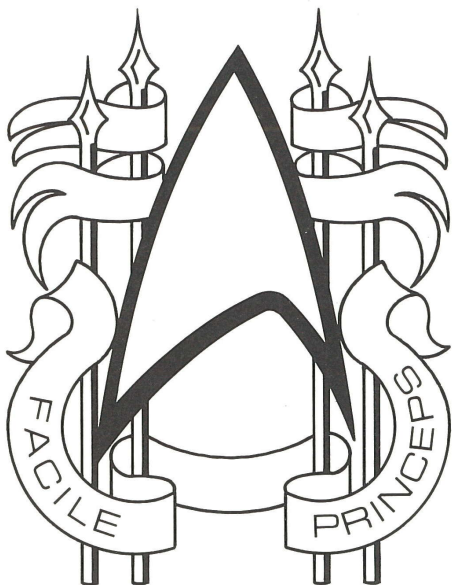
**Bennington**

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. escape hatch 4. engineering deck 5. landing bay 6. PB-47 Mod 3 warp drive units



**Coronado**

1. PB-47 Mod 3 warp drive units 2. bow landing bay doors 3. Awalt torpedo tubes 4. RIN-6 phaser banks 5. RIN-9 phaser banks 6. engineering deck 7. stern landing bay doors



# ACHERNAR

## Class Heavy Cruisers

### 9 HEAVY CRUISERS: "ACHERNAR" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1732	<i>Achernar</i>	Star Fleet Division, San Francisco Yards, Earth	28 Feb 2261	09 Aug 2262	12 Mar 2263	<b>A4S</b>
NCC-1733	<i>Sol</i>	Star Fleet Division, San Francisco Yards, Earth	01 Nov 2263	16 Mar 2265	17 Aug 2265	<b>AO</b>
NCC-1734	<i>Jupiter</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 6313.5	SD 6488.2	SD 6509.34	Converted
NCC-1735	<i>Rigil Kentaurus</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6371.25	SD 6512.4	SD 6536.21	<b>A3N</b>
NCC-1736	<i>Quindar</i>	Arias Mastac, Prime Dockyards, Daran V	SD 6422.68	SD 6539.17	SD 6573.47	Converted
NCC-1737	<i>Proxima</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 6417.31	SD 6519.23	SD 6594.61	<b>ATAC</b>
NCC-1738	<i>Androclus</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 6425.11	SD 6582.43	SD 6601.73	Converted
NCC-1739	<i>Astrad</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 6494.03	SD 6602.35	SD 6622.71	<b>AO</b>
NCC-1740	<i>Mondoloy</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 6516.27	SD 6613.4	SD 6650.26	Converted
NCC-1741	<i>Alfr</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 6519.05	SD 6621.3	SD 6654.41	<b>A1S</b>
NCC-1742	<i>Thelonii</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6530.18	SD 6636.46	SD 6674.28	<b>A2S</b>
NCC-1743	<i>Xanthii</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 6520.3	SD 6650.52	SD 6693.91	<b>A3S</b>
NCC-1744	<i>Sirius</i>	Arias Mastac, Prime Dockyards, Daran V	SD 6517.2	SD 6655.72	SD 6703.11	<b>A4N</b>

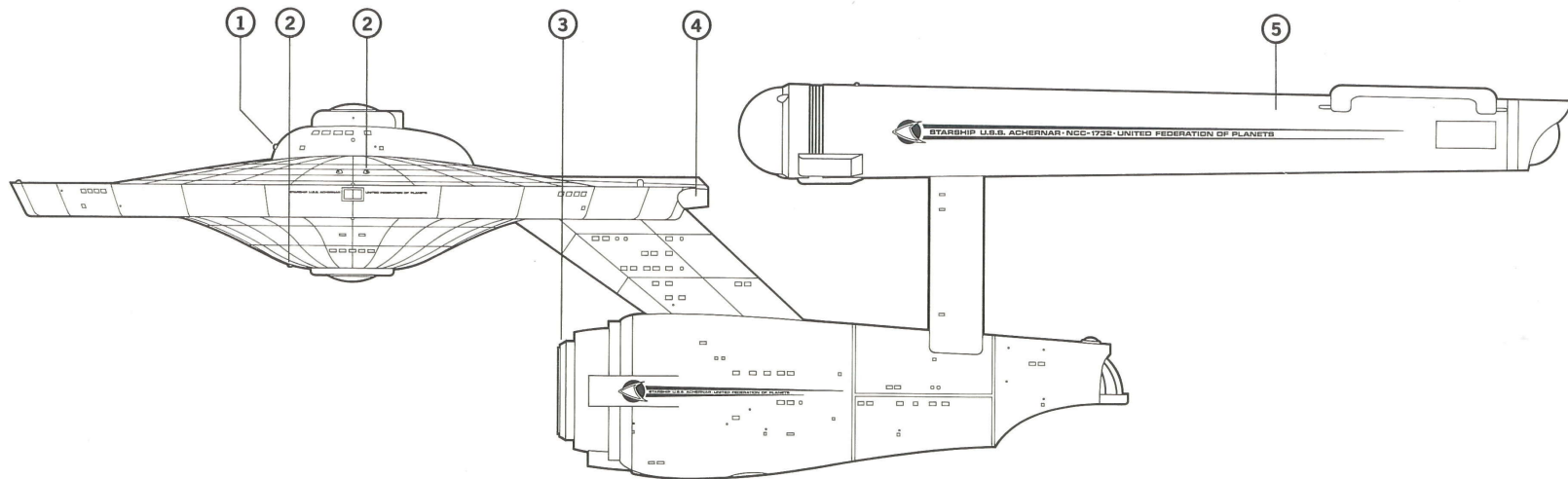
These were the last major, Class One starships to be constructed based on "old technology" design standards. The last of these ships (*Sirius*) was completed *after* work on the *Decatur* (CST 2500) and *Enterprise* (CH 1701) - both equipped with linear drive - had already begun.

These ships have been criticized for their limited speed (when compared to other heavy cruiser classes), modest protective systems, and sparse armament. The latter limitation will be partially corrected with the installation of additional phaser banks (RSM-12A single mount) in the secondary hull of certain ships beginning in 2292.

The *Sol* and *Astrad* are scheduled to be assigned to the SFRF in 2293. The *Xanthii* is based at Star Station Cepheus.

*Class:* Authorization for these heavy cruisers came as the result of increased Klingon activity (in the form of border violations, attacks on shipping, and general expansionist moves) in the late 2250s and early 2260s. Original proposals were for 68 ships of this type; final appropriations resulted in a more realistic 13 ships, with provisions for the modernization of suitable *Constitution* (CH 1700)- and *Bonhomme Richard* (CH 1712)-class heavy cruisers.

Despite the desire to deliver these ships as fast as possible, extensive evaluations and acceptance trials were performed on *Achernar* (CH 1732). Star Fleet Division didn't begin work on the *Sol* (CH 1733) until almost eight months after the commissioning of the lead ship.



### Achernar in 2290

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. Tlika deflector mount 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units

#### Current specifications of *Achernar* class:

Displacement: 190,000 metric tons standard  
(186,700mt light, 195,250mt full load)

	Overall	Primary Hull	Nacelles
Length:	288.6m	128.0m	153.6m
Beam:	127.1m	127.1m	19.7m
Draft:	72.6m	32.5m	18.2m

Propulsion: Two (2) PB-47 Mod 3 dilithium-energized antimatter circumferential warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Four (4) SBE subatomic unified energy impulse units  
(System contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Asaks" chemical combustion reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 6, standard  
Warp 8, maximum

Acceleration: Rest-Onset Critical Momentum: 17.14 sec  
Onset Critical Momentum-Warp Engage: 2.01 sec  
Warp 1-Warp 4: 1.02 sec  
Warp 4-Warp 6: .56 sec  
Warp 6-Warp 8: 2.21 sec

Duration: 5 Earth years, standard  
18 Earth years, maximum

Complement: 430 (43 officers + 387 crew)  
NCC-1732, 1733: 444 (43 officers + 401 crew)

Embarked craft: 2-3

Navigation: "Starmark" Warp Celestial Guidance  
(System contractor: Benkulen Systems, Singapore, Earth)

Computers: NCC-1732, 1733, 1737, 1739: ELD-10  
(System contractor: Interstellar Business Machines, Chicago, Earth)  
NCC-1735: "Fasfax" Duotronic III  
(System contractor: Farranti Mnemonics, Berkshire, Earth)  
NCC-1741-44: "T'Sharsish"  
(System contractor: Shaktir Tripel, Surak, Vulcan)

Phasers: 3 banks of 2 each - RIN-6 independent twin mount  
(System contractor: Agusta Ansadado Inc., Fuzes, Venus)

Photon torpedoes: 2 tubes - "Awalt" direct  
(System contractor: Racal Werft F.M.C., Stratos, Ardana)

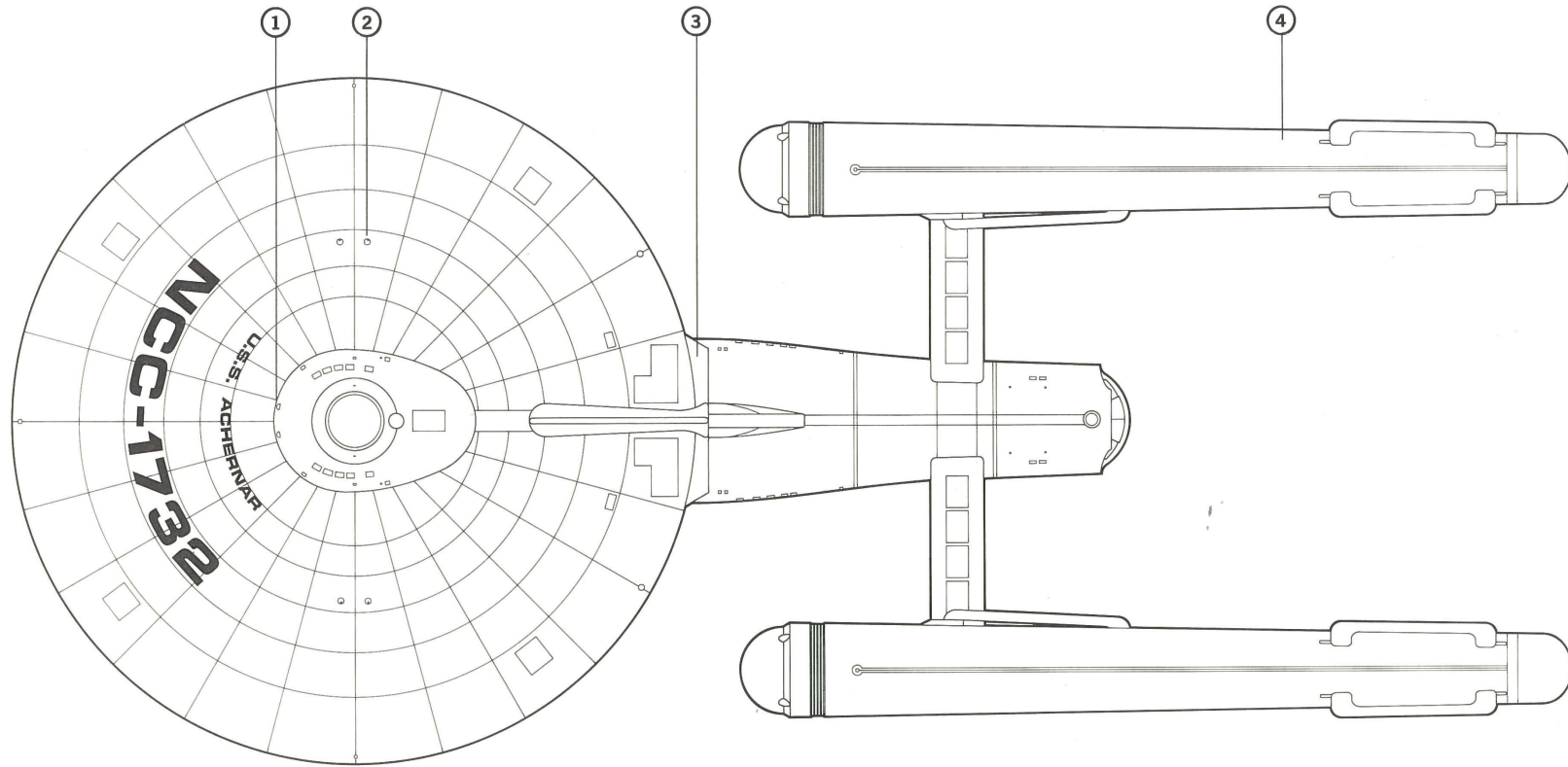
Defense: RSAT/HIRAM force field and deflector system  
FSTR/TAC Fleet Strategic/Tactical Data System  
(Systems contractor: Trestis ar Trestis, Pangaeear, Izar)

Life support: CT-3/Centris artificial gravity generator  
"Coraza" radiation shielding  
(Systems contractor: Cristobal SM/S, Manila, Earth)  
"Ambrix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

The *Astrad* (CH 1739) and *Alfr* (CH 1741) were instrumental in ending the Kznti Incursion; *Xanthii* (CH 1743) survived the Kzin sneak attack on Tau Ceti in 2272. The *Proxima* (CH 1737) was assigned to TacFleet in 2270.

**Classification:** These ships were ordered as heavy cruisers in November 2260; construction began on the lead ship only three months later. Hull numbers 1732-44 assigned 10 January 2261.

CH 1734, 1736, 1738, and 1740 were uprated to *Endeavor* (CH 1716) class specifications in the early 2270s, after an average operational life of just ten Earth-years.



**Acheron** in 2290

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. SBE impulse engines 4. PB-47 Mod 3 warp drive units

*Design:* The *Acheron* class starships are based on an improved *Bonhomme Richard* design, superior to the previous heavy cruisers with better engines, greater fire-power, and advanced astronics. Averaging 4,000 metric tons larger than the *Bonhomme Richard* class, these ships have a more streamlined design, especially noticeable in the secondary hull. The *Alfr* and later ships have additional deflector grid-work (vice viewports) at secondary hull amidships and on their support pylons and engine housings. Other ships of the class may be backfitted with a variant of the "Lancelot" deflector system on an individual ship basis.

The "Starmark" Warp Celestial navigation suite is fitted in all ships. Duotronic III computer systems or their equivalents are provided: the ELD series in the earlier ships, "Fasfax" in CH 1735, and the Vulcan "T'Sharsish" in CH 1741-44. (CH 1734, 1736, 1738, and 1740 were equipped with SBT systems before their conversion to *Endeavor* specifications.) Each of these units integrates effectively with the FSTR/TAC defensive system, fitted in all ships.

The design of these vessels was changed during construction to provide a more circular command hull (in comparison to the previous *Bonhomme Richard* class), a

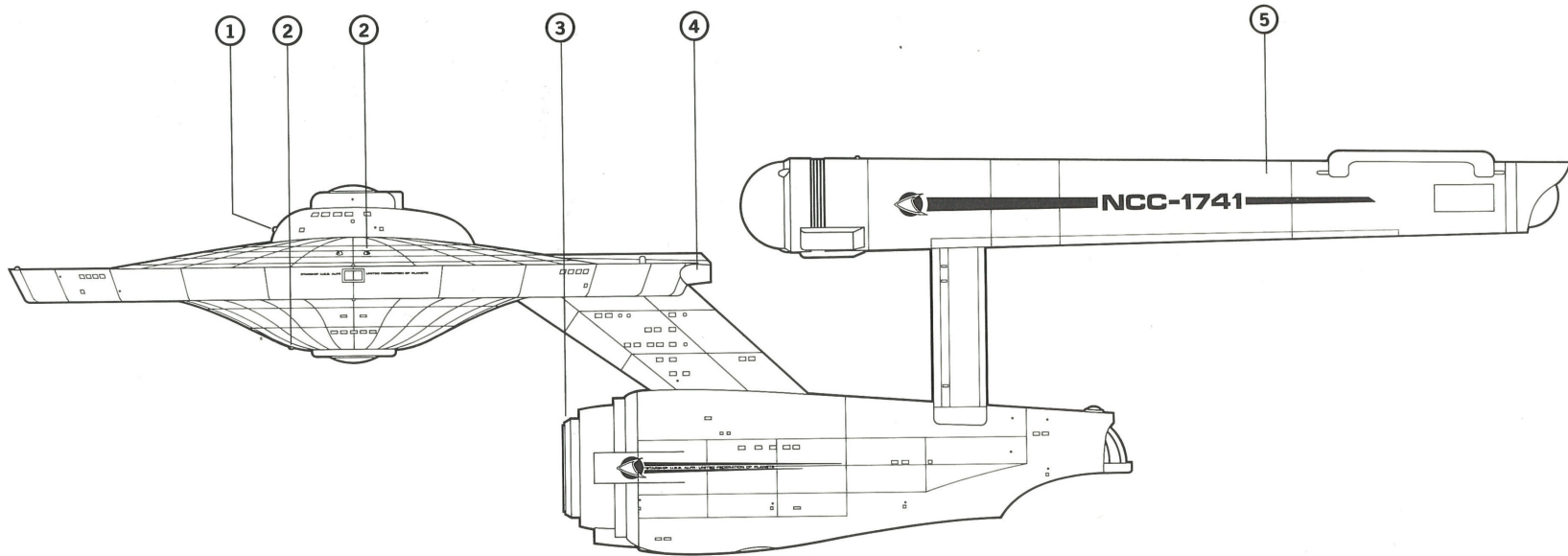
slightly larger main bridge, and larger, staggered personnel hatch/lifeboat stations on the upper primary hull.

*Engineering:* The *Acheron* class was equipped with PB-47 series circumferential warp engines during construction, the last major starship class to be fitted with circumferential warp drive. These engines provide far superior acceleration times than the older PB-32s; maximum velocity, however, is the same.

*Weapons:* RIN-6 twin mount phaser banks are fitted at three locations - all on the primary hull. An RSM single mount system (providing RSM-12A units) will be incorporated into the secondary hull of these ships (on a selected-vessel basis), giving them rear and lower phaser fire arcs.

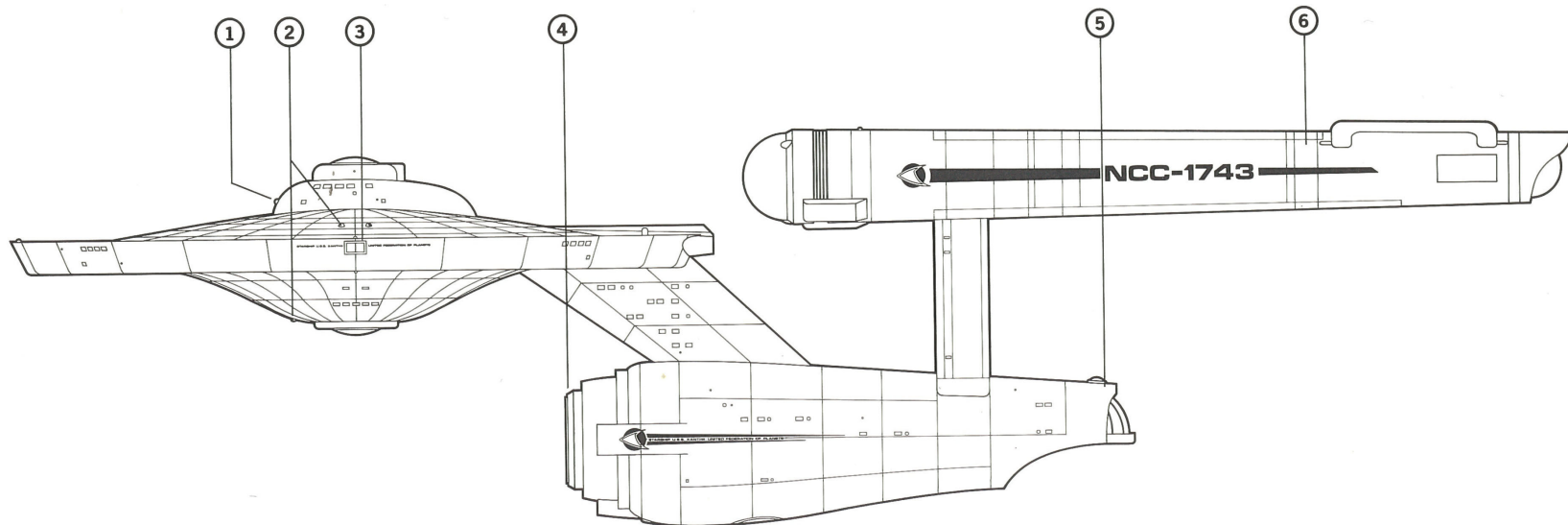
These were also the last starships (with the exception of the four new-build *Endeavor*-class heavy cruisers) to be constructed with a torpedo system in the command hull (03 level).

*Embarked craft:* The *Proxima* is equipped with two *Tigris* Class 3 long-range shuttles, replacing her standard shuttlecraft.



**Alfr** in 2268. Note pennant design which immediately preceded the current pennant arrangement.

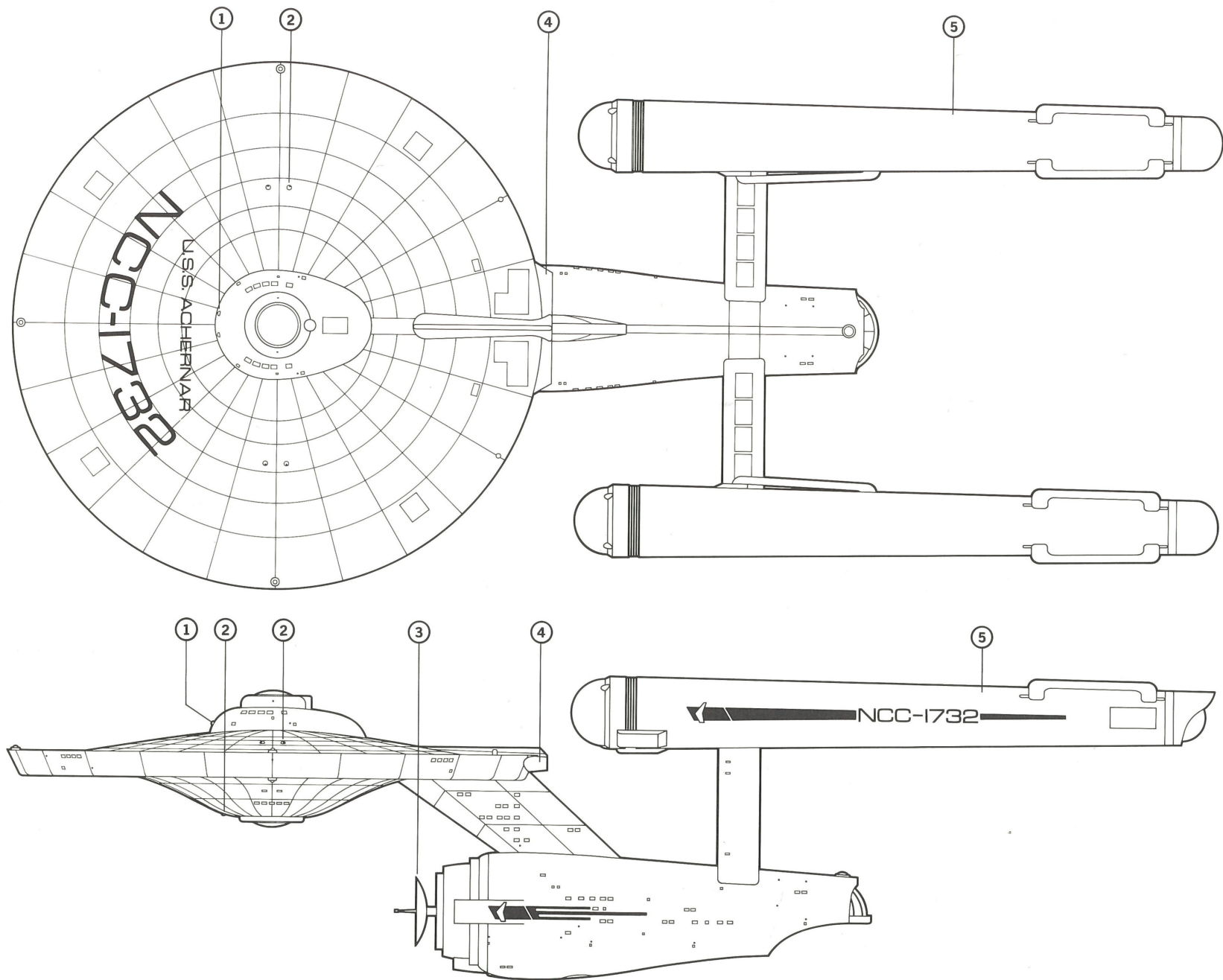
1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. Tlika deflector mount 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units



**Xanthii** in 2267

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. gangway hatch 4. Tlika deflector mount 5. landing bay 6. PB-47 Mod 3 warp drive units





**Acheron in 2263**

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. experimental Hobbs 50 deflector mount 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units

warp drive units



# ENTERPRISE

## Class Heavy Cruisers

This was the first class of starships refitted to “new technology” design standards. These heavy cruisers were converted to their new specifications over a period of nine Earth-years (2266-75). Almost since the time of their commissioning these ships have represented the ultimate in new technology Star Fleet design philosophy. For most of their service lives they were the fastest and most powerful starships in Star Fleet. They are now being surpassed by ships of the similar *Enterprise (II)* class.

*Class:* These ships, like those of the later *Constitution (II)* class, were originally members of the *Bonhomme Richard* (CH 1712) and early *Constitution* (CH 1700) classes. Star Fleet had originally planned to uprate the seven ships that now belong to the *Constitution (II)* class to *Enterprise* specifications, but decided in 2265 to “split” the ships into two separate heavy cruiser programs. This resulted in both classes being completed sooner and allowed for long-term analyzation of the performance records of each design.

The *Lexington* (CH 1703) was originally scheduled to be the lead ship of this class; however, a delay in completing her mission resulted in the assignment of dockyard priority status to *Enterprise* (CH 1701).

The *Enterprise* was launched ahead of schedule in 2267 and was responsible for solving the Vejur crisis. She also defeated an entire Kzin task force in 2272, effectively ending the Kznti Incursion. In 2277, the *Enterprise* made first contact with the Inari civilization when she encountered a scout ship just beyond subquadrant 3 south. The *Enterprise* was destroyed in early 2287 by a Klingon warship in an encounter which remains classified.

The *Lexington* and *Excalibur* (CH 1705) were assigned to deep space missions outside Federation territory from 2276 to 2280. Also, along with the *El Dorado* (CH 1722) these ships defeated a total of 18 Klingon vessels during the Taal Tan Offensive of 2283.

The *Hood* (CH 1707) defeated and was able to capture the Klingon battlecruiser

*L'ktja* during the Rykla Dagh Incident of 2285. The *Hood* was later lost with all crew after engaging the *K'teremny*-class destroyer *Qrish*.

*Classification:* Modernization of the first six ships of this class (CH 1701-03, 1705-07) was authorized on 19 April 2265. CH 1722 and 1726 were approved on 05 January 2270.

These ships were initially classified as large exploratory cruisers (CKE); reclassified as heavy cruisers in June 2266.

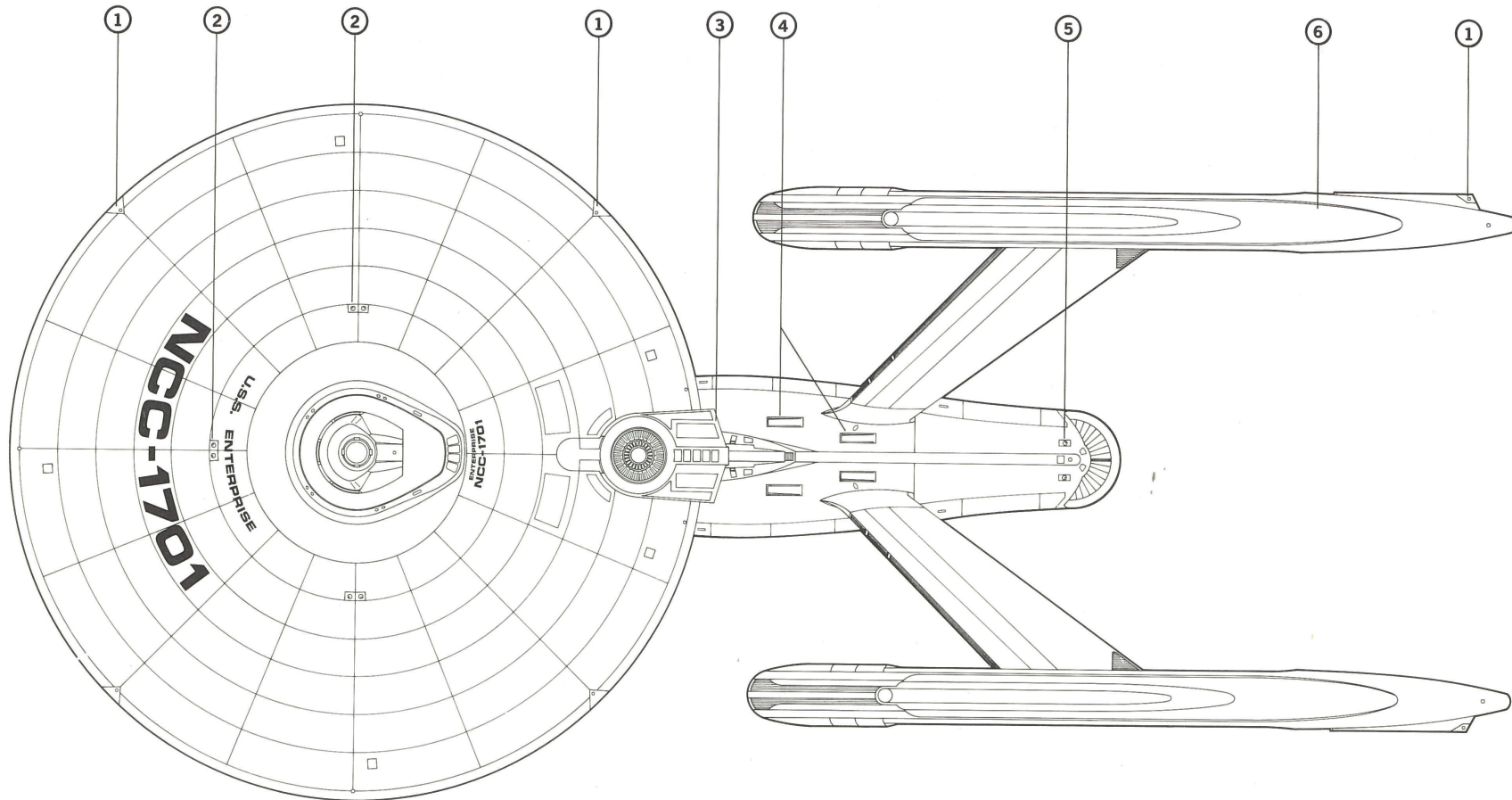
*Design:* For nearly twenty Earth-years these were the most sophisticated vessels ever built as well as the most versatile starships in Star Fleet service. During their conversions, improvements were incorporated in nearly every area of starship design and operation.

Actual internal deck space was increased in these ships by reducing corridor size. Vastly improved environmental support systems and various protective features were also fitted. An improved sickbay and a larger rec deck were installed, as were an officers lounge on the 03 level and a botanical bay in the secondary hull. Expanded cargo and hangar areas were also fitted in the secondary hull, effectively eliminating its role as a support hull for services also provided in the primary hull.

The standardized docking port system was added at seven locations, and a gangway hatch was fitted on the port side of the primary hull.

Some testing and evaluation of systems installed in the *Enterprise* class was performed on similar units in the *Belknap*-class cruiser *Decatur* (CST 2500), which was launched six months earlier than *Enterprise*.

Except for CH 1722, these ships were fitted with “Daystrom” series Duotronic II computer systems when built. These systems were upgraded to Duotronic III equivalents beginning in 2278. CH 1722 was equipped with the “Daystrom” Duotronic III system during construction.

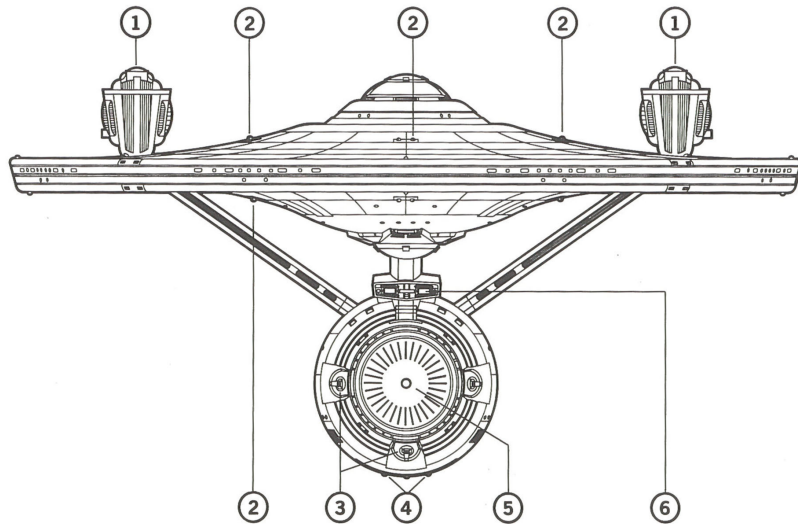


### Enterprise

1. Trentis reaction control system 2. RIM-12C phaser banks 3. RSM impulse engines 4. QASR maneuvering thrusters 5. RSM-14B phaser banks 6. LN-64 Mod 3 warp drive units

### 3 HEAVY CRUISERS: "ENTERPRISE" CLASS

Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1701	<i>Enterprise</i>	Star Fleet Division, San Francisco Yards, Earth	03 Jan 2266	23 Aug 2267	17 May 2268	Lost
NCC-1702	<i>Farragut</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	21 Apr 2268	03 Nov 2269	22 June 2270	Converted
NCC-1703	<i>Lexington</i>	Newport News Shipbuilding, Louisiana, Earth	09 May 2269	13 Dec 2270	06 July 2271	Converted
NCC-1705	<i>Excalibur</i>	Star Fleet Division, San Francisco Yards, Earth	02 Jan 2268	11 Sept 2269	18 May 2270	Converted
NCC-1706	<i>Exeter</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	18 Feb 2268	27 Oct 2269	29 June 2270	<b>A3N</b>
NCC-1707	<i>Hood</i>	Star Fleet Division, San Francisco Yards, Earth	12 Sept 2269	25 Feb 2271	30 Aug 2271	Lost
NCC-1722	<i>El Dorado</i>	Star Fleet Division, San Francisco Yards, Earth	26 Oct 2273	02 Jan 2275	15 June 2275	<b>A2S</b>
NCC-1726	<i>Kreiger</i>	Ishikawajima Harima Industries, Yokohama, Earth	17 Mar 2271	23 Oct 2272	01 May 2273	<b>A1S</b>



### Enterprise

1. LN-64 Mod 3 warp drive units 2. RIM-12C phaser banks 3. QIK-28 sensors  
 4. RSM-14B phaser banks 5. Vernier sensor/deflector mount 6. Mk 6 Mod 1 torpedo tubes

- Phasers: 6 banks of 2 each - RIM-12C independent twin mount  
 6 banks - RSM-14B single mount  
 (Systems contractor: Agusta Anasadado Inc., Fuzes, Venus)
- Photon torpedoes: 2 tubes - Mk 6 Mod 1 direct  
 (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)
- Defense: "Lancelot" primary force field and deflector control system  
 (System contractor: Prentice-Schafer Inc., Marsport, Mars)  
 "Mentor II" fire control system  
 FSTR/TAC Fleet Strategic/Tactical Data System  
 (System contractor: Trestis ar Trestis, Pangaeear, Izar)  
 CGCP/SCDS cloaking generation, penetration and stasis countermeasure system  
 (System contractor: Hycor, Woburn, Earth)
- Life support: MC-3C artificial gravity generator  
 (System contractor: Cristobal SM/S, Manila, Earth)  
 "Rastis" radiation protection package  
 (System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
 "Cerix" waste regeneration systems  
 (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

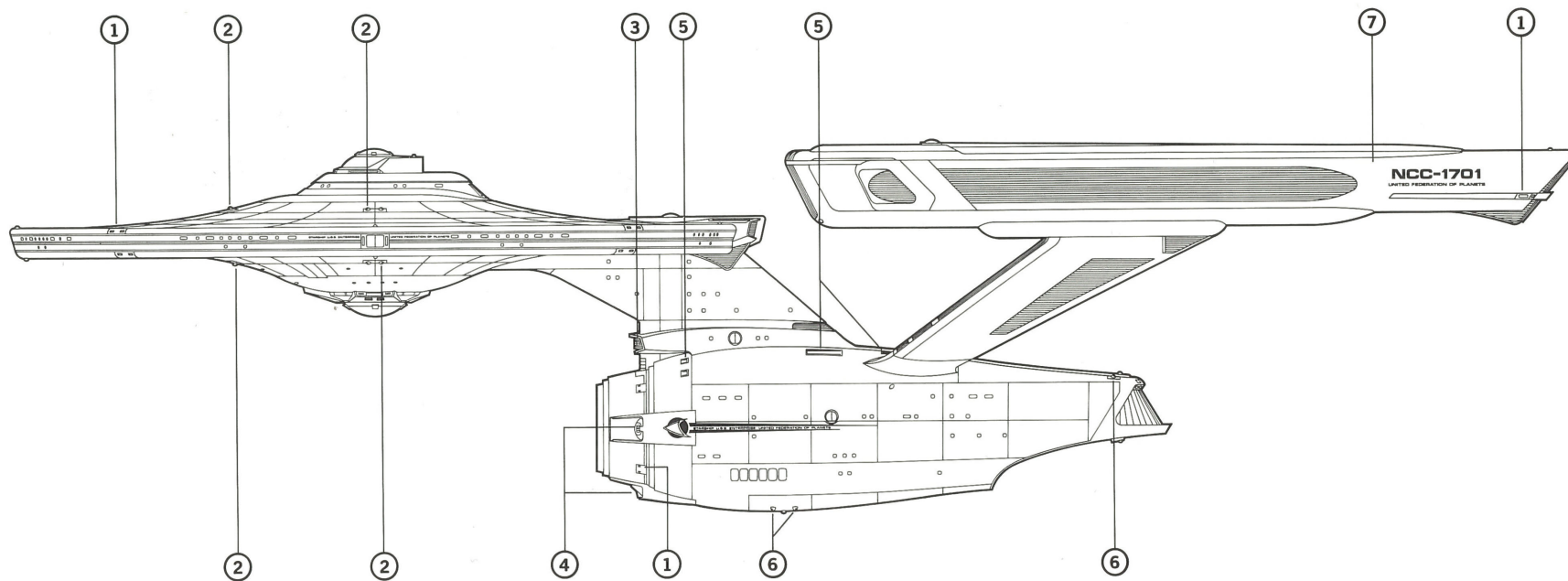
The M-7 series Multitronic supplement is fitted in *Enterprise* class ships only (M-9 series in *Enterprise (II)* class), further enhancing their primarily exploratory mission profile.

The "Dragon's Eye" navigation suite by Valdemar is also unique to this class. CIDSS was scheduled to be incorporated into these ships until 2287 when they were assigned to be updated to the specifications of the *Enterprise (II)* class.

### Current specifications of *Enterprise* class:

- Displacement: 210,000 metric tons standard  
 (206,000mt light, 215,000mt full load)
- |         | Overall | Primary Hull | Nacelles |
|---------|---------|--------------|----------|
| Length: | 304.8m  | 146.3m       | 154.8m   |
| Beam:   | 141.7m  | 141.7m       | 12.6m    |
| Draft:  | 71.3m   | 32.9m        | 18.3m    |
- Propulsion: Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units  
 (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
 Two (2) RSM subatomic unified energy impulse units  
 QASR particle beam maneuvering thrusters  
 (Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
 "Trentis" pulsed laser reaction control system  
 (System contractor: Orage Ijek, Aksajak, Andor)
- Velocity: Warp 8, standard  
 Warp 12, maximum
- Acceleration: Rest-Onset Critical Momentum: 8.51 sec  
 Onset Critical Momentum-Warp Engage: 1.12 sec  
 Warp 1-Warp 4: .78 sec  
 Warp 4-Warp 8: .67 sec  
 Warp 8-Warp 12: 2.13 sec
- Duration: 5 Earth years, standard  
 22 Earth years, maximum
- Complement: 500 (72 officers + 428 crew)
- Embarked craft: 2
- Navigation: "Dragon's Eye" Warp Celestial Guidance  
 (System contractor: Valdemar NCS Inc., Copenhagen, Earth)
- Computers: "Daystrom" Duotronic III with Multitronic M-7 Supplement  
 (Systems contractor: Daystrom Computer Systems Inc., Lunaport, Luna)





### Enterprise

1. Trentis reaction control system 2. RIM-12C phaser banks 3. Mk 6 Mod 1 torpedo tubes 4. QIK-28 sensors 5. QASR maneuvering thrusters 6. RSM-14B phaser banks 7. LN-64 Mod 3 warp drive units

**Conversion:** Although five different shipyards were contracted for the conversion of these ships, very few differences were evident upon their completion due to the strict construction guidelines of the Star Fleet Requirements Board. However, the *Exeter*, *El Dorado*, and *Kreiger* each have subtle design variations due primarily to the long interim periods between their respective drydockings.

**Engineering:** During conversion these ships were fitted with the new LN-64 linear warp engines and their accompanying intermix shaft assemblies. This system required an extensive network of interfacing linear chambers which were connected directly to the antimatter storage bottles in the lower secondary hull. Also, the impulse engine configuration was integrated with the warp drive system for the first time (except for U.S.S. *Decatur*-see *Belknap*/CS 2501 class) by means of an impulse deflection crystal in the primary hull.

The LN-64 warp units in these ships were upgraded with minor modifications twice: once during 2274-76 and again during 2281 and 2282, (While undergoing acceptance trials in 2268 *Enterprise* attained an unverified speed of warp factor 17.863; *Excalibur* recorded a velocity of warp factor 18.74 in 2270.)

The "Trentis" pulsed laser configuration replaced the "Asaks" chemical combustion reaction control package during conversion. QASR units were added for low-velocity propulsion and close-quarters maneuvering.

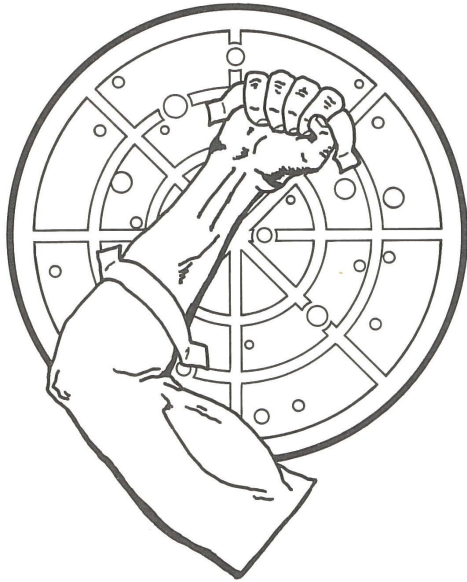
**Weapons:** As built the first six ships were equipped with RIM-9 phaser banks at the six primary hull locations. These units were upgraded to the current RIM-12C system in 2273. CH 1722 and 1726 were equipped with RIM-12C units during construction.

The RSM single mount phaser system was provided at six secondary hull locations in all ships beginning in 2274, replacing the earlier RH system.

These ships were equipped during construction with the improved Model 2 variant of the Skat-Rar Mk 6 photon torpedo system. An experimental photon torpedo launch system was installed in *Enterprise* during an extensive overhaul in 2285. This Hyde-York system substitutes manual loading and prelaunch control (utilizing hardened Batanes-designed torpedoes) for the automated system used in most ships. The long "arm-to-fire" mode of the Hyde-York configuration caused problems for *Enterprise* in several hostile-action situations, and some Inquiry Board reports suggest it may have contributed to her destruction. The Hyde-York system is not scheduled for installation in any other class.

The FSTR/TAC data system is provided, combining offensive, defensive, and exploratory postures in the primary mode and allowing easier integration with the numerous scientific subsystems provided in the secondary computer network of this class.

**Modernization:** In early 2287 *Enterprise* class starships were briefly scheduled to be decommissioned after heavy cruisers of the new *Levant* (CH 1843) class were authorized for construction. In April of that year, however, this decision was reversed by the Chief of Star Fleet Command and remaining *Enterprise*-class heavy cruisers (CH 1702, 1703, 1705, 1706, 1722, and 1726) were authorized for upgrading to *Levant* specifications. The *Levant* class was reclassified *Enterprise (II)* class after the irreclaimable *Enterprise* (CH 1701) was scheduled for reconstruction in February 2287.



Unauthorized

# BELKNAP

## Class Strike Cruisers

The *Belknap*-class strike cruisers were originally developed as “companion” vessels to *Enterprise* (CH 1701)- and uprated *Constitution* (CH 1700)-class heavy cruisers. After the lead ship *Decatur* was launched in February 2267 the Bureau of Spacecraft stated that the *Belknap* class would provide all the resources of a heavy cruiser class starship in a smaller hull. However, Star Fleet decided in March 2269 to change the primary mission profile of this class to one of a more defensive posture. As a result, the *Belknap* class starships unofficially became replacements for the large number of perimeter action ships of the *Kiaga* (PA 820) and *Agilis* (PA 855) classes that were built during the Four Years War and that were gradually becoming outdated.

Most of the ships in the *Belknap* class serve in the Federation’s outer subquadrants, except for the *Sovereign*, *Essahir*, *Baikal*, *Briza*, and *Delphin* which are active in subquadrant zero. Three ships (the *Matsurra*, *Raan*, and *Sur Cha*) are assigned to TacFleet, and two others (the *Estocin* and *Ki Rin*) are scheduled to join TacFleet soon. The *Decatur*, though substantially different from her sister ships, is nevertheless considered a member of this class (which was originally named for her). She served as an active line vessel for several years, but as more strike cruisers entered active service, the *Decatur* was slowly groomed to become the ideal training ship for the *Belknap* class. She is currently home ported at Starbase 7.

**Class:** The number of perimeter action vessels proposed for the fleet has varied considerably, apparently reaching a peak of 372 ships in 2269 in Star Fleet program proposals - 35 ships of the *Kiaga* class, the 154 *Agilis* class ships, 178 ships of the then-proposed *Akyazi* (PA 1010) class, and 5 ships of the CS 2500 design, which evolved into the *Belknap*-class strike cruisers. This ambitious program was soon reduced to more feasible numbers, and in late 2270 the Military Staff Committee and Bureau of Spacecraft decided to put the PA 1010 class on hold and proceed with the strike cruiser only. Because of this, the number of *Belknap* class ships scheduled to

be built was increased to twenty. An additional eight strike cruisers were ordered in 2280.

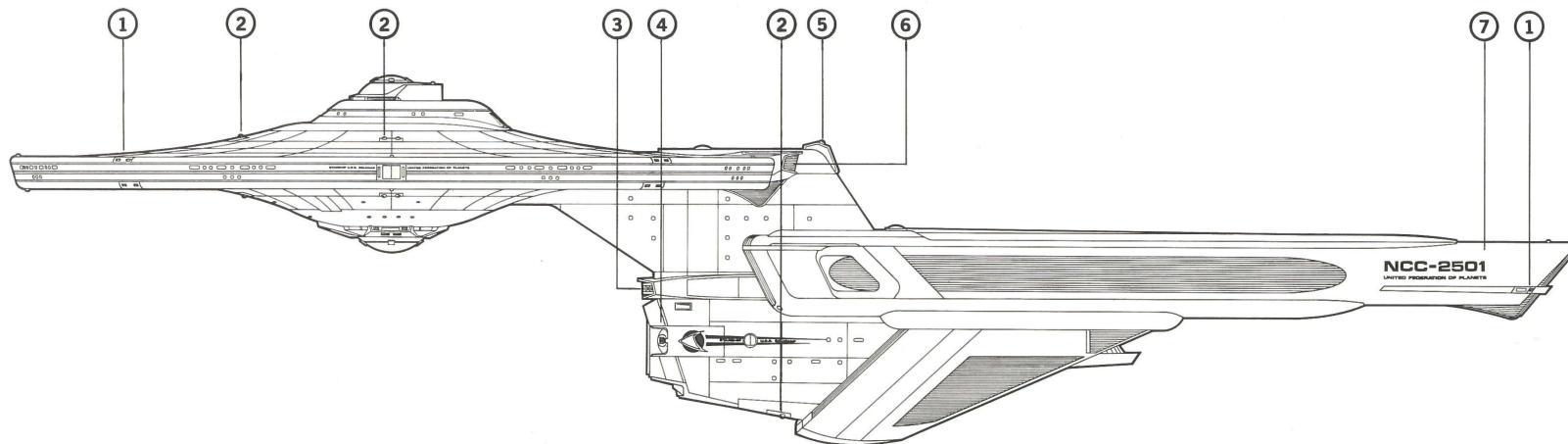
**Classification:** *Belknap* class starships were originally classified as cruisers (CA 2500, 2515-18); they were changed to strike cruisers on 15 March 2269 to better reflect their basic mission role. CS 2501-14 and 2519 were ordered as strike cruisers on 11 November 2270. CS 2537-44 were authorized on 24 January 2280. The *Decatur* was reclassified as a training vessel (CST 2500) on 10 August 2278.

Hull numbers 2520-36 were originally assigned to the *Ascension* (DN 2520)-class dreadnoughts. The eight additional *Belknap* class ships authorized in 2280 were ordered *after* the *Ascension* class was authorized but *before* the number of those dreadnoughts built was cut from 17 to 10. As a result, none of the 2520-36 series hull numbers were reassigned to the eight additional *Belknap*-class strike cruisers.

**Design:** Most of the evaluation and systems testing for this class was performed on the *Decatur*. She was the first ship in the fleet to test the LN-64 series linear warp engines (first installed in their final form on the heavy cruiser *Enterprise*) and the first to act as testbed for the three-engine variant of this design (which evolved into the *Ascension*/DN 2520-class dreadnought program). The basic design of the *Decatur*/*Belknap* strike cruisers evolved from independent studies that were aimed at improving various performance aspects of *Saladin* (DD 500)-class destroyers. These studies resulted in the addition of a second engine to the *Saladin* design (see *Pompey*/DD 506 class) and inadvertently to the development of the original *Decatur* concept.

One of the most interesting features of this class is its warp unit/support pylon package. The entire assembly is one unit, and attaches to the ship at the bottom of the secondary hull. It is capable of almost routine detachment and retrieval in case of emergency or repair.

All *Belknap* class ships (except for the *Decatur*) are fitted with the ADA series countermeasures support system. CS 2515-19 and 2537-44 are also equipped with CIDSS

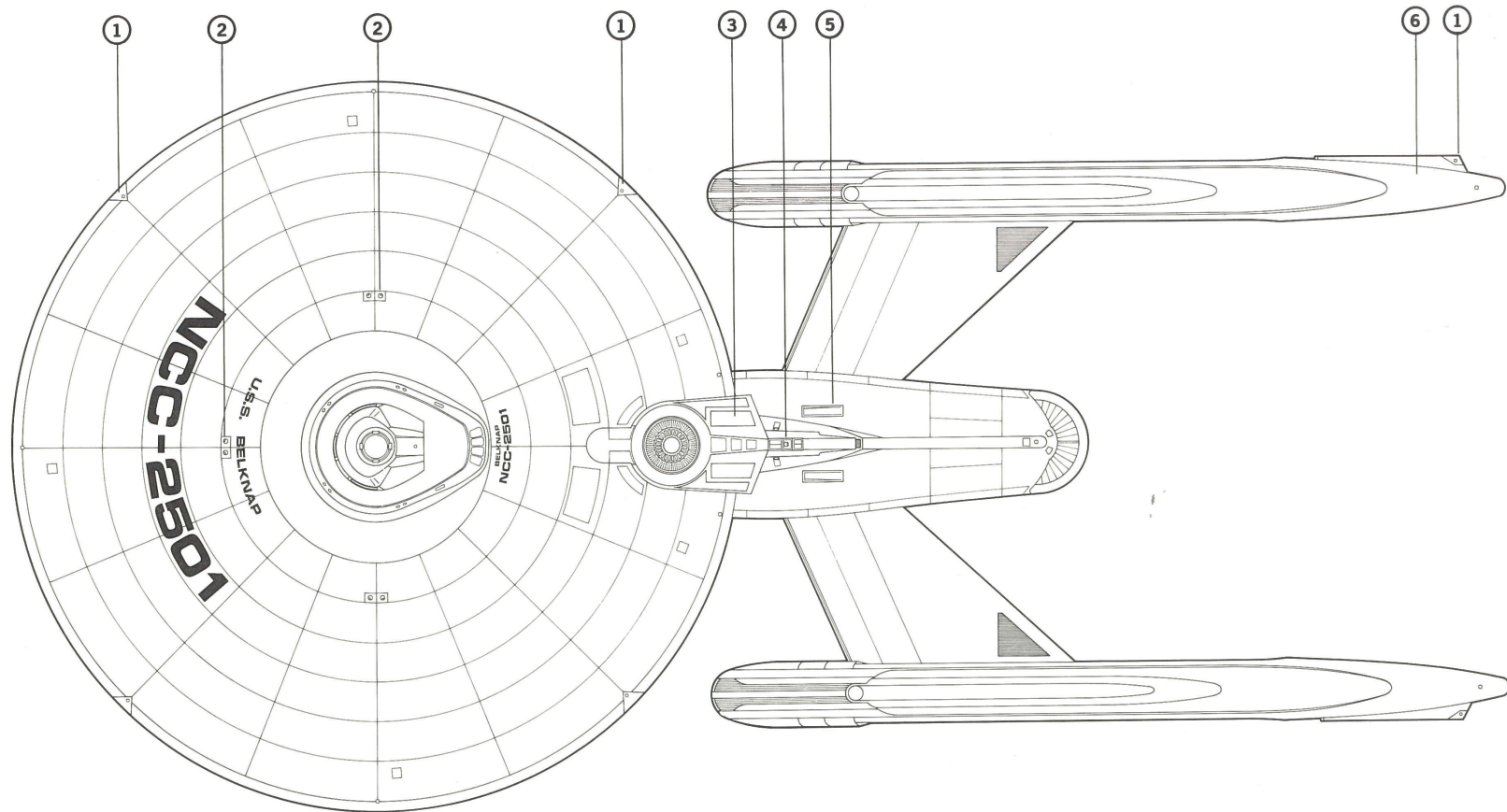


### Belknap

1. Trentis reaction control system 2. RIM-12C phaser banks 3. Mk 7 Mod 1 torpedo tubes 4. QIK-28 sensors 5. RSM-14B phaser banks 6. RSL impulse engines 7. LN-64 Mod 3 warp drive units

### 28 STRIKE CRUISERS: "BELKNAP" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-2500	<i>Decatur</i>	Cosmadyne Corporation, Boston Shipyards, Earth	02 Dec 2265	17 Feb 2267	12 May 2270	ATRA
NCC-2501	<i>Belknap</i>	Cosmadyne Corporation, Boston Shipyards, Earth	21 Oct 2271	09 Jan 2273	07 Feb 2274	A1N
NCC-2502	<i>Bradley</i>	Cosmadyne Corporation, Boston Shipyards, Earth	14 Aug 2274	18 Sept 2275	28 June 2276	A2S
NCC-2503	<i>Khiritat</i>	Cosmadyne Corporation, Boston Shipyards, Earth	23 Mar 2275	27 Feb 2276	06 Nov 2276	A2S
NCC-2504	<i>Haversham</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 7154.22	SD 7298.35	SD 7402.51	A3N
NCC-2505	<i>Sovereign</i>	Cosmadyne Corporation, Boston Shipyards, Earth	17 Nov 2276	04 Dec 2277	29 July 2278	AO
NCC-2506	<i>Concord</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 7565.43	SD 7593.26	SD 7732.53	A4S
NCC-2507	<i>Rishiri</i>	Cosmadyne Corporation, Boston Shipyards, Earth	03 July 2278	14 July 2279	06 Mar 2280	A1N
NCC-2508	<i>Essahir</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 7982.36	SD 8011.14	SD 8195.6	AO
NCC-2509	<i>Jarrett</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8003.36	SD 8212.57	SD 8291.75	A2S
NCC-2510	<i>Fahrion</i>	Cosmadyne Corporation, Boston Shipyards, Earth	15 Oct 2278	05 Nov 2279	23 Aug 2280	A3S
NCC-2511	<i>Estocin</i>	Cosmadyne Corporation, Boston Shipyards, Earth	06 Mar 2279	27 Feb 2280	12 Nov 2280	A2N
NCC-2512	<i>Matsurra</i>	Cosmadyne Corporation, Boston Shipyards, Earth	17 Dec 2279	01 Jan 2281	16 Oct 2281	ATAC
NCC-2513	<i>Baikal</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8200.34	SD 8387.44	SD 8442.31	AO
NCC-2514	<i>Haven</i>	Cosmadyne Corporation, Boston Shipyards, Earth	19 Aug 2280	01 Aug 2281	17 Feb 2282	A4N
NCC-2515	<i>Briza</i>	Cosmadyne Corporation, Boston Shipyards, Earth	29 Apr 2281	30 Mar 2282	02 Oct 2282	AO
NCC-2516	<i>Mikuma</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8326.7	SD 8419.65	SD 8471.28	A1S
NCC-2517	<i>Shangri-La</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8410.31	SD 8527.3	SD 8591.62	A4S
NCC-2518	<i>Hai Din</i>	Cosmadyne Corporation, Boston Shipyards, Earth	23 Dec 2281	28 Dec 2282	29 Apr 2283	A3N
NCC-2519	<i>Raan</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8511.72	SD 8588.45	SD 8621.37	ATAC
NCC-2537	<i>Delphin</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8577.4	SD 8679.22	SD 8698.19	AO
NCC-2538	<i>Seneca</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8655.61	SD 8734.94	SD 8759.23	A1S
NCC-2539	<i>Ki Rin</i>	Cosmadyne Corporation, Boston Shipyards, Earth	22 June 2282	29 June 2283	25 Nov 2283	A3S
NCC-2540	<i>Cicala</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8699.29	SD 8813.53	SD 8851.33	A2N
NCC-2541	<i>Sur Cha</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8792.4	SD 8886.27	SD 8926.27	ATAC
NCC-2542	<i>Mira</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8861.73	SD 8983.52	SD 9034.61	A4N
NCC-2543	<i>Aveley</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8980.2	SD 9079.36	SD 9119.47	A3S
NCC-2544	<i>Alor</i>	Cosmadyne Corporation, Boston Shipyards, Earth	18 Apr 2283	02 Apr 2284	16 Sept 2284	A1S



### Belknap

1. Trentis reaction control system 2. RIM-12C phaser banks 3. RSL impulse engines 4. RSM-14B phaser banks 5. QASR maneuvering thrusters 6. LN-64 Mod 3 warp drive units

(Close-In Deflector Shield System), which acts as a back-up during encounters with large vessels and provides added protection against attacks from very small craft, which have demonstrated an improved ability to penetrate extended screen defensive systems. The *Belknap* class is also fitted with the "Hawkeye" Navigational Guidance System, and CS 2518 and 2538-44 are equipped with an enhanced version of this system, supplemented by the NAVTAC guidance suite.

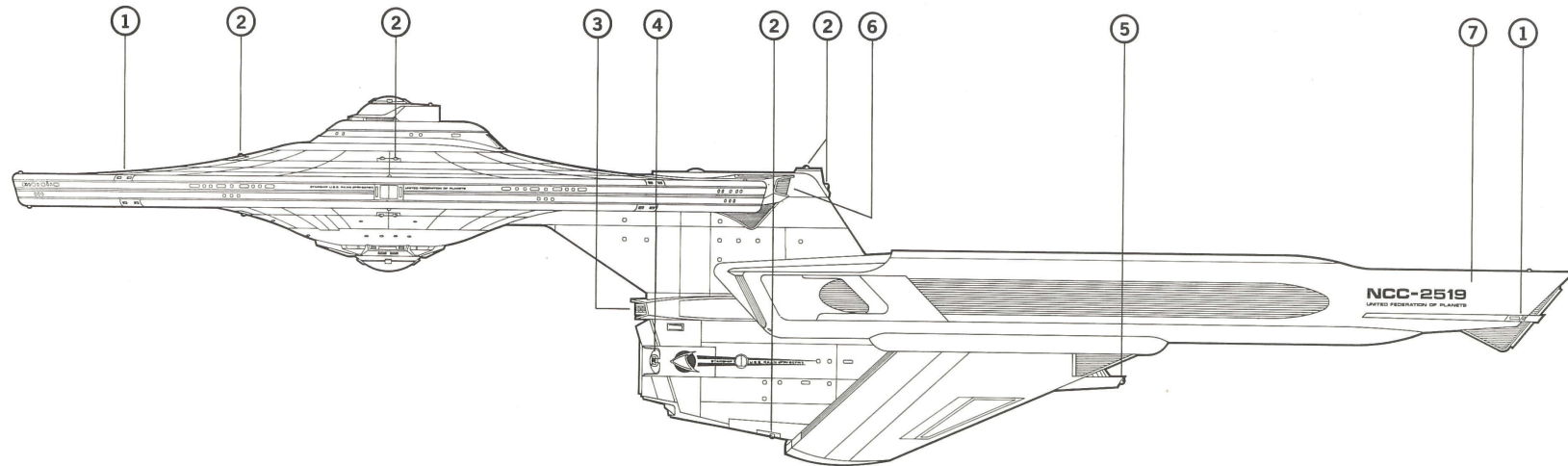
*Belknap*-class strike cruisers assigned to TacFleet are equipped with the CGCP/SCDS "B" stasis countermeasure and cloaking system; all other ships are fitted with the less sophisticated "A" variant of this system. CS 2512 is scheduled to be back-fitted soon with both CIDSS and the Dataram computer support system to make her more compatible with the other *Belknap* class ships currently serving with TacFleet.

*Builders:* The entire *Belknap* class was contracted with only two shipyards to facilitate design and mass production. A contract for the development and production of 12 ships (including the already-built *Decatur*) was awarded on 17 February 2271 to

the Boston Shipyards division of the Cosmadyne Corporation on Earth. A similar contract for 8 ships was awarded on 22 August 2271 to Star Fleet Division's Cameron Facility on Deneb V. Eight additional strike cruisers were authorized in January 2280. Cosmadyne was awarded a contract on 11 March of that year to produce two of these ships; Star Fleet Division was contracted to build the other six on 4 April 2280. Work on the *Belknap* class finally ended in July 2284 with each yard having produced 14 vessels.

*Engineering:* Most of these ships are fitted with the LN-64 series warp engines; however, the *Raan* (CS 2519) and *Sur Cha* (CS 2541) were equipped with the "Ikeda" LN-68 series warp units when they were assigned to TacFleet. These engines are specifically designed to provide a faster velocity (approximately warp factor 12.8 for limited durations) while sacrificing the decreased rate of dilithium decay of the LN-64 models. There are presently no plans to retrofit the *Matsurra* (CS 2512) with the LN-68 units although she is currently in TacFleet service. Also, it is unlikely that the *Estocin*



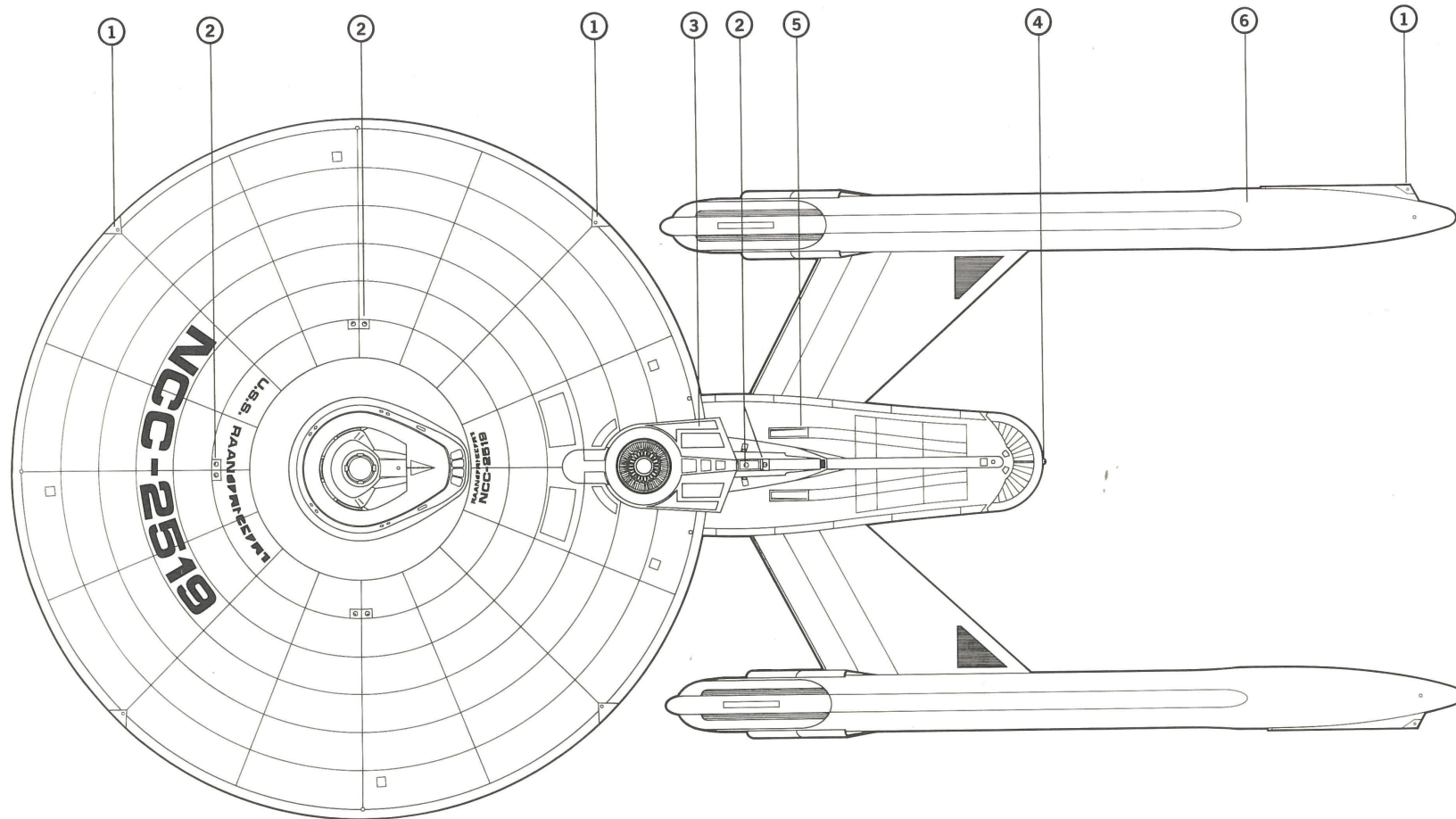


### Raan

1. Trentis reaction control system 2. RIM-12C phaser banks 3. Mk 7 Mod 1 torpedo tubes 4. QIK-28 sensors 5. RSM-14B phaser banks 6. RSL impulse engines 7. LN-68 Mod 1 warp drive units

#### Current specifications of *Belknap* class:

Displacement:	187,000 metric tons standard (183,000mt light, 191,500mt full load)	Embarked craft:	2
Length:	Overall 290.0m	Navigation:	"Hawkeye" Warp Celestial Guidance (System contractor: Plessey Group, Essex, Earth)
Beam:	141.7m	Computers:	NCC-2518, 2538-44: NAVTAC Guidance Supplement (System contractor: Plessey Group, Essex, Earth)
Draft:	67.5m	Phasers:	"Sable" Duotronic III (System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)
Propulsion:	Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)	Photon torpedoes:	NCC-2501-18: K1A Supplement (System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)
Velocity:	Warp 8, standard	Defense:	NCC-2519, 2537-44: Dataram Support Subsystem (System contractor: Farranti Mnemonics, Berkshire, Earth)
Acceleration:	Warp 12, maximum	Life support:	7 banks of 2 each - RIM-12C independent twin mount NCC-2519, 2541: 8 banks of 2 each - RIM-12C independent twin mount 1 bank - RSM-14B single mount (Systems contractor: Agusta Ansadado Inc., Fuzes, Venus)
Duration:	Rest-Onset Critical Momentum: 8.48 sec Onset Critical Momentum-Warp Engage: 1.10 sec		2 tubes - Mk 7 Mod 1 direct (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)
Complement:	Warp 1-Warp 4: .75 sec Warp 4-Warp 8: .67 sec Warp 8-Warp 12: 2.11 sec		"Lancelot" primary force field and deflector control system (System contractor: Prentice-Schafer Inc., Marsport, Mars)
	5 Earth years, standard		NCC-2515-19, 2537-44: CIDSS Deflector Supplement (System contractor: Prentice-Schafer Inc., Marsport, Mars)
	20 Earth years, maximum		Cetis weapon system; TACAR fire control add-on (Systems contractor: Raakuv, Gaziwahaida, Andor)
	395 (55 officers + 340 crew)		CGCP/SCDS cloaking generation, penetration and stasis countermeasure system (System contractor: Hycor, Woburn, Earth)
	NCC-2510-12, 2514, 2515, 2518: 401 (55 officers + 346 crew)		MC-3E artificial gravity generator (System contractor: Cristobal SM/S, Manila, Earth)
	NCC-2513, 2516, 2517, 2519: 411 (57 officers + 354 crew)		"Rastis" radiation protection package (System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)
	NCC-2537-44: 410 (55 officers + 355 crew)		"Cerix" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



#### Raan

1. Trentis reaction control system 2. RIM-12C phaser banks 3. RSL impulse engines 4. RSM-14B phaser banks 5. QASR maneuvering thrusters 6. LN-68 Mod 1 warp drive units

(CS 2511) and *Ki Rin* (CS 2539) will be fitted with these engines even though they are scheduled to join TacFleet in the near future.

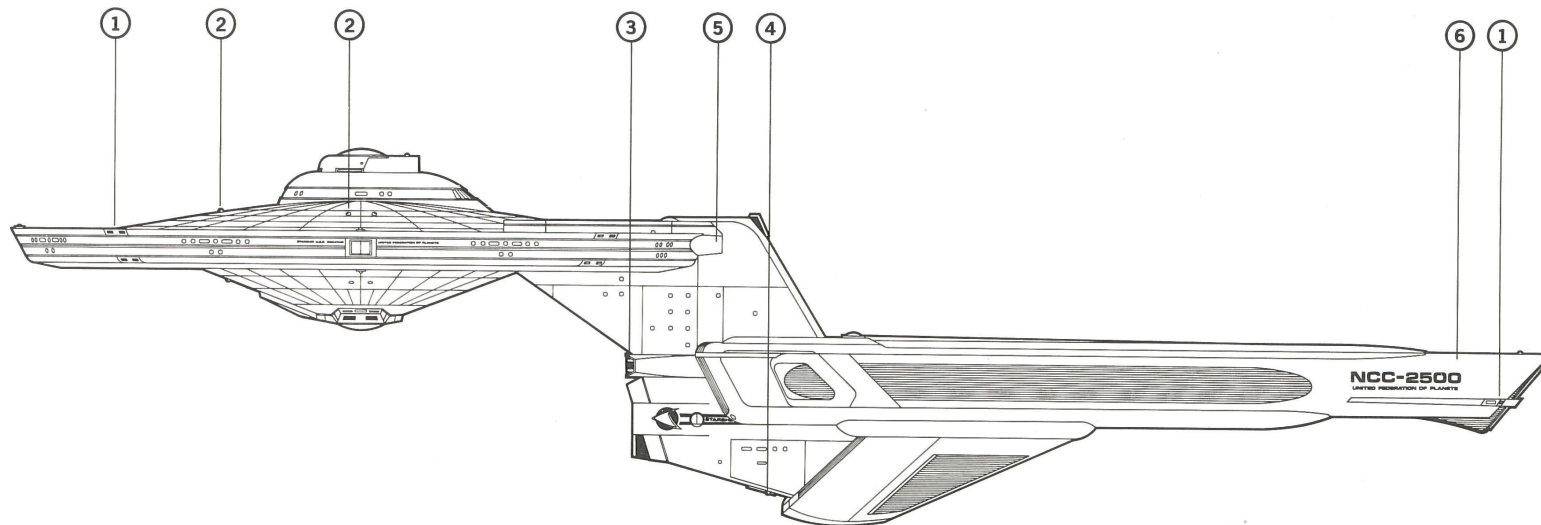
The *Decatur* (with her LN-64 series engines) is limited in overall velocity capabilities because of her different hull structure. The *Decatur's* redline speed of warp factor 10 is therefore a structural design limit, rather than a true indication of the actual speed potential of the basic design.

**Weapons:** The *Belknap*-class strike cruisers are equipped with the Cetus weapon system. This configuration provides the class with a tremendous amount of offensive capability and is flexible enough to permit numerous upgrades, especially in the form

of group coordination programs (both defensive and exploratory postures) and training simulations.

The *Raan* and *Sur Cha* were recently equipped with an additional RIM-12C twin mount phaser bank due to their TacFleet assignments, increasing the total number of emplacements to 17 on these ships.

**Nomenclature:** CS 2515 was originally named *Belknap*; was renamed *Briza* on 23 November 2270 (with CS 2501 subsequently named *Belknap*). CS 2518 was to be named *Bonhomme Richard* when that heavy cruiser was scheduled to be decommissioned; her name was later changed to *Hai Din*.



### Decatur

1. Kit WM reaction control system 2. RIM-10C phaser banks 3. Mk 6 Mod 1 torpedo tubes 4. RSM-14B phaser banks 5. SBE(A) impulse engines 6. LN-64 Mod 3 warp drive units

#### Current specifications of U.S.S. *Decatur*:

Displacement: 171,000 metric tons standard  
(168,500mt light, 174,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	278.0m	128.0m	154.8m
Beam:	127.1m	127.1m	12.6m
Draft:	67.1m	32.4m	18.3m

Propulsion: Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Four (4) SBE(A) modified subatomic unified energy impulse units  
QASR particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Kit WM" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 8, standard  
Warp 10, maximum

Acceleration: Rest-Onset Critical Momentum: 9.25 sec  
Onset Critical Momentum-Warp Engage: 1.17 sec  
Warp 1-Warp 4: .70 sec  
Warp 4-Warp 7: .61 sec  
Warp 7-Warp 10: 2.21 sec

Duration: 5 Earth years, standard  
18 Earth years, maximum

Complement: 326 (49 officers + 277 crew)

Embarked craft: 2-3

Navigation: "Hawkeye" Warp Celestial Guidance  
(System contractor: Plessey Group, Essex, Earth)

Computers: "Sable" Duotronic III; "Tu'Rel" Support Subsystem  
(Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)

Phasers: 5 banks of 2 each - RIM-10C independent twin mount  
2 banks - RSM-14B single mount  
(Systems contractor: Agusta Anasadado Inc., Fuzes, Venus)

Photon torpedoes: 2 tubes - Mk 6 Mod 1 direct  
(System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)

Defense: TWS-20 primary force field and deflector control system  
(System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
Cetus weapon system; TACAR fire control add-on  
(Systems contractor: Raakuv, Gaziwahaida, Andor)

Life support: CT-3/Centris artificial gravity generator  
(System contractor: Cristobal SM/S, Manila, Earth)  
"Rastis" radiation protection package (modified)  
(System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
"Cerix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



# CONSTITUTION (II)

## Class Heavy Cruisers

### 7 HEAVY CRUISERS: "CONSTITUTION (II)" CLASS

Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1700	<i>Constitution</i>	Star Fleet Division, San Francisco Yards, Earth	24 Nov 2269	23 Jan 2271	19 Oct 2271	A3S
NCC-1704	<i>Yorktown</i>	Newport News Shipbuilding, Virginia, Earth	09 July 2270	11 Oct 2271	25 June 2272	AO
NCC-1710	<i>Kongo</i>	Star Fleet Division, San Francisco Yards, Earth	20 Dec 2271	04 Mar 2273	24 Oct 2273	A4S
NCC-1712	<i>Bonhomme Richard</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	28 Feb 2271	15 May 2272	21 Dec 2272	A2S
NCC-1713	<i>Monitor</i>	Star Fleet Division, San Francisco Yards, Earth	15 Apr 2273	26 Apr 2274	15 Oct 2274	AO
NCC-1714	<i>Hornet</i>	Newport News Shipbuilding, Virginia, Earth	17 Aug 2271	19 Oct 2272	25 May 2273	A1S
NCC-1715	<i>Merrimac</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	11 Sept 2270	23 Jan 2272	19 Nov 2272	A3S

These ships, like those of the *Enterprise* class, were all converted from other heavy cruiser classes. All seven underwent extensive refitting at Terran yards over a period of 4½ years. The updated *Constitution* class represented the "middle ground" of Star Fleet's heavy cruiser upgrading programs of the late 2260s and early 2270s, falling between the *Endeavor* (CH 1716) and *Enterprise* (CH 1701) classes in capability.

The *Kongo* is based outside subquadrant 4 south at Ser Ty-Ty, the only Star Fleet ship ever to be based outside Federation territory. (The *Hornet* [CH 1714] was home ported at Star Station Aurora briefly in the late 2270s.)

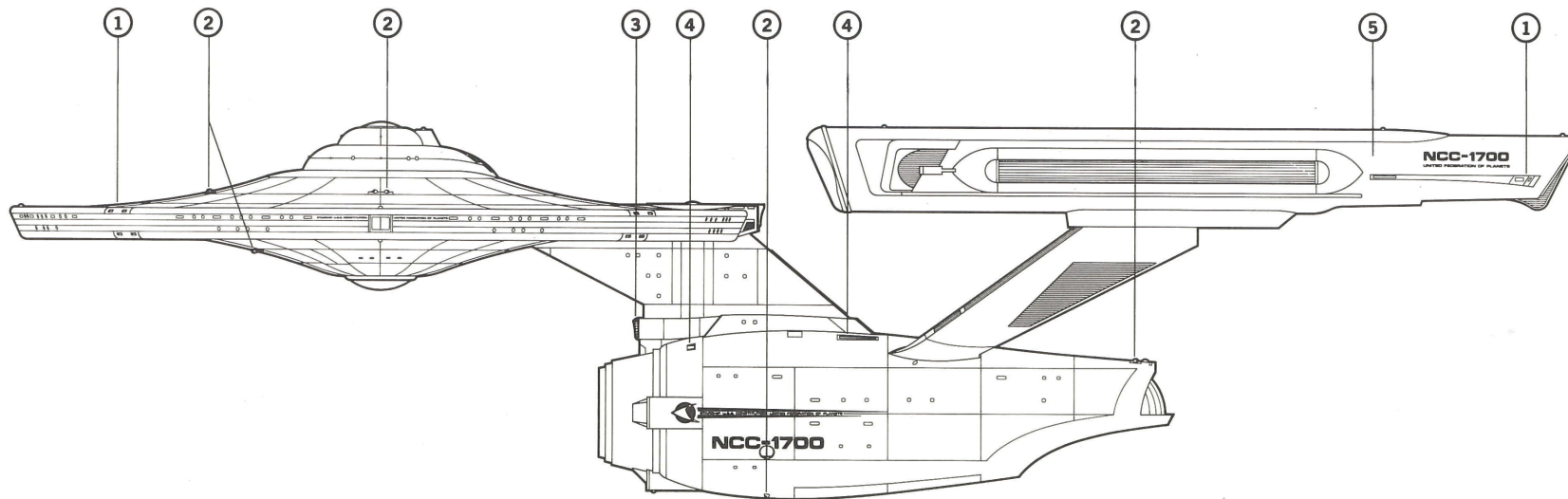
*Class:* This class consists of ships which originally belonged to the *Bonhomme Richard* and original *Constitution* classes. CH 1700, 1704, and 1710 were originally constructed as *Constitution*-class heavy cruisers in the late 2210s and early 2220s. They were upgraded during their service lives first to *Bonhomme Richard* and later to *Achernar* class specifications. CH 1712-15 were originally the lead ships of the *Bonhomme Richard* class, built during the late 2240s. They were upgraded to *Achernar*

specifications in the mid-2260s.

The *Constitution*, *Yorktown*, and *Merrimac* saw extensive action during the Kznti Incursion despite being pressed into service ahead of schedule. All three coordinated combat strikes against Kzin forces at Pylipias and Zetar, and the *Yorktown* later instituted an enforced quarantine of Kchula.

*Classification:* First three ships were authorized in 2214; classified as heavy cruisers in June 2217. Modernization from *Achernar* (CH 1732) specifications approved on 07 September 2268. CH 1712-15 authorized in August 2245; modernization from *Achernar* specifications approved on 12 May 2269. These ships are officially listed by Star Fleet as comprising the "Constitution (II)" heavy cruiser class (until such time as the *Potemkin* [CH 1711] is retired, when they will be re-designated "Constitution" class for record purposes).

*Design:* These ships are truly hybrids in terms of their outward design and appearance, blending aspects of the "old" and "new" technology philosophies into a single,



### Constitution (II)

1. Trentis reaction control system 2. RIM-10C phaser banks 3. Mk 6 Mod 2 torpedo tubes 4. QASR maneuvering thrusters 5. LN-60 Mod 3 warp drive units

#### Current specifications of *Constitution (II)* class:

Displacement: 202,000 metric tons standard  
(197,500mt light, 207,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	297.5m	143.1m	146.6m
Beam:	140.8m	140.8m	10.9m
Draft:	71.4m	31.7m	19.1m

Propulsion: Two (2) "Achates" LN-60 Mod 3 dilithium-energized antimatter linear warp drive units  
(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)  
Four (4) Namada NK subatomic unified energy impulse units  
QASR particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Trentis" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 8, standard  
Warp 11, maximum

Acceleration: Rest-Onset Critical Momentum: 9.54 sec  
Onset Critical Momentum-Warp Engage: 1.31 sec  
Warp 1-Warp 4: .88 sec  
Warp 4-Warp 8: .74 sec  
Warp 8-Warp 11: 2.12 sec

Duration: 5 Earth years, standard  
20 Earth years, maximum

Complement: 435 (58 officers + 377 crew)  
NCC-1712, 1715: 450 (62 officers + 388 crew)

Embarked craft: 2-3  
Navigation: "Artos" Warp Celestial Guidance  
(System contractor: Mandor Industries Ltd., Dalhalam, Delta IV)

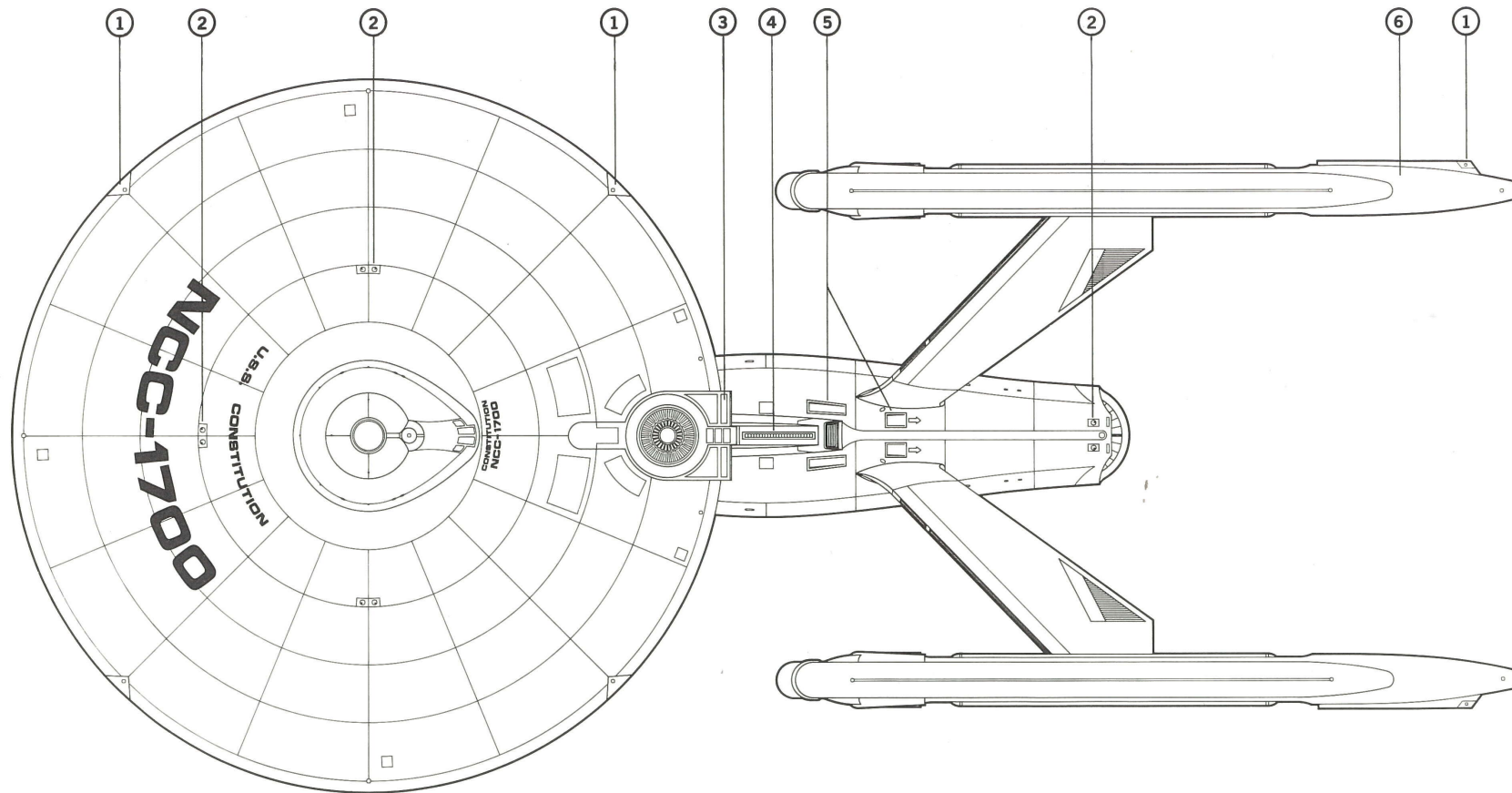
Computers: "Fasfax" Duotronic III  
(System contractor: Farranti Mnemonics, Berkshire, Earth)  
NCC-1704, 1714: "Daystrom" Duotronic III  
(System contractor: Daystrom Computer Systems Inc., Lunaport, Luna)

Phasers: 6 banks of 2 each - RIM-10C independent twin mount  
(System contractor: Agusta Anasado Inc., Fuzes, Venus)

Photon torpedoes: 2 tubes - Mk 6 Mod 2 direct  
(System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)  
NCC-1704, 1714: 1 tube - "Zeus" Mk 4 direct  
(System contractor: Keindoffer-Klaatsen DSC, Munich, Earth)

Defense: "Lancelot" primary force field and deflector control system  
(System contractor: Prenticè-Schafer Inc., Marsport, Mars)  
FSTR/TAC Fleet Strategic/Tactical Data System  
(System contractor: Trestis ar Trestis, Pangaeer, Izar)  
CGCP/SCDS cloaking generation, penetration, and stasis countermeasure system  
(System contractor: Hycor, Woburn, Earth)  
NCC-1710, 1713: Kolt ST6 deflector spire  
(System contractor: Kal Achal Conglessum, Takuv, Tellar)

Life support: CT-3/Centris artificial gravity generator  
(System contractor: Cristobal SM/S, Manila, Earth)  
"Rastis" radiation protection package (modified)  
(System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
"Cerix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



### Constitution (II)

1. Trentis reaction control system
2. RIM-10C phaser banks
3. Namada NK impulse engines
4. cloaking enhancement system
5. QASR maneuvering thrusters
6. LN-60 Mod 3 warp drive units

functionally-efficient system. Although as refitted they have a basically "new tech" appearance, many of their earlier features are still present, albeit in slightly altered form: the Jesten-Morrisson hangar doors and the sparse, utilitarian lines of the upper bridge and command hull (02 level) are readily apparent, as are the austere energy field sensors and uncluttered navigational domes. The biggest change during refitting came with the installation of linear warp engines, and consequently the modified pylon design required for their operation.

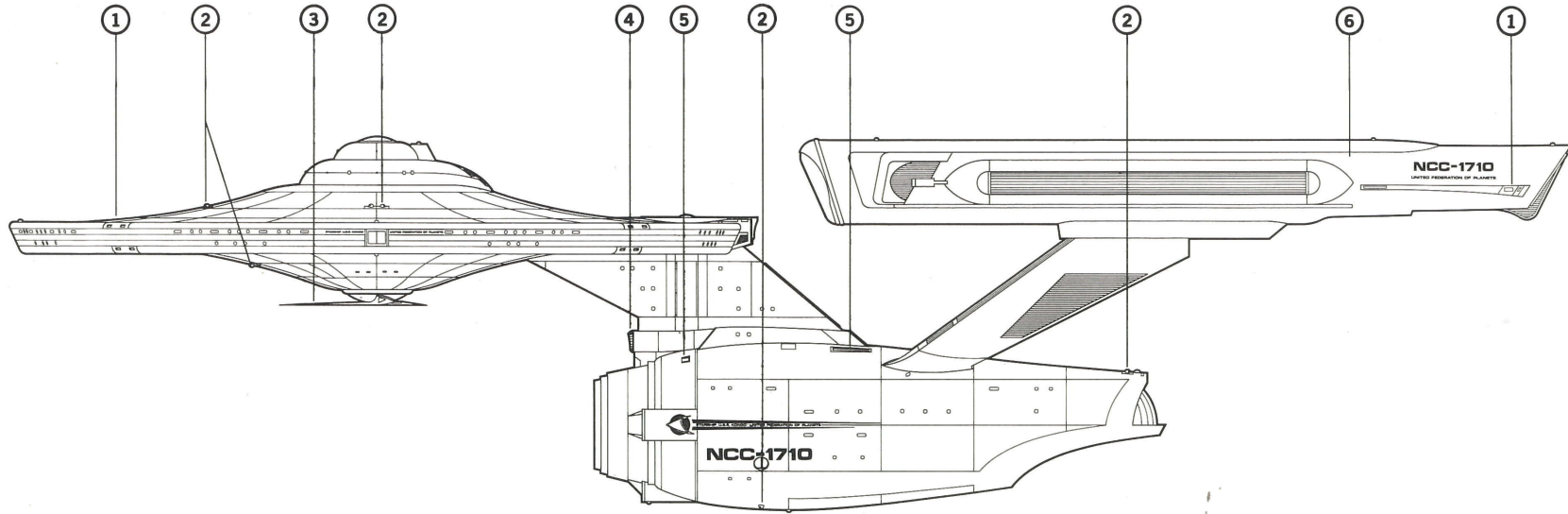
Internally these ships are similar to the *Enterprise* class; although slightly more spacious, they have less actual deck space. An expanded cargo deck with greatly improved facilities is provided in the secondary hull; however, only two unsecured docking ports were fitted, both at the lower cargo level (in place of the botanical bay ports on the *Enterprise* and *Tikopai*/CH 1800 classes). CH 1704 and 1714 have a gangway hatch fitted on both the port and starboard sides of the primary hull.

Duotronic II computer installations were fitted in all ships - the "Daystrom" series in CH 1704 and 1714, "Fasfax" in the others. These units were upgraded to Duotronic III variants on an individual ship basis beginning in 2283. The defensive suite of these ships is identical to that of the *Enterprise* class, with the "Mentor" fire control unit the only system not provided. CIDSS may be backfitted in all ships beginning in 2293.

A cloaking-generation enhancement unit is fitted at the trailing edge of the interconnecting dorsal.

**Conversion:** The *Yorktown* (CH 1704) and *Hornet* (CH 1714) were converted by Newport News. These ships have features subtly different from the others, such as reinforced engine support pylons, modified maneuvering thruster locations, and additional deflector grid coverage.

**Engineering:** These ships were provided with LN-60 series linear warp units during



**Kongo**

- 1. Trentis reaction control system
- 2. RIM-10C phaser banks
- 3. Kolt ST6 deflector spire
- 4. Mk 6 Mod 2 torpedo tubes
- 5. QASR maneuvering thrusters
- 6. LN-60 Mod 3 warp drive units

refitting. These Vickers-designed "Achates" engines are only slightly less-sophisticated than the widely used LN-64 model; they require the same intermix shaft configuration as in the *Enterprise* and *Tikopai* classes, and provide nearly identical velocities and similar acceleration rates. (While on acceptance trials in April 2271, the *Constitution* [CH 1700] reportedly achieved warp factor 16 - and was still accelerating - when the ship's captain ordered reduced speed because of the super-extraordinary stress being placed on the ship's substructure.)

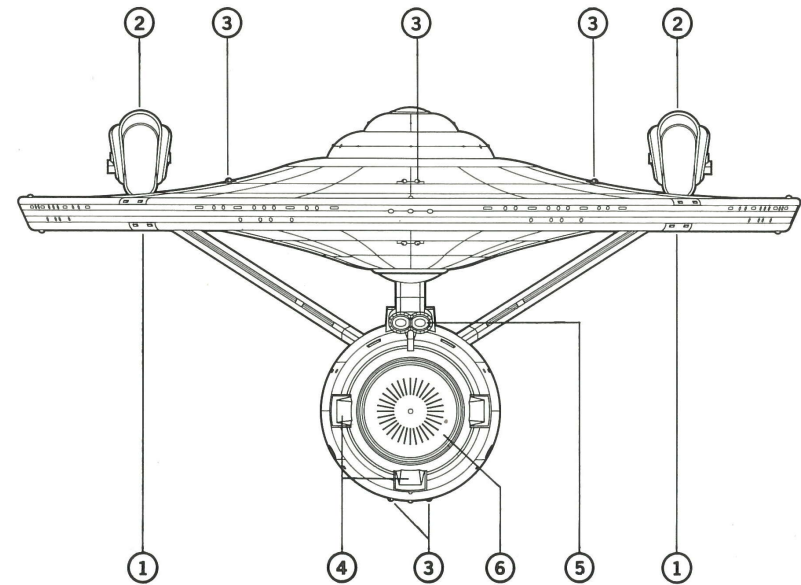
This is one of the few major starship classes not equipped with RS series impulse units; a Namada NK system is fitted instead. These units are mounted in a similar housing, requiring four engines (with two thrust ports per engine) instead of two to provide the same amount of thrust. This results in a more complicated configuration, but the Namada series has routinely performed above-average. Additional emergency venting is provided on both sides of the engine housing.

**Weapons:** The Fleet Strategic/Tactical Data System (FSTR/TAC) is fitted in these ships, giving them a more balanced mix of offensive and scientific capabilities than ships fitted with Cetus. RIM-10C phaser banks are provided at six locations.

Most ships were fitted with the standard (dual-tube) Model 2 variant of the Mk 6 direct-feed photon torpedo system. The *Yorktown* and *Hornet* are equipped with only one tube, outfitted with the Keindoffer-Klaatsen "Zeus" Mk 4 torpedo system. This system generally takes longer in the arming mode but provides a more powerful torpedo with a longer range.

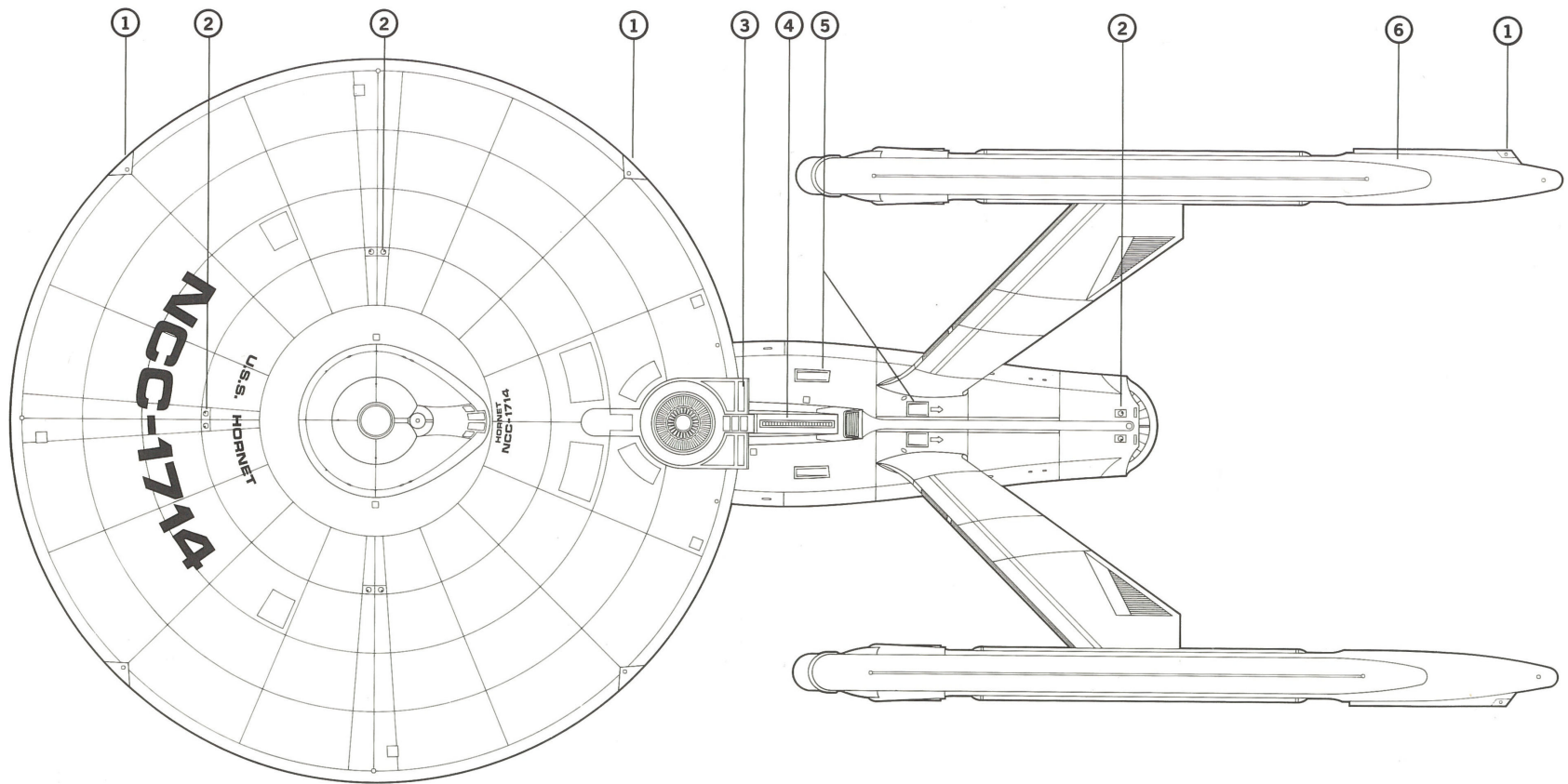
The *Kongo* (CH 1710) and *Monitor* (CH 1713) are equipped with Kolt ST6 deflector spires, mounted on their lower navigational sensor domes.

**Embarked craft:** The *Kongo* was provided with four "Killer Bee" assault craft (replacing one of her standard shuttles) after her home port relocation to Ser Ty-Ty in 2281.



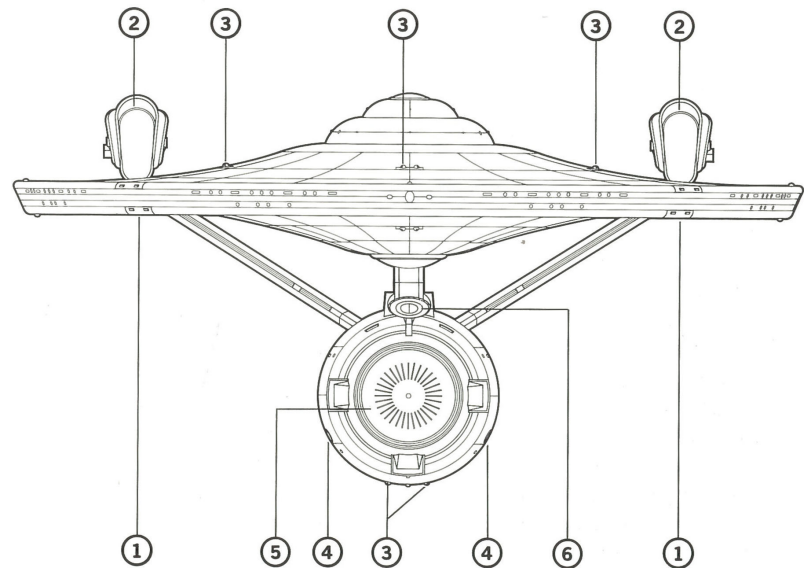
**Constitution (II)**

- 1. Trentis reaction control system
- 2. LN-60 Mod 3 warp drive units
- 3. RIM-10C phaser banks
- 4. Galan 27 sensors
- 5. Mk 6 Mod 2 torpedo tubes
- 6. Vernier sensor/deflector mount



**Hornet**

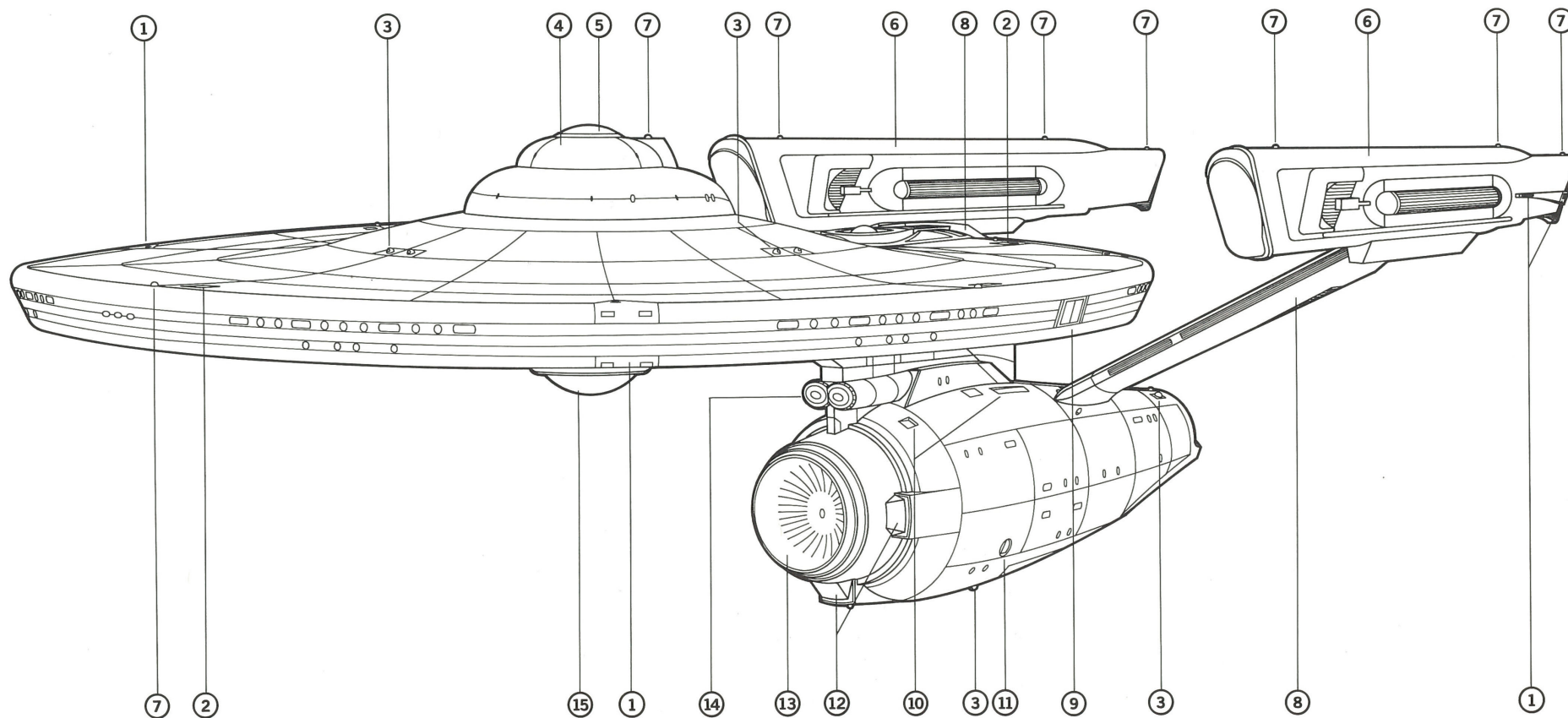
- 1. Trentis reaction control system
- 2. RIM-10C phaser banks
- 3. Namada NK impulse engines
- 4. cloaking enhancement system
- 5. QASR maneuvering thrusters
- 6. LN-60 Mod 3 warp drive units



**Yorktown**

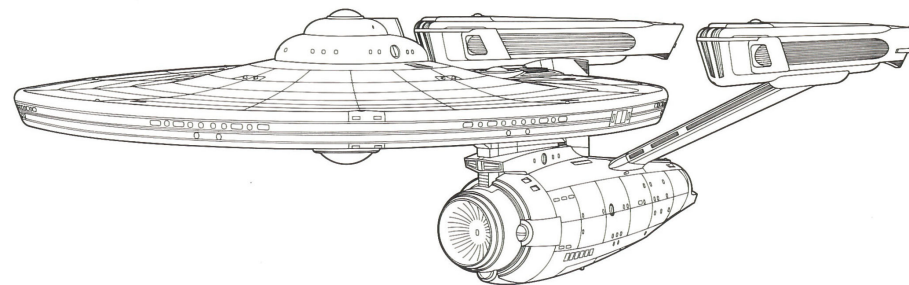
- 1. Trentis reaction control system
- 2. LN-60 Mod 3 warp drive units
- 3. RIM-10C phaser banks
- 4. docking port
- 5. Vernier sensor/deflector mount
- 6. Mk 4 Zeus torpedo tube





### Constitution II

- 1. Trentis reaction control system
- 2. personnel hatch
- 3. RIM-10C phaser banks
- 4. primary bridge
- 5. upper sensor platform
- 6. LN-60 Mod 3 warp drive units
- 7. formation light
- 8. support pylon
- 9. gangway hatch
- 10. QASR maneuvering thrusters
- 11. docking port
- 12. Galan sensor units
- 13. Vernier sensor/deflector mount
- 14. Mk 6 Mod 2 torpedo tubes
- 15. lower sensor platform



This view of the *Constitution II* illustrates the different shape and design of the LN-60 "Achates" warp drive units when compared to the more standard LN-64 model. These ships received the Vernier sensor/deflector system and Duotronic III computer installation but less deflector grid protection and lighter armament than the *Tikopai* or *Enterprise* classes. Note the Mk 6 torpedo tubes, lower secondary hull docking port and 'clipped' support pylons.

see **Tikopai** class



# ENDEAVOR

## Class Heavy Cruisers

### 14 HEAVY CRUISERS: "ENDEAVOR" CLASS

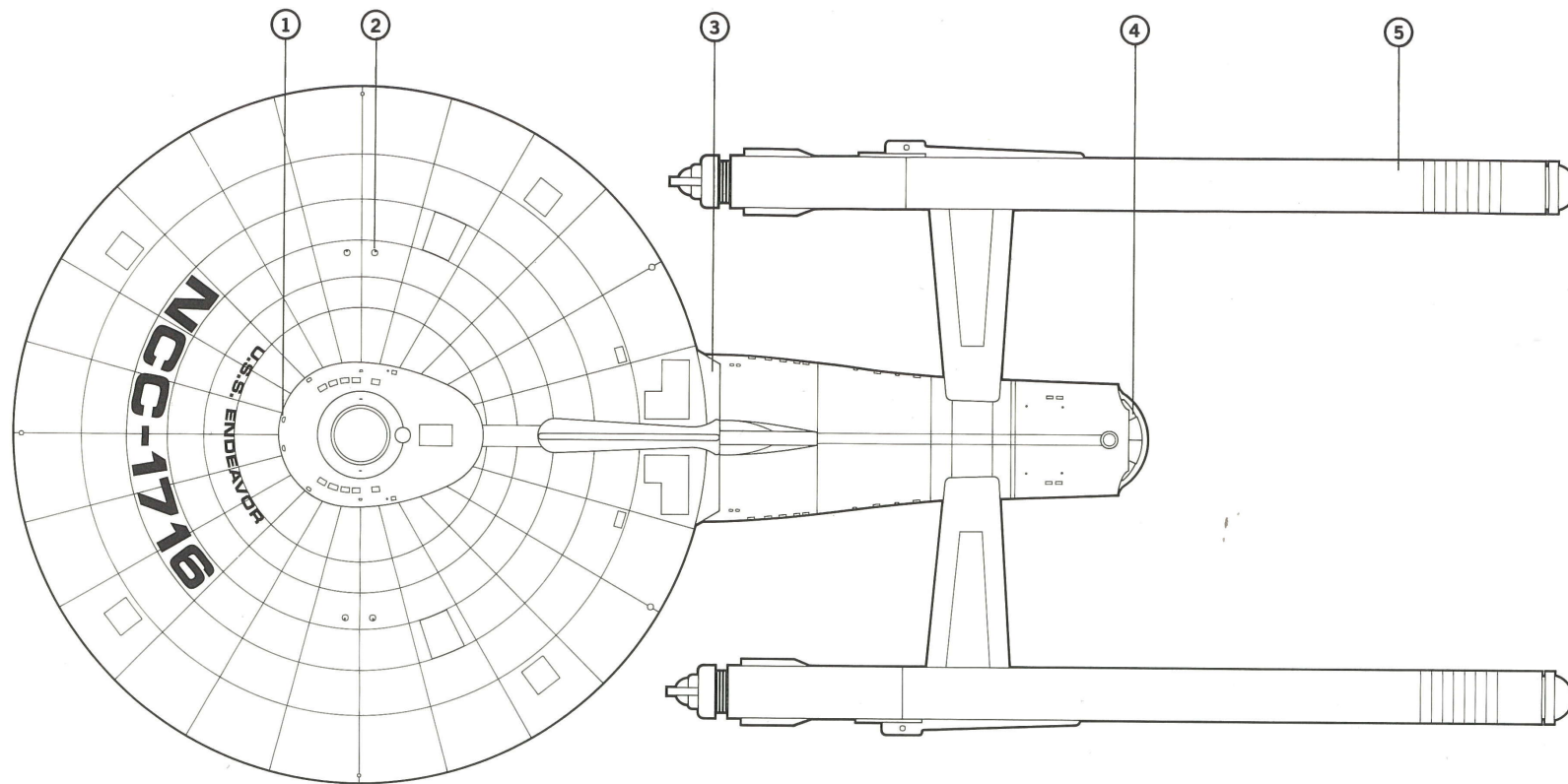
Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1716	<i>Endeavor</i>	Star Fleet Division, San Francisco Yards, Earth	13 Sept 2271	14 Nov 2272	13 July 2273	<b>A2S</b>
NCC-1718	<i>Excelsior</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	28 Nov 2273	01 Dec 2274	15 June 2275	Lost
NCC-1719	<i>Eagle</i>	Star Fleet Division, San Francisco Yards, Earth	26 June 2270	30 Aug 2271	27 Apr 2272	<b>ATAC</b>
NCC-1720	<i>Lafayette</i>	Star Fleet Division, San Francisco Yards, Earth	11 May 2274	02 June 2275	18 Dec 2275	<b>A1N</b>
NCC-1721	<i>Wasp</i>	Newport News Shipbuilding, Virginia, Earth	13 May 2272	11 June 2273	29 Dec 2273	<b>A1S</b>
NCC-1723	<i>Ari</i>	Newport News Shipbuilding, Virginia, Earth	22 June 2272	30 Aug 2273	27 Mar 2274	<b>A2N</b>
NCC-1724	<i>Saratoga</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	07 Apr 2272	21 July 2273	18 Feb 2274	Lost
NCC-1725	<i>Tori</i>	Star Fleet Division, San Francisco Yards, Earth	15 Oct 2272	03 Dec 2273	15 July 2274	<b>ATAC</b>
NCC-1734	<i>Jupiter</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 8444.5	SD 8522.09	SD 8572.3	<b>A2S</b>
NCC-1736	<i>Quindar</i>	Arias Mastac, Prime Dockyards, Daran V	SD 8097.23	SD 8203.34	SD 8254.1	<b>A4N</b>
NCC-1738	<i>Androcs</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 8323.76	SD 8465.17	SD 8489.07	<b>A1S</b>
NCC-1740	<i>Mondoloy</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 8543.1	SD 8697.26	SD 8731.9	<b>A4S</b>

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1728	<i>Truxtun</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	06 Aug 2273	10 Sept 2274	17 Feb 2275	<b>AO</b>
NCC-1729	<i>Confiance</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	31 July 2274	18 July 2275	13 Dec 2275	<b>AO</b>
NCC-1730	<i>Bunker Hill</i>	Newport News Shipbuilding, Virginia, Earth	13 Nov 2273	09 Nov 2274	02 Apr 2275	<b>A3N</b>
NCC-1731	<i>La Vengeance</i>	Newport News Shipbuilding, Virginia, Earth	01 Aug 2273	01 Oct 2274	17 Apr 2275	<b>A1N</b>

This class was representative of Star Fleet's desire to incorporate "new technology" components and systems into ships that were still relatively new at the time. With the exception of CH 1728-31, the *Endeavor* class consists entirely of heavy cruisers converted from other classes. The oldest ship, *Endeavor*, had been active 21 Earth-

years when she entered drydock for refitting; *Mondoloy*, the newest, had been in service only eight years. The *Truxtun*, *Confiance*, *Bunker Hill*, and *La Vengeance* were new-build starships originally ordered as replacements for heavy cruisers of the *Bonhomme Richard* and original *Constitution* classes that were lost in the line of duty.



**Endeavor** in 2290

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. adapted SBE impulse engines 4. landing bay 5. LN-52 SCNN warp drive units

All ships (except the *Eagle* and *Tori*) initially operated in subquadrant zero, being home ported at the inner starbases or assigned to system defense forces. Four ships are scheduled to be assigned to the SFRF by 2294.

*Class:* Most of the ships in this class originally belonged to the *Bonhomme Richard* (CH 1712) and *Achernar* (CH 1732) heavy cruiser classes. The first eight ships were constructed as *Bonhomme Richard* class ships from 2248 to 2252; upgraded to *Achernar* class specifications in the mid-2260s. CH 1734, 1736, 1738, and 1740 were originally built as *Achernar* class starships beginning in 2263.

These 14 ships are sometimes referred to as the *Truxtun* class, due to the fact that CH 1728-31 are the only new-build heavy cruisers of this type (see *Nomenclature* below).

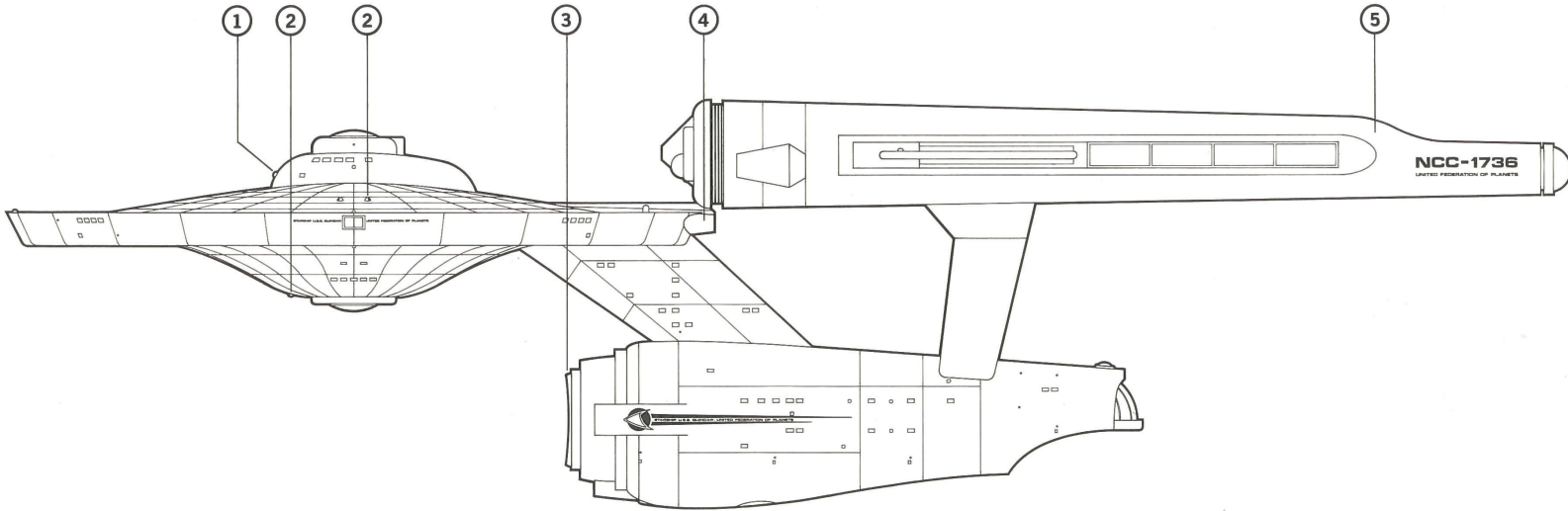
The *Eagle* (CH 1719) was the first starship converted, entering drydock on 26 June 2270. She was relaunched 23 days ahead of schedule (before many of her subsystems were installed) and immediately assigned to TacFleet - on classified status - for reasons unknown at the time. As a result, she was never listed as lead ship of the class. (After declassification it was revealed that *Eagle* provided command and control coordination in the unsuccessful Cabria Bay operation.)

The *Tori* (CH 1725) was assigned to TacFleet in 2279. Along with *Lafayette* and *Wasp* she defeated the Klingon hunter-killers *K'chss* and *K'utuul* during the Taal Tan Offensive of 2283.

The *Excelsior* (CH 1718) disappeared in 2277 while on a reconnaissance mission outside Federation treaty territory (external to subquadrant 2 south). Investigations into her disappearance remained active until 2281. No cause was determined.

The *Saratoga* (CH 1724) was damaged beyond repair on stardate 8661.4 in the vicinity of Beta Xela. She was the victim of an ambush by four vessels, at least two of which were later determined to be of Klingon origin. Three-hundred seventy three crew members were lost. Klingonese officials denied any knowledge of the incident.

*Classification:* The first eight ships of this class were originally authorized as heavy cruisers in January 2246 after the outbreak of hostilities which led to the Four Years War. Their conversion to *Endeavor* specifications was approved in December 2269. Upgrading of *Jupiter*, *Quindar*, *Androcus*, and *Mondoloy* approved January 2270; these four ships originally authorized in November 2260. CH 1728-31 ordered 20 March 2271.

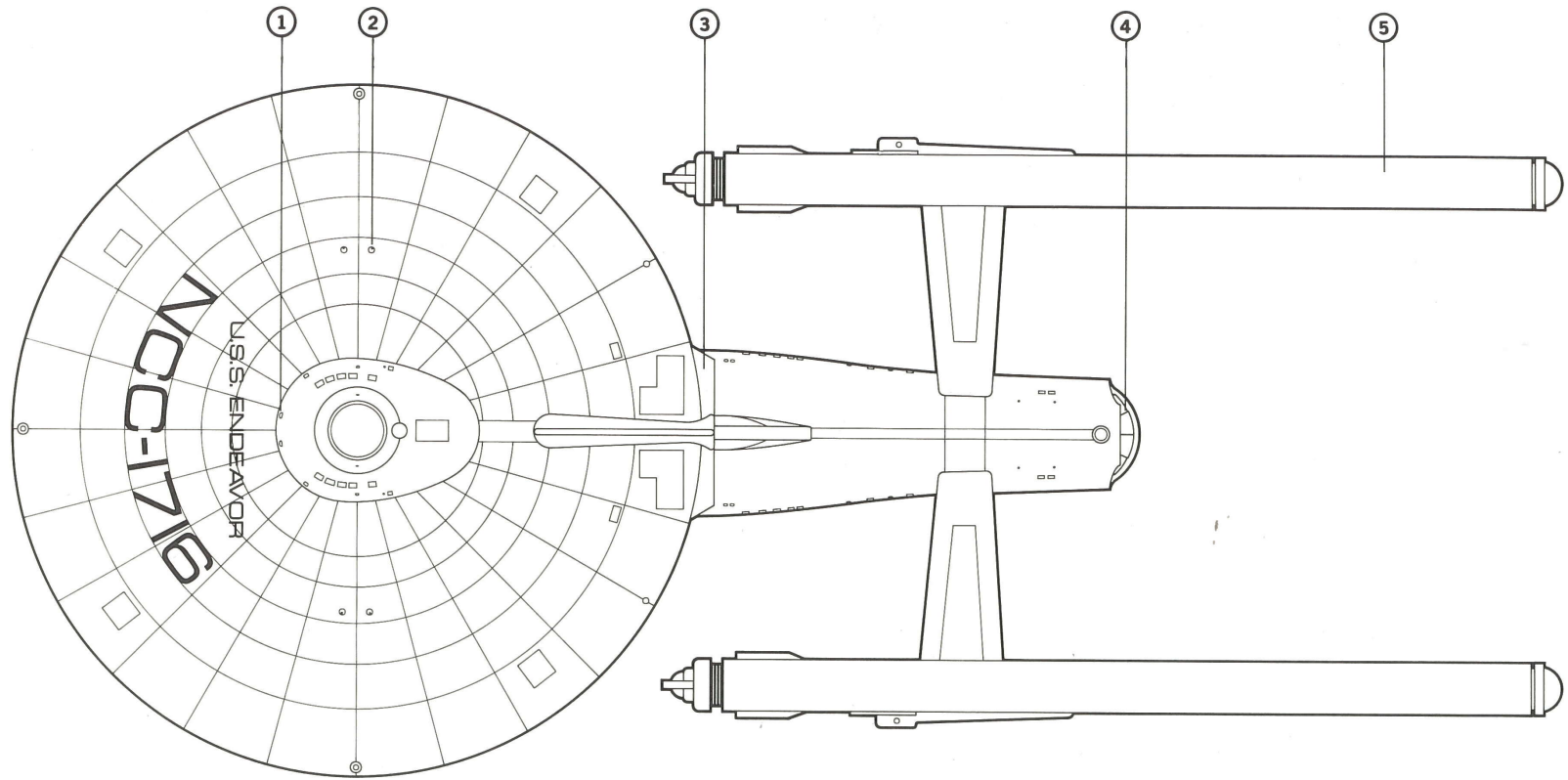


### Quindar

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. Debreu/Lang/Siskiyu sensor/deflector mount 4. adapted SBE impulse engines  
5. LN-52 SCNN warp drive units

#### Current specifications of *Endeavor* class:

Displacement:	190,000 metric tons standard (186,000mt light, 195,000mt full load) NCC-1721, 1723, 1730, 1731: 191,000 metric tons standard (186,500mt light, 195,700mt full load) NCC-1736: 188,900 metric tons standard (185,000mt light, 193,500mt full load)	Duration:	Warp 7-Warp 10: 2.07 sec 5 Earth years, standard 20 Earth years, maximum
Length:	Overall            Primary Hull            Nacelles 283.1m            128.4m            164.0m	Complement:	430 (46 officers + 384 crew) NCC-1723, 1728, 1729: 419 (43 officers + 376 crew) NCC-1736: 411 (42 officers + 369 crew)
Beam:	126.2m            126.2m            13.3m	Embarked craft:	2-3
Draft:	73.8m            32.5m            19.5m	Navigation:	"Starmark" Warp Celestial Guidance (System contractor: Benkulen Systems, Singapore, Earth)
Propulsion:	Two (2) "Fleetwing" LN-52 SCNN (Self-Contained, Non-Networked) dilithium-energized antimatter linear warp drive units (System contractor: Dennison/Westinghouse Hyperphotic Propulsion Division, San Francisco, Earth) Four (4) SBE subatomic unified energy impulse units (adapted) (System contractor: Scarbak Propulsion Systems, Cairo, Earth) "Asaks" chemical combustion reaction control system (System contractor: Orage Ijek, Aksajak, Andor)	Computers:	"Fasfax" Duotronic III (System contractor: Farranti Mnemonics, Berkshire, Earth)
Velocity:	Warp 8, standard Warp 10, maximum	Phasers:	3 banks of 2 each - RIN-6 independent twin mount (System contractor: Agusta Anasado Inc., Fuzes, Venus)
Acceleration:	Rest-Onset Critical Momentum: 14.04 sec Onset Critical Momentum-Warp Engage: 1.84 sec Warp 1-Warp 4: .98 sec Warp 4-Warp 7: .79 sec	Photon torpedoes:	2 tubes - "Awalt" direct (System contractor: Racial Werft F.M.C., Stratos, Ardana)
		Defense:	RSAT/HIRAM force field and deflector system FSTR/TAC Fleet Strategic/Tactical Data System (Systems contractor: Trestis ar Trestis, Pangaear, Izar) CGCP/SCDS cloaking generation, penetration and stasis countermeasure system (System contractor: Hycor, Woburn, Earth)
		Life support:	CT-3/Centris artificial gravity generator "Coraza" radiation shielding (Systems contractor: Cristobal SM/S, Manila, Earth) "Ambrix" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



**Endeavor** in 2273

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. SBE impulse engines 4. landing bay 5. LN-52 SCNN warp drive units

*Design:* These ships are basically identical to those of the *Achernar* class, with linear instead of circumferential warp drive units and modifications to various internal systems. CH 1728-31 are new-build ships equipped during construction with the systems listed (except for "Fasfax" III, added later).

Some internal structural modifications were made to the converted ships so that they could better handle the increased speed provided by the LN-52 engines. Extra internal deck bracing and additional pressure absorption systems were installed at key stress areas, such as the interconnecting dorsal, engine support pylons, and selected areas in the upper and lower primary hull. Also, the RSAT/HIRAM force field unit was upgraded to provide increased external protection.

These were the last starships equipped with the "Starmark" series navigational guidance system.

The *Quindar* is fitted with narrower, reinforced engine support pylons. These save her about 1,000 metric tons in displacement.

All of the converted ships were equipped with SBT-R 44 computer systems prior to their refitting. These units were replaced with "Fasfax" Duotronic II systems. CH

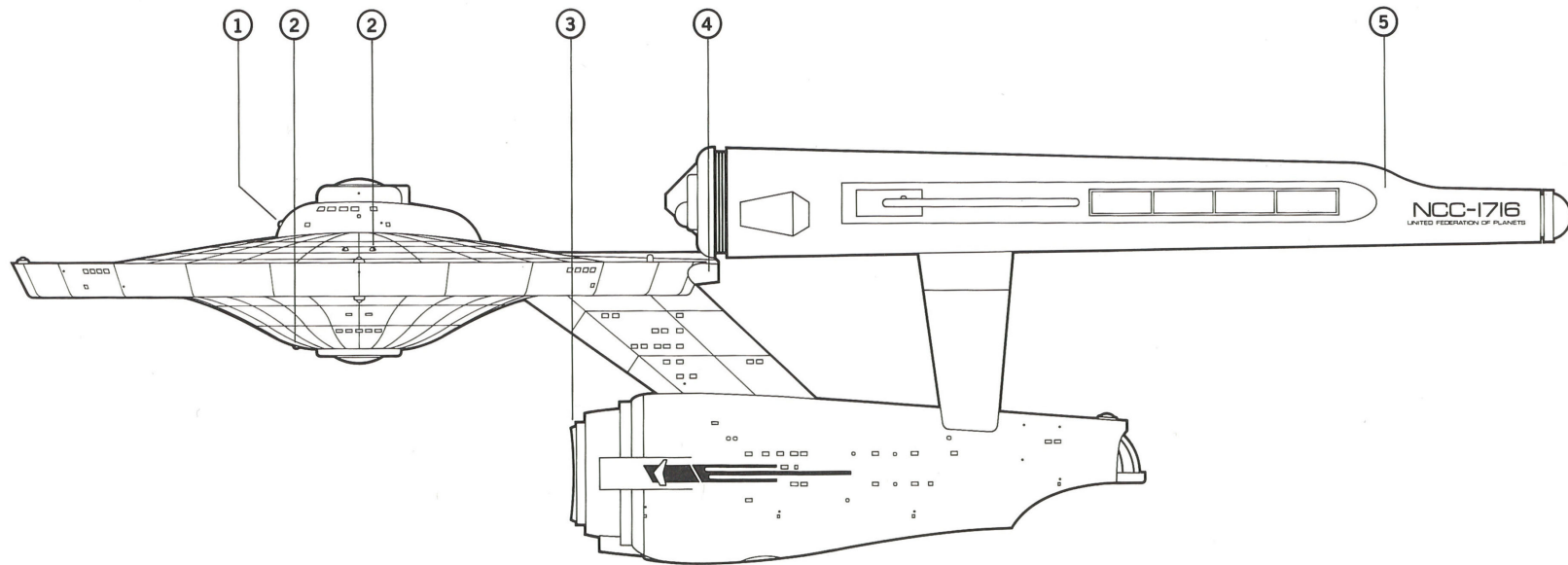
1728-31 were built with "Fasfax." All ships were subsequently equipped with Duotronic III systems beginning in 2280.

These ships were fitted with the Debreu/Lang/Siskiyou Model "H" long-range sensor/deflector, faired into the front end of the secondary hull.

CH 1728-31 were the last Star Fleet cruiser-size vessels to be built without the standardized docking port system.

*Builders:* The new-build ships *Truxtun* and *Confiance* (built by Vickers) and *Bunker Hill* and *La Vengeance* (Newport News) were each completed in little more than one Earth-year.

*Engineering:* The *Endeavor* class starships are equipped with LN-52 linear engines. These units provide the highest speed that the structural design of these ships can handle (with minor modifications). The Dennison/Westinghouse LN-52 model is the only self-contained linear engine produced. As in the PB series circumferential units, all engine functions occur within the engine housing - no intermix shaft assemblies are required. These engines have a much faster rate of dilithium decay than later LN models; as a result, higher warp speeds (above warp factor 8) cannot be sustained as long.



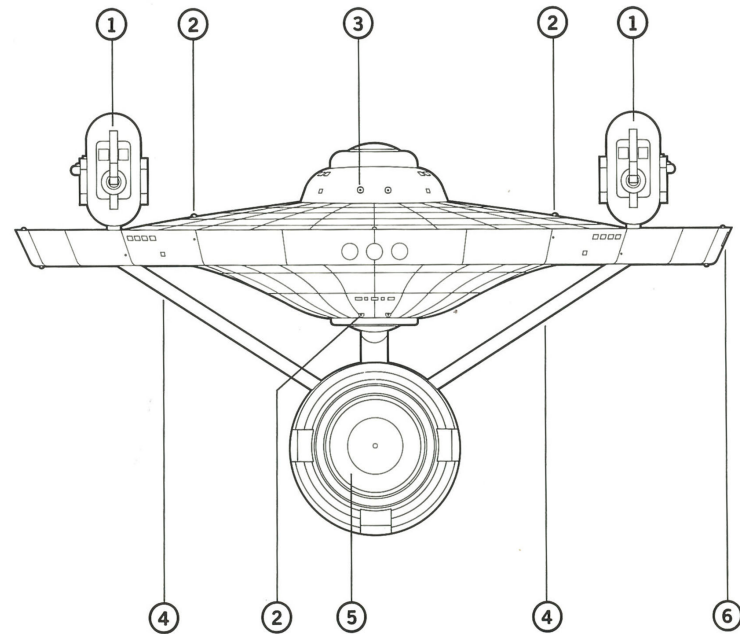
**Endeavor in 2273**

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. Debreu/Lang/Siskiyu sensor/deflector mount 4. SBE impulse engines 5. LN-52 SCNN warp drive units

The SBE impulse units and their corresponding computer and secondary systems required some upgrading to permit them to operate more effectively with the capabilities of the linear warp system.

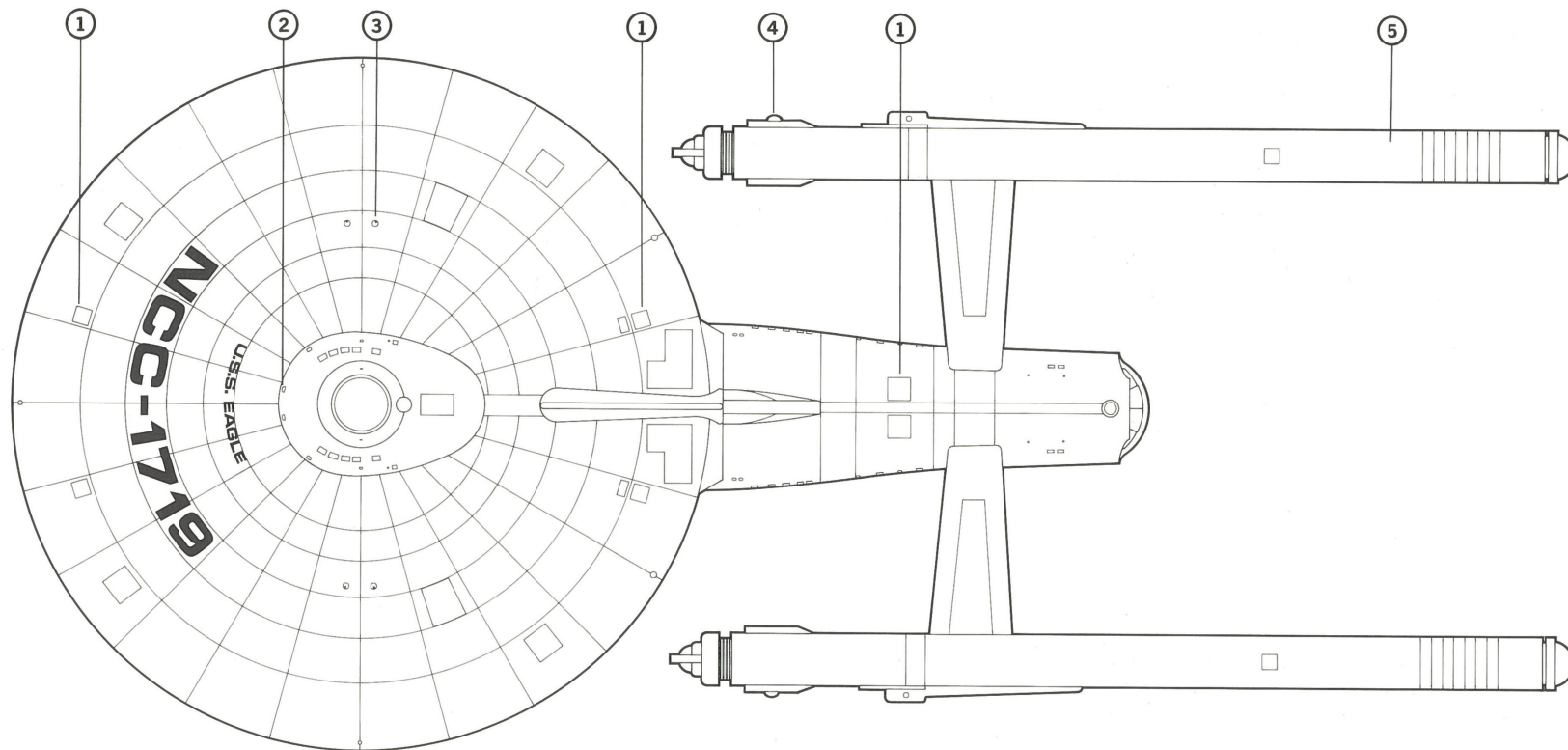
*Weapons:* All ships are scheduled to receive an RSM single mount phaser system (also being fitted in some *Achernar* class ships) to augment their current RIN-6 phaser banks. Four additional emplacements will be fitted in the secondary hull.

*Nomenclature:* CH 1728-31 were originally ordered to replace starship hull numbers 1017, 1717, 1708, and 1709 (all lost in the line of duty), and were assigned the names *Constellation II*, *Defiant II*, *Intrepid II*, and *Valiant II*, respectively. However, it was decided in early 2273 to assign the past names only to vessels not classified as heavy cruisers. The names of CH 1728-31 were thus changed to further honor the crews of the lost starships.



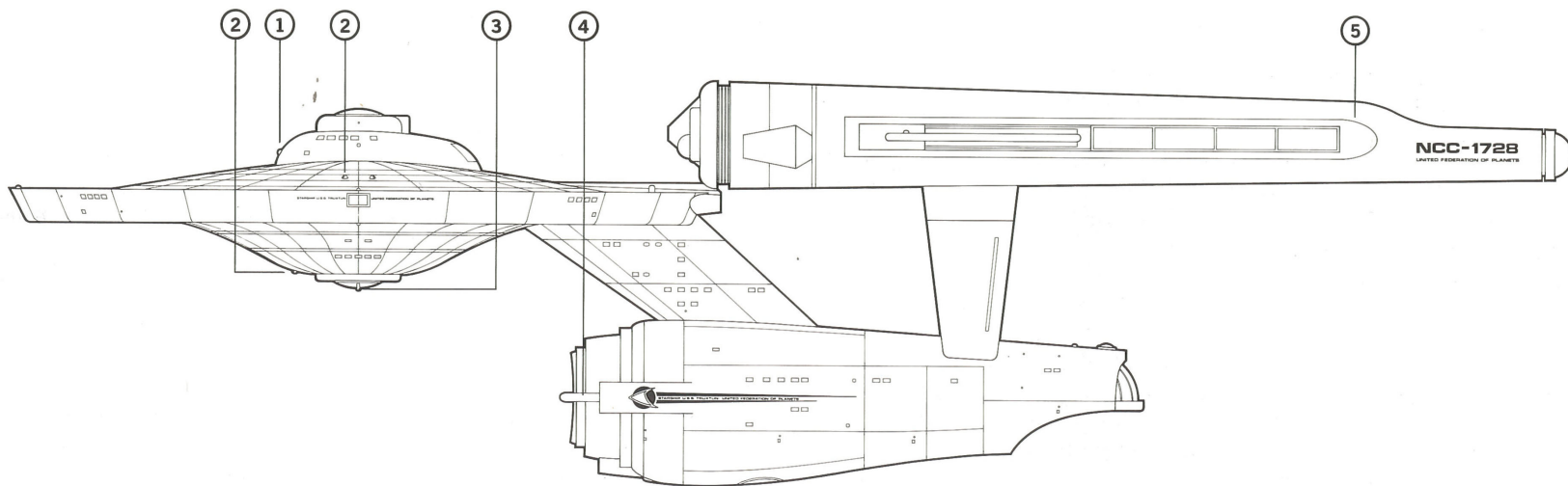
**Endeavor in 2290**

1. LN-52 SCNN warp drive units 2. RIN-6 phaser banks 3. Awalt torpedo tubes 4. jointed support pylon 5. Debreu/Lang/Siskiyu sensor/deflector mount 6. gangway hatch



**Eagle**

1. personnel hatch 2. Awalt torpedo tubes 3. RIN-6 phaser banks 4. modified antimatter dump 5. LN-52 SCNN warp drive units



**Truxtun**

1. Awalt torpedo tubes 2. RIN-6 phaser banks 3. specialized Pitot sensor 4. long-range sensor collar 5. LN-52 SCNN warp drive units



# TIKOPAI

## Class Heavy Cruisers

This is one of the largest classes of cruiser-size starships ever constructed. All 33 *Tikopai*-class heavy cruisers were operational within a period of less than five Earth-years. Outwardly these ships resemble the earlier *Enterprise* (CH 1701) class; differences are evident at the extreme upper and lower primary hull locations (01, 02, and 10, 11 levels), where austere hull sections replace the sophisticated sensor and navigational equipment of the earlier heavy cruisers.

Three of these ships are scheduled to be assigned to the Star Fleet Reserve Force beginning in 2295.

*Class:* The *Tikopai* design was originally intended to be put into production as the *Enterprise* class (c. 2265). Star Fleet eventually decided on a more sophisticated design for the earlier ships, however, and the *Tikopai* class emerged approximately seven Earth-years later as a less-expensive, chiefly exploratory heavy cruiser force.

Construction of 43 ships of this type was authorized in early 2272; this number was reduced for fiscal reasons to 33 in November of that year. Final dockyard selection was completed in March 2273. Construction began on the lead ship in May, almost five months before the last of the *Enterprise*-class heavy cruisers (*El Dorado* [CH 1722]) entered drydock to begin conversion.

The TacFleet ships *Arcturus* (CH 1807), *Darion* (CH 1810), and *Vena* (CH 1817) were each able to obtain vast amounts of information about Klingon activities while operating under the guise of various scientific expeditions during 2282-85.

The *Nakarat* (CH 1805), *Agena* (CH 1816), *Antares* (CH 1820), and *Betelgeuse* (CH 1822) are all scheduled to leave Federation treaty territory in 2292 on extended-duration exploratory missions funded by the Interstellar Ministry of Science.

*Classification:* These ships were originally ordered as exploratory cruisers (CE 1800-42), indicating that they were variations of the *Enterprise* class ships. They were changed to heavy cruisers (CH) with the same hull numbers in September 2272.

*Design:* These ships were designed primarily as exploratory units. Their overall specifications are somewhat inferior to the similar *Enterprise* class, primarily due to the lack of a front-line defensive mission profile. (Later ships were fitted with more defense-oriented secondary systems.)

The displacement figures of these ships vary considerably, ranging from the 204,500 metric tons of the Vulcan-built cruisers to the 209,000mt of the Terran ships (*Ishikawajima* and SFD). *Shor Ta'kel* utilized a variety of stronger, lightweight materials during the design and construction of their ships.

These cruisers embark smaller crews than the earlier *Enterprise* class since they don't require various tactical and support personnel.

All ships are equipped with the "Con/Am" Duotronic III computer system as their primary unit. This configuration provides adequate scientific capabilities but a limited alternate-mission profile when compared to other units such as the "Daystrom" series.

The earlier ships of this class were provided with the "Glennis" computer support package while the later ships received the K3 Supplement system, giving them a slightly more flexible alternate-mission capability. Later ships also received the "Taos" navigation system, replacing the less-sophisticated "Artos-C" units fitted in the earlier vessels.

These ships were fitted with two additional docking ports (02 level) during construction, giving them seven unsecured docking areas (nine total).

A small, one-craft hangar was fitted in the primary hull on the 06 level. Access is provided by means of an elevator stationed at the surface of the primary hull, just aft of the officers lounge. Some ships are equipped with a three-person shuttle while others use the hangar as a temporary storage area for admiralty or flag officer shuttlecraft.

Sensor installations are of the modified Arslana Kilij type and are adapted specifically for navigational and scientific uses; the sophisticated strategic and tactical defensive units of the *Enterprise* class ships are not fitted. Primary sensor operations are located



### 33 HEAVY CRUISERS: "TIKOPAI" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1800	<i>Tikopai</i>	Ishikawajima Harima Industries, Yokohama, Earth	27 May 2273	11 Oct 2274	15 Aug 2275	A1N
NCC-1801	<i>K'ushui</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6105.27	SD 6222.31	SD 6273.4	A2N
NCC-1802	<i>K'hotan</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6251.18	SD 6384.5	SD 6402.91	A2S
NCC-1803	<i>Altair</i>	Cosmadyne Corporation, Boston Shipyards, Earth	06 Aug 2273	19 Feb 2275	02 Sept 2275	AO
NCC-1804	<i>Fomalhaut</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7871.69	SD 8002.3	SD 8027.32	A3N
NCC-1805	<i>Nakarat</i>	Cosmadyne Corporation, Boston Shipyards, Earth	20 Feb 2274	13 June 2275	15 Dec 2275	A4N
NCC-1806	<i>Vega</i>	Newport News Shipbuilding, East Bank Facility, Deneb V	SD 7411.28	SD 7552.3	SD 7571.24	AO
NCC-1807	<i>Arcturus</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 7151.82	SD 7269.8	SD 7275.43	ATAC
NCC-1808	<i>Pollux</i>	Avondale Group, New Dallas, Rigel IV	SD 5981.34	SD 6092.5	SD 6104.7	A3S
NCC-1809	<i>Capella</i>	Cosmadyne Corporation, Boston Shipyards, Earth	06 June 2275	09 Aug 2276	18 Jan 2277	A2S
NCC-1810	<i>Darion</i>	Ishikawajima Harima Industries, Yokohama, Earth	01 Sept 2274	11 Dec 2275	21 June 2276	ATAC
NCC-1811	<i>Sardar</i>	Newport News Shipbuilding, East Bank Facility, Deneb V	SD 7622.86	SD 7768.06	SD 7813.8	A1N
NCC-1812	<i>Aldebaran</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7952.4	SD 8065.71	SD 8099.47	A3S
NCC-1813	<i>Hor</i>	Avondale Group, New Dallas, Rigel IV	SD 6100.5	SD 6253.2	SD 6292.01	A1S
NCC-1814	<i>Canopus</i>	Cosmadyne Corporation, Boston Shipyards, Earth	12 Apr 2276	15 June 2277	09 Nov 2277	A4S
NCC-1815	<i>Spica</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6400.2	SD 6551.5	SD 6875.5	A3N
NCC-1816	<i>Agena</i>	Ishikawajima Harima Industries, Yokohama, Earth	01 Nov 2275	08 Feb 2277	30 July 2277	A2N
NCC-1817	<i>Vena</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6500.25	SD 6662.8	SD 6805.5	ATAC
NCC-1818	<i>Acrux</i>	Newport News Shipbuilding, East Bank Facility, Deneb V	SD 7700.5	SD 7884.87	SD 8001.05	A2S
NCC-1819	<i>Binar</i>	Newport News Shipbuilding, East Bank Facility, Deneb V	SD 7850.23	SD 8010.2	SD 8054.1	A4S
NCC-1820	<i>Antares</i>	Cosmadyne Corporation, Boston Shipyards, Earth	01 May 2277	02 Aug 2278	12 Jan 2279	A4N
NCC-1821	<i>Anak</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6600.75	SD 6787.2	SD 6799.4	A3S
NCC-1822	<i>Betelgeuse</i>	Ishikawajima Harima Industries, Yokohama, Earth	15 Feb 2277	03 Apr 2278	05 Sept 2278	A3N
NCC-1823	<i>Lux</i>	Shor Ta'kel Ltd., Central Docks, 40 Eridani	SD 6750.15	SD 6877.48	SD 6890.4	A2N
NCC-1824	<i>Rigel</i>	Avondale Group, New Dallas, Rigel IV	SD 6223.1	SD 6400.7	SD 6488.22	A2S
NCC-1825	<i>Helios</i>	Cosmadyne Corporation, Boston Shipyards, Earth	01 Sept 2278	30 Nov 2279	04 Mar 2280	A3N
NCC-1826	<i>Deneb</i>	Newport News Shipbuilding, East Bank Facility, Deneb V	SD 7825.0	SD 7975.65	SD 8011.3	A4S
NCC-1827	<i>Adhara</i>	Avondale Group, New Dallas, Rigel IV	SD 6395.8	SD 6504.77	SD 6522.3	A3N
NCC-1828	<i>Alioth</i>	Avondale Group, New Dallas, Rigel IV	SD 6408.9	SD 6545.76	SD 6581.17	ATAC
NCC-1829	<i>Alkaid</i>	Avondale Group, New Dallas, Rigel IV	SD 6600.55	SD 6750.25	SD 6771.92	ATAC
NCC-1830	<i>Alnilam</i>	Avondale Group, New Dallas, Rigel IV	SD 6713.15	SD 6899.21	SD 7010.8	A1S
NCC-1831	<i>Arided</i>	Avondale Group, New Dallas, Rigel IV	SD 6910.4	SD 7080.43	SD 7112.51	ATAC
NCC-1832	<i>Bellatrix</i>	Ishikawajima Harima Industries, Yokohama, Earth	01 June 2278	30 June 2279	28 Oct 2279	ATAC

at the forward end of the secondary hull, where the three attraction sensor units are closely integrated with the long-range Vernier system.

The CGCP/SCDS cloaking and countermeasure system was incorporated into these ships very late in the design stage. All TacFleet ships were fitted with the "B" model of this system. Three TacFleet ships are scheduled to be backfitted with superior defensive and weapon systems in the near future to enable them to fulfill their defense assignments more effectively. The four other ships will likely be reassigned.

**Builders:** A total of eight construction firms were contracted to build these ships. Each contractor utilized only one yard during production.

As a result of the Naval Construction Contract Board's desire to stress different areas of ship design during the construction of this class, most contracts were awarded to the seven private shipyards in competition, with Avondale securing the largest number of ships (eight) and Rapier Dynamics the least (two). Star Fleet Division (the Star Fleet subsidiary) secured only one ship, marking the first time SFD received less than two contracts in the construction of a major starship class.

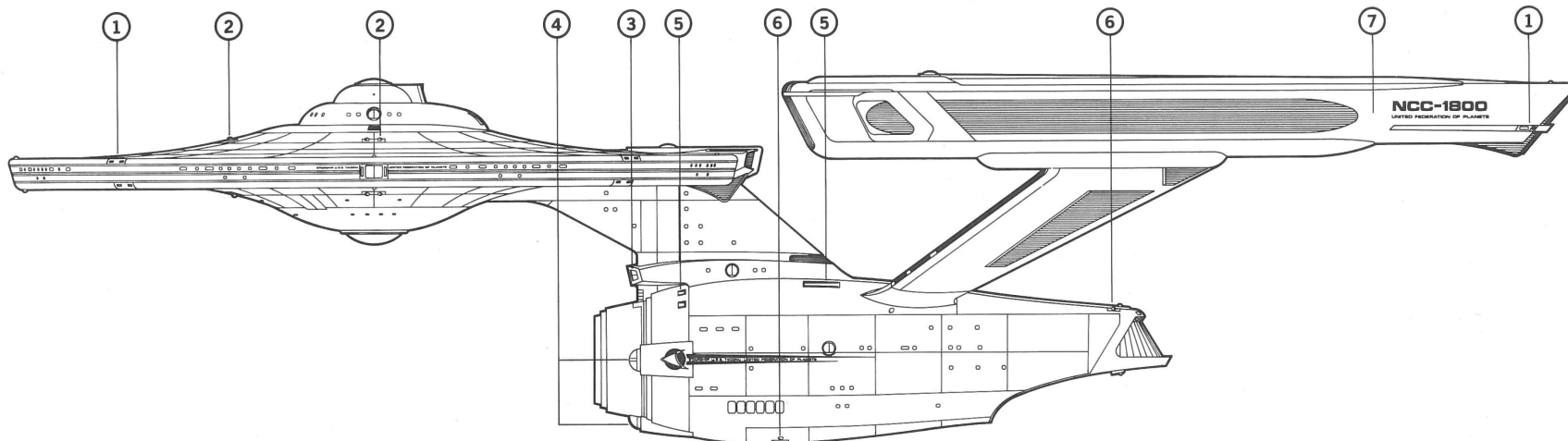
**Engineering:** These ships have had numerous problems with their LN-64A warp units; early operating reports from various ships indicated a considerable number of aborted warp attempts. Most problems with these engines have since been corrected, but acceleration rates, duration ability, and FOB (Frequency of Operational Breakdown) figures have never been as impressive as in the LN-64 series.

The "Ukiah" reaction control system was a chiefly experimental configuration at the time of its installation but has performed at above-average efficiency levels. Two rear-firing QASR units were deleted from these ships.

**Weapons:** The "Eyas" weapon system was fitted in all ships. The "Mentor III" fire control system was fitted in most later ships to provide a partially increased defensive capability over the "Conus II" system in the earlier vessels.

These ships are equipped with the same phaser models as in the *Enterprise* class (RIM-12C and RSM-14B); however, only four banks are fitted on the secondary hull as opposed to six.

The "Thor" photon torpedo system is an enclosed configuration with a shorter effec-



### Tikopai

1. Ukiyah reaction control system 2. RIM-12C phaser banks 3. Thor Mod 2 torpedo tubes 4. Arslana Kilij sensor units 5. QASR maneuvering thrusters 6. RSM-14B phaser banks 7. LN-64A Mod 3 warp drive units

#### Current specifications of *Tikopai* class:

Displacement: 206,000 metric tons standard  
(202,500mt light, 210,500mt full load)  
NCC-1801, 1802, 1815, 1817, 1821, 1823: 204,500 metric tons standard  
(201,000mt light, 209,000mt full load)  
NCC-1824, 1827-31: 207,000 metric tons standard  
(203,000mt light, 211,500mt full load)  
NCC-1807, 1810, 1832: 209,000 metric tons standard  
(204,500mt light, 213,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	304.8m	146.3m	154.8m
Beam:	141.7m	141.7m	12.6m
Draft:	71.3m	31.7m	18.3m

Propulsion: Two (2) LN-64A Mod 3 dilithium-energized antimatter linear warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Two (2) RSL subatomic unified energy impulse units  
QASR particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Ukiyah" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 8, standard  
Warp 12, maximum

Acceleration: Rest-Onset Critical Momentum: 8.97 sec  
Onset Critical Momentum-Warp Engage: 1.19 sec  
Warp 1-Warp 4: .81 sec  
Warp 4-Warp 8: .69 sec  
Warp 8-Warp 12: 2.21 sec

Duration: 5 Earth years, standard  
20 Earth years, maximum

Complement: 440 (65 officers + 375 crew)  
NCC-1816, 1822, 1824, 1827, 1830: 447 (65 officers + 382 crew)  
NCC-1817, 1828, 1829, 1831, 1832: 455 (78 officers + 377 crew)

Embarked craft: 2+  
Navigation: NCC-1800-09, 1814: "Artos-C" Warp Celestial Guidance  
(System contractor: Mandor Industries Ltd., Dalhalm, Delta IV)  
NCC-1810-13, 1815-32: "Taos" Warp Celestial Guidance  
(System contractor: Valdemar NCS Inc., Copenhagen, Earth)

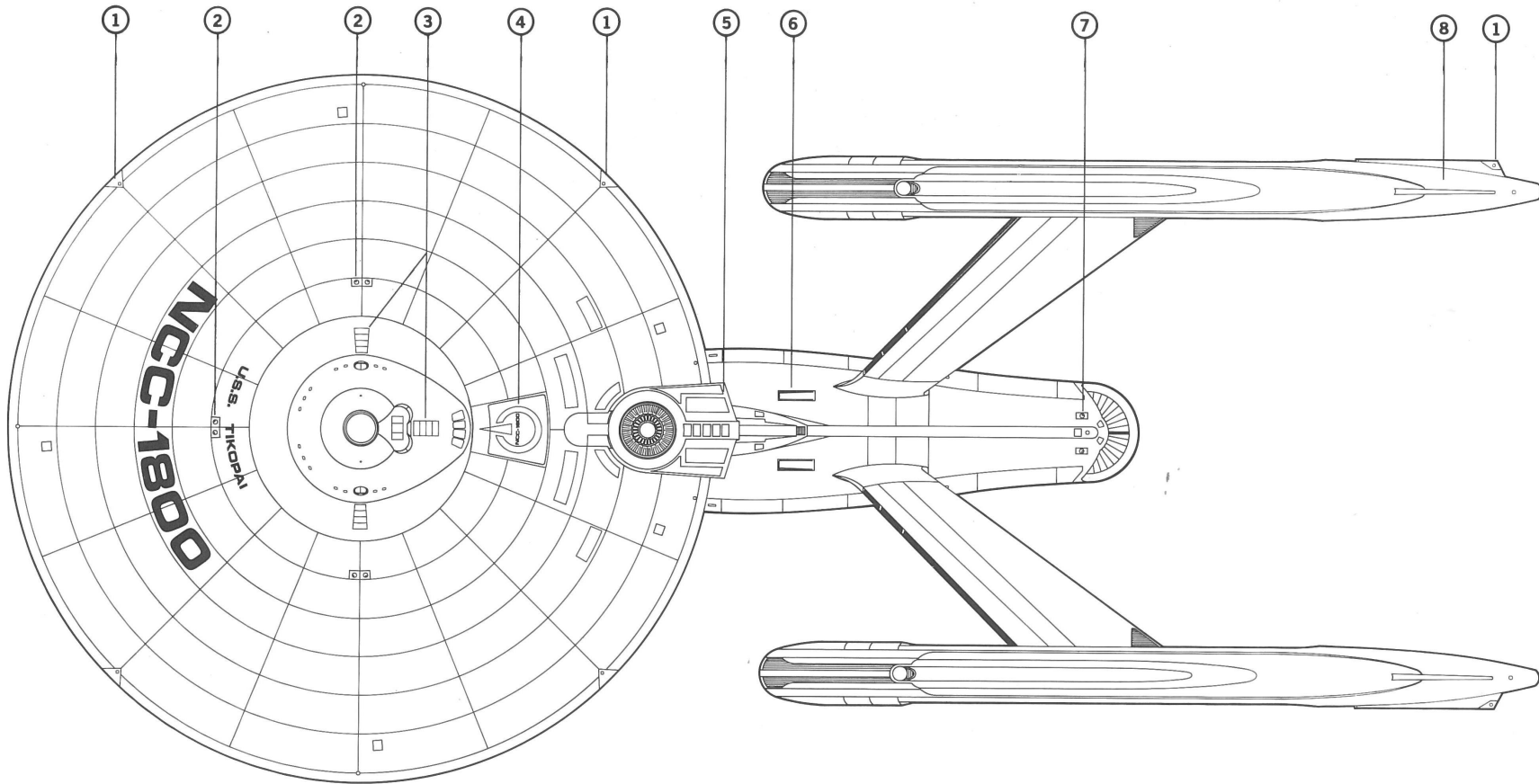
Computers: "Con/Am" Duotronic III  
(System contractor: Plessey Group, Essex, Earth)  
NCC-1800-10, 1814: "Glennis" ATX Support Subsystem  
(System contractor: Interstellar Business Machines, Chicago, Earth)  
NCC-1811-13, 1815-32: K3 Supplement  
(System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)

Phasers: 6 banks of 2 each - RIM-12C independent twin mount  
4 banks - RSM-14B single mount  
(Systems contractor: Augusta Ansadado Inc., Fuzes, Venus)

Photon torpedoes: 2 tubes - "Thor" Mod 2 direct  
(System contractor: Keindoffer-Klaatsen DSC, Munich, Earth)

Defense: "Phoenix" primary force field and deflector control system  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)  
"Eyas" weapon system  
(System contractor: Keindoffer-Klaatsen DSC, Munich, Earth)  
NCC-1800-10, 1814: "Conus II" sensor and fire control system  
(System contractor: Raakuv, Gaziwahaida, Andor)  
NCC-1811-13, 1815-1832: "Mentor III" fire control system  
(System contractor: Trestis ar Trestis, Pangaeear, Izar)  
CGCP/SCDS cloaking generation, penetration and stasis countermeasure system  
(System contractor: Hycor, Woburn, Earth)

Life support: MC-3E artificial gravity generator  
(System contractor: Cristobal SM/S, Manila, Earth)  
"Lernex 1" radiation protection package  
(System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
"Cerix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



**Tikopai**

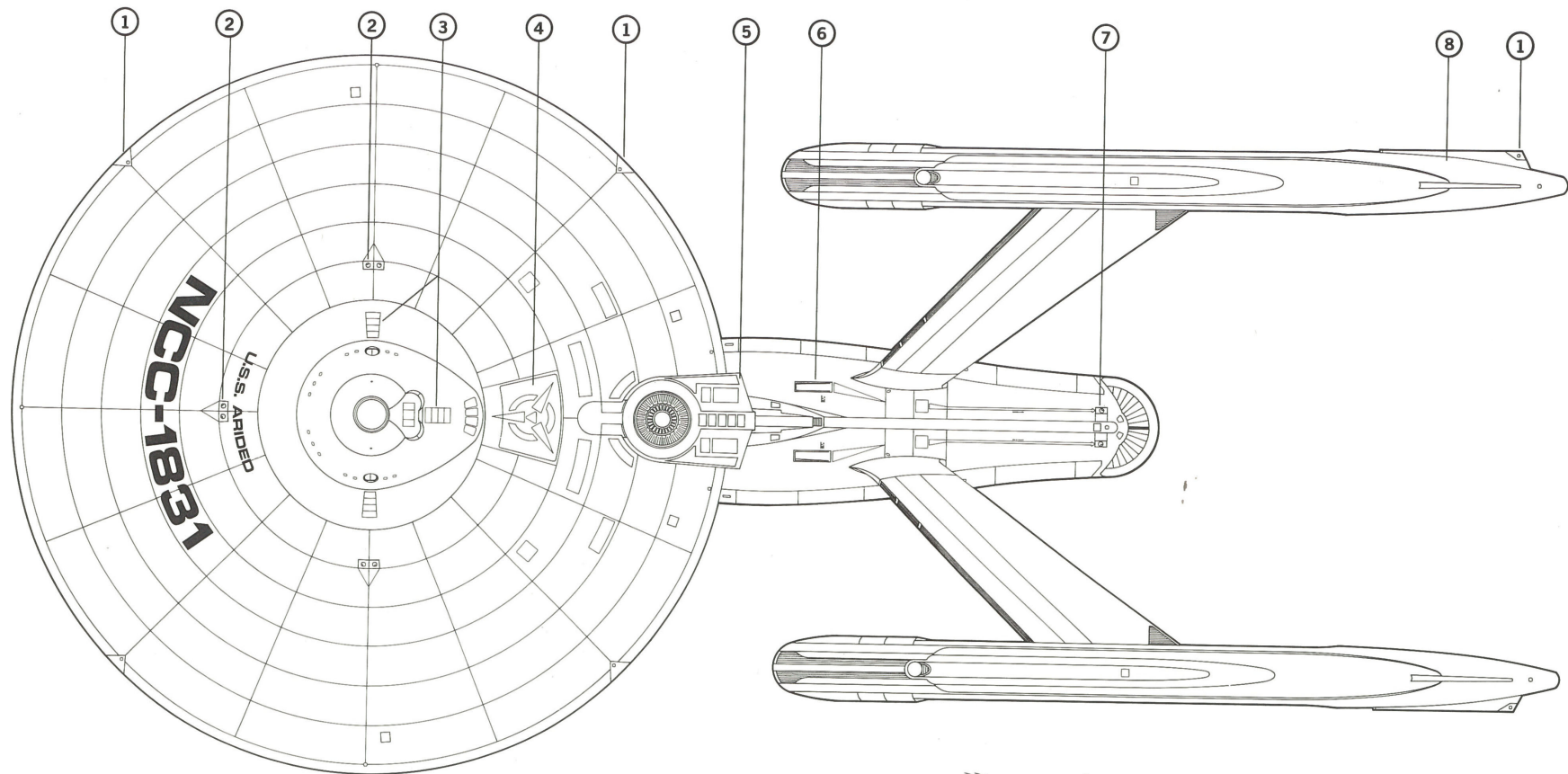
1. Ukiyah reaction control system 2. RIM-12C phaser banks 3. non-skid panels 4. small craft elevator 5. RSL impulse engines  
 6. QASR maneuvering thrusters 7. RSM-14B phaser banks 8. LN-64A Mod 3 warp drive units

tive range than most other systems. However, the system does provide a more powerful torpedo than even the Mk 25 configuration of the *Cyane* (FH 1890) class.

*Embarked craft:* Several of these ships are equipped with long-range scientific shuttlecraft. Others are equipped with a combination of the standard shuttle and various

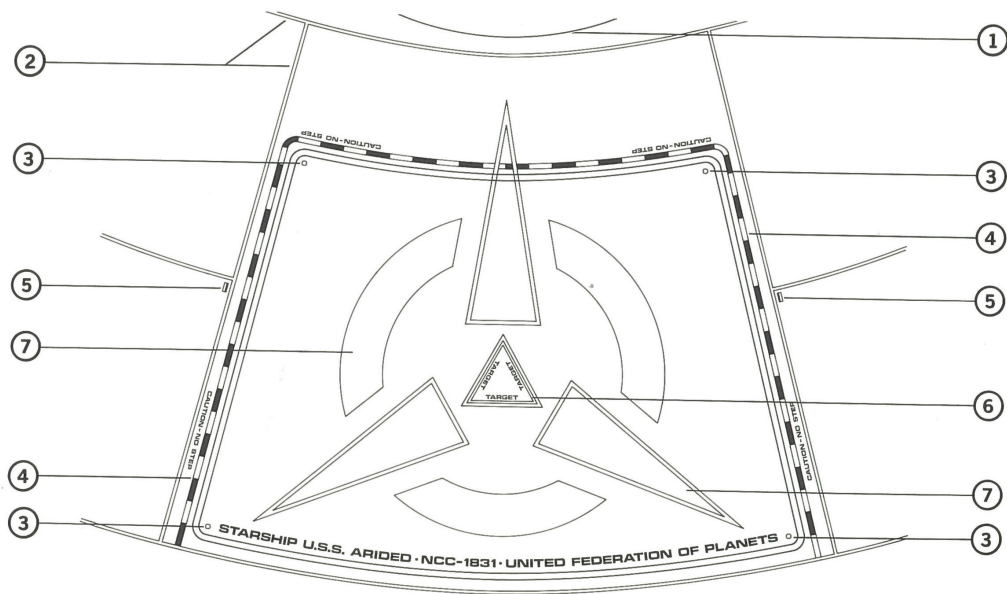
support craft.

*Nomenclature:* These ships were originally to be named for various Federation statesmen of recent history. This decision was reversed in May 2272, however, and Star Fleet issued the current list based on the Star Catalog in July of that year.



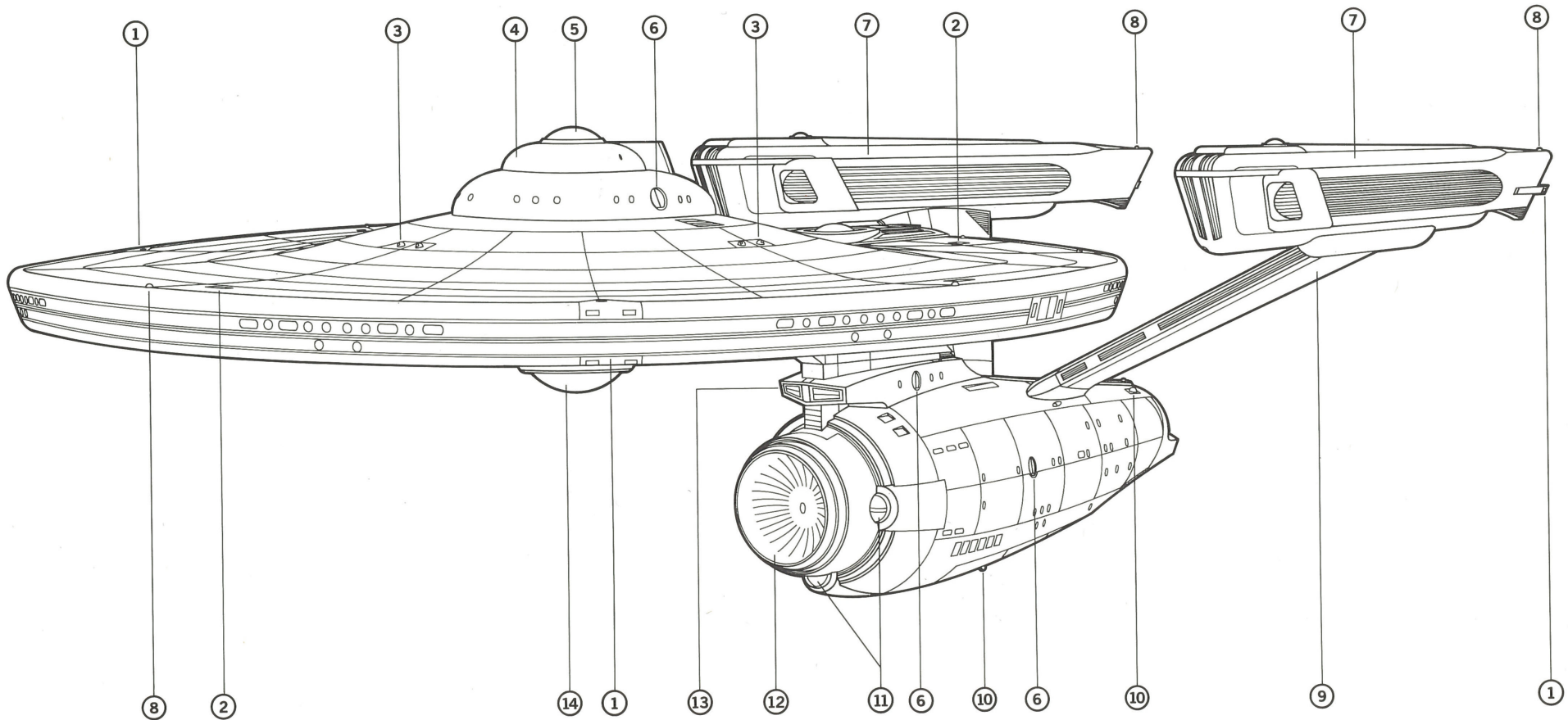
**Aried**

1. Ukiyah reaction control system 2. RIM-12C phaser banks 3. non-skid panels 4. see detail below 5. RSL impulse engines 6. QASR maneuvering thrusters 7. RSM-14B phaser banks 8. LN-64A Mod 3 warp drive units



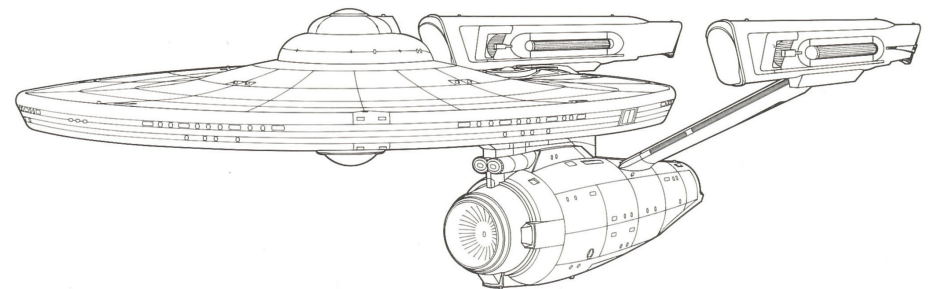
**Detail, small craft elevator** — CH 1808, 1813, 1824, 1827-31

1. command hull superstructure 2. deflector grid 3. elevator formation lights 4. caution marker 5. elevator manual controls 6. target light bar 7. non-skid panels



### Tikopai

1. Ukiyah reaction control system 2. personnel hatch 3. RIM-12C phaser banks  
 4. primary bridge 5. upper sensor platform 6. docking port 7. LN-64A Mod 3 warp drive units 8. formation light 9. support pylon 10. RSM-14B phaser banks  
 11. Arslana Kilij sensor units 12. Vernier sensor/deflector mount 13. Mod 2 Thor torpedo tubes 14. lower sensor platform

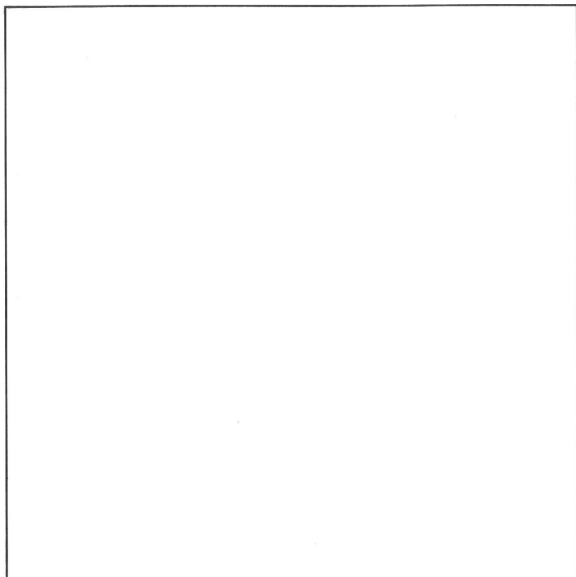


Note the *Tikopai's* overall external design similarity to the *Enterprise-class* heavy cruisers. Major differences can be seen at the upper and lower primary hull levels and in the Arslana scientific sensor package on the secondary hull. Despite the similarities, however, these ships are more comparable to the *Constitution II* class in overall capability due to the fact that they were designed primarily as exploratory vessels. Note also the enclosed "Thor" torpedo tubes, additional O2 level docking ports and Rosun vanes at the upper rear of the warp units.

see *Constitution II* class

# ENTERPRISE (II)

## Class Heavy Cruisers



No Insignia Authorized

### 7 + 7 HEAVY CRUISERS: "ENTERPRISE (II)" CLASS

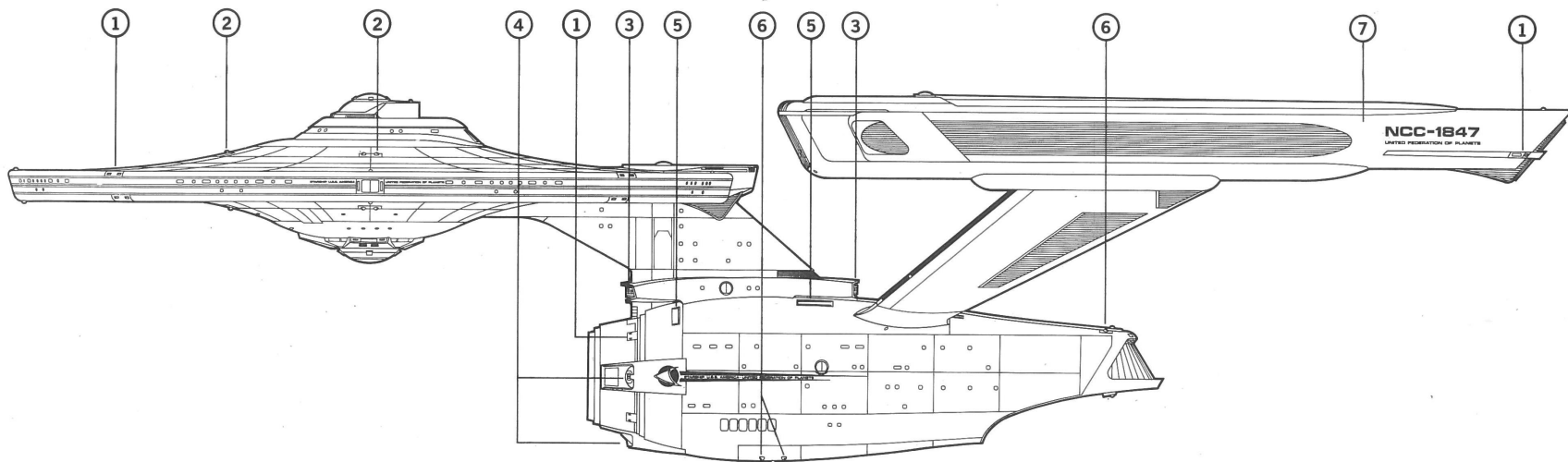
Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1702	<i>Farragut</i>	Star Fleet Division, Alfras Naval Yards, Deneb V	SD 8908.26	SD 8940.12	SD 8948.37	<b>A2N</b>
NCC-1703	<i>Lexington</i>	Star Fleet Division, Vlastikov Support Base, Colony Five	SD 7957.34	SD 7990.01		Building
NCC-1705	<i>Excalibur</i>	Star Fleet Division, Kyoto Spaceport, Titan	SD 8992.13			Building
NCC-1706	<i>Exeter</i>	Star Fleet Division, Port Copernicus Yards, Luna				Planned
NCC-1722	<i>El Dorado</i>					Planned
NCC-1726	<i>Kreiger</i>					Planned

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1701	<i>Enterprise</i>	Star Fleet Division, San Francisco Yards, Earth	01 Mar 2287	17 May 2288	30 Jan 2289	<b>A3S</b>
NCC-1843	<i>Levant</i>	Star Fleet Division, Singapore Naval Yards, Earth	16 Feb 2288	03 May 2289	14 Jan 2290	<b>A1N</b>
NCC-1844	<i>Ticonderoga</i>	Star Fleet Division, Vlastikov Support Base, Colony Five	SD 7239.8	SD 7361.25	SD 7399.0	<b>A3N</b>
NCC-1845	<i>Raritan</i>	Star Fleet Division, San Francisco Yards, Earth	11 Jan 2288	23 Apr 2289	30 Nov 2289	<b>ATAC</b>
NCC-1846	<i>Temeraire</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	24 Feb 2288	14 June 2289	31 Dec 2289	<b>A4S</b>
NCC-1847	<i>America</i>	Star Fleet Division, Port Copernicus Yards, Luna	SD 8235.5	SD 8364.78	SD 8391.17	<b>A1S</b>
NCC-1848	<i>Scipion</i>	Star Fleet Division, Vlastikov Support Base, Colony Five	SD 7345.93	SD 7481.8		Building
NCC-1849	<i>Alliance</i>	Star Fleet Division, San Francisco Yards, Earth	07 Mar 2289			Building

These are the most capable starships currently in Star Fleet service with excellent defensive and scientific capabilities. When completed this class will represent Star Fleet's top-of-the-line, multi-mission heavy cruiser force. Six new-build ships are already operational, and another converted ship is expected to join the *Farragut* (CH 1702) soon.

*Class:* The *Enterprise* (CH 1701) design of some twenty Earth-years earlier was selected

as the basis for the *Levant* (CH 1843) class, and seven ships were authorized for construction in December 2286. At the same time the Military Staff Committee and the Requirements Analysis Board issued a directive to decommission heavy cruisers of the *Enterprise* class on a selected-vessel basis. However, this decision was reversed by the Chief of Star Fleet Operations less than four months later, and ships of the *Enterprise* class were subsequently scheduled for refitting. The *Enterprise* herself was de-



### America

The *America* is shown here with rear-firing Mk 70 torpedo tubes. Though not presently planned, this capability may be incorporated into some new-build ships at a later date.

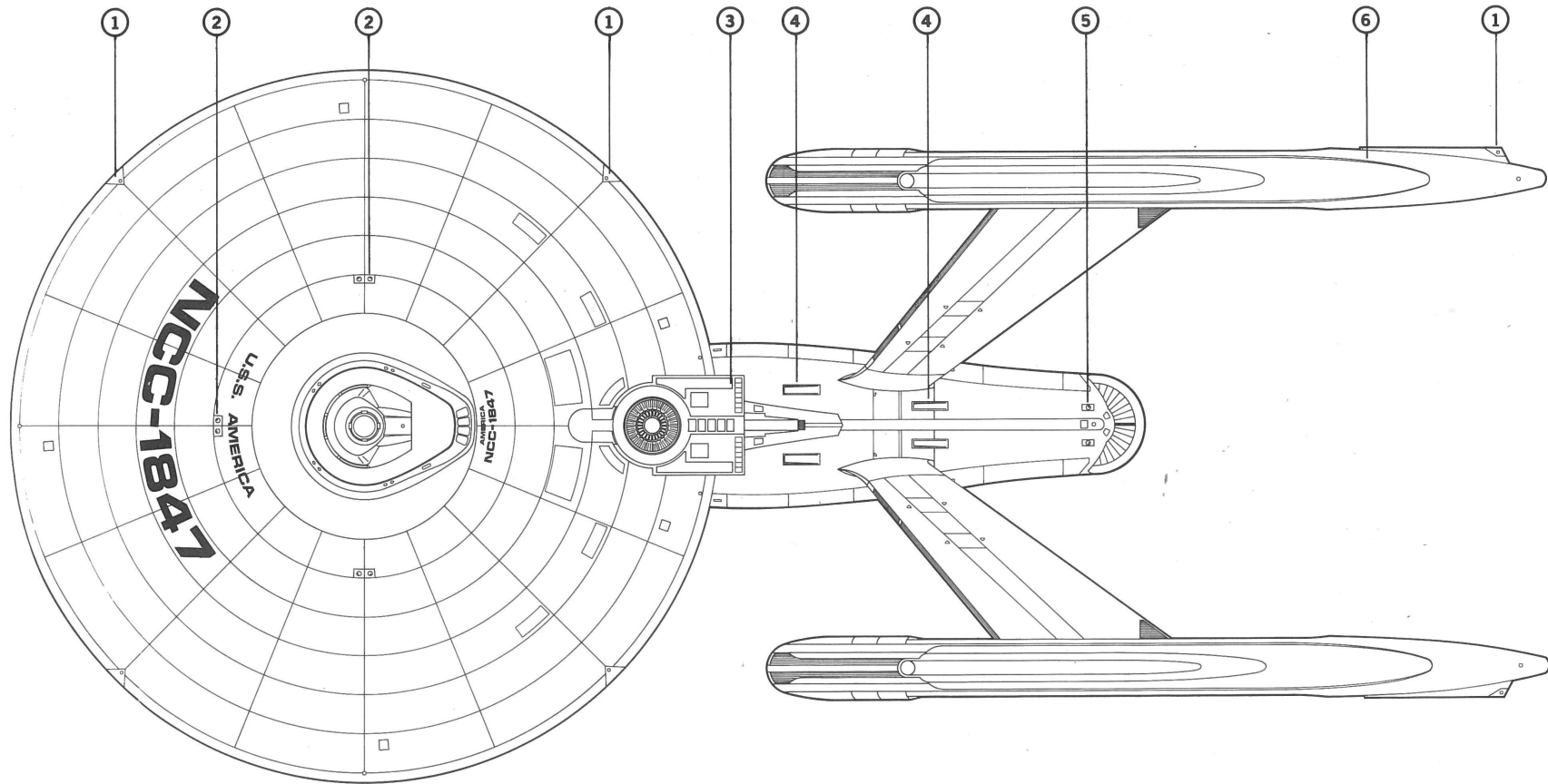
1. Trentis reaction control system 2. RIM-15A phaser banks 3. Mk 70 Mod 2 torpedo tubes 4. QIK-70 sensors 5. QASR maneuvering thrusters 6. RSM-20B phaser banks 7. LN-64B Mod 3 warp drive units

#### Current specifications of *Enterprise (II)* class:

Displacement:	211,500 metric tons standard (208,000mt light, 217,000mt full load)
Length:	Overall            Primary Hull            Nacelles
Beam:	304.8m            146.3m            155.0m
Draft:	141.7m            141.7m            13.5m
Propulsion:	71.3m            32.9m            18.3m
Velocity:	Two (2) LN-64B Mod 3 dilithium-energized antimatter linear warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)
Acceleration:	Two (2) RSM subatomic unified energy impulse units QASR particle beam maneuvering thrusters (Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)
Duration:	"Trentis" pulsed laser reaction control system (System contractor: Orage Ijek, Aksajak, Andor)
Complement:	Warp 9, standard
Embarked craft:	Warp 13, maximum
	Rest-Onset Critical Momentum: 7.93 sec
	Onset Critical Momentum-Warp Engage: 1.01 sec
	Warp 1-Warp 3: .50 sec
	Warp 3-Warp 6: .41 sec
	Warp 6-Warp 9: .46 sec
	Warp 9-Warp 13: 1.80 sec
	5 Earth years, standard
	25 Earth years, maximum
	NCC-1702: 495 (72 officers + 423 crew)
	2+

Navigation:	RAV/ISHAK Warp Celestial Guidance (System contractor: Tlixis Ramab RRB, Balikan, Coridan III)
Computers:	"Daystrom" Duotronic IV with Multitronic M-9 Supplement (Systems contractor: Daystrom Computer Systems Inc., Lunaport, Luna)
Phasers:	6 banks of 2 each - RIM-15A independent twin mount 6 banks - RSM-20B single mount (Systems contractor: Agusta Anasado Inc., Fuzes, Venus)
Photon torpedoes:	2 tubes - Mk 70 Mod 2 direct (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)
Defense:	"Merlin" force field and deflector system with cloaking generator and stasis countermeasure subsystem D/SS Defense and Scanning Systems (Systems contractor: Prentice-Schafer Inc., Marsport, Mars)
Life support:	FSTR/TAC Fleet Strategic/Tactical Data System (System contractor: Trestis ar Trestis, Pangaeer, Izar)
	MM3 Modular Gravity and Atmosphere Maintenance Unit "Escudo" radiation shielding (Systems contractor: Cristobal SM/S, Manila, Earth)
	"Cerix 2" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

stroyed on 28 January 2287; on 25 February funding was secured for an additional heavy cruiser of *Levant* specifications. On 28 February the *Levant* class was rechristened *Enterprise (II)* class and *Enterprise* was inserted into the production schedule at Star Fleet Division's San Francisco facility. (Hull number 1701 was retained for record-keeping purposes since *Levant* class hull numbers were already assigned in the 1800 series.)



### America

1. Trentis reaction control system 2. RIM-15A phaser banks 3. SANTH expanded impulse deck 4. QASR maneuvering thrusters  
5. RSM-20B phaser banks 6. LN-64B Mod 3 warp drive units

Although listed as "active," most of these ships have yet to undergo contract acceptance trials. The *Enterprise* and *Ticonderoga* (CH 1844) have already completed their PSA (post-shakedown availability) schedules at the builder and are now in full Fleet service.

**Classification:** When conceived these ships were classified as "exploratory cruisers" (CE), a designation at one time considered for the *Enterprise* (and later *Tikopai*/CH 1800) class. Their classification was changed to heavy cruisers (CH) on 11 January 2287.

**Design:** From the outset these ships were directed by the Chief of Star Fleet Operations to be far more effective as mixed-use starships than the previous *Tikopai* class. The systems configuration and operational specifications of these ships are more impressive as a whole than those of any other starship class.

Externally these ships are almost completely identical to the earlier *Enterprise* class. This can be partly attributed to the general excellence of the *Enterprise* starship design. The later ships, (beginning with *America*) will have larger, reinforced engine sup-

port pylons and a larger external impulse deck.

The hangar areas of these heavy cruisers are somewhat larger than in the *Enterprise* class at the expense of some cargo capacity.

These ships are the first to receive Duotronic IV series logic units. The "Daystrom" computer configuration was chosen for its general flexibility and superiority over other systems. With the new M-9 Supplement supporting the primary network these vessels are equipped with what is arguably the most capable logic system in the Fleet.

The Coridianian RAV/ISHAK navigation suite is considered by many to be the eventual successor to the reliable Deltan "Artos" series.

The MM3 combination gravity and atmosphere system is an integrated, modular unit with a high reliability rating and simplified maintenance procedures. The "Escudo" anti-radiation package is also a new system.

The "Merlin" defensive configuration combines the force field/deflector capabilities and the cloaking/stasis system into a single unit for the first time. An updated version



of FSTR/TAC is integrated on the secondary level with the D/SS series defense system. Each one of these units combines defensive and data-gathering capabilities, and the installation of both provides these ships with impressive specifications in each area.

The improved Kotri CIDSS system is scheduled to be incorporated into this class beginning in 2293.

**Builders:** The awarding of virtually all construction contracts for ships of this class to various Star Fleet Division shipyards has placed pressure on Star Fleet to assign the two remaining ships to private firms. Newport News and Vickers may receive one contract each.

**Engineering:** These ships are equipped with LN-64B series warp engines. These units are an improvement on the LN-64A system in the *Tikopai* class, which experienced major problems with those engines during initial operations. A maximum sustained velocity of warp factor 13 makes the ships of the *Enterprise (II)* class among the fastest in the Fleet. (While on Star Fleet acceptance trials the *Ticonderoga* recorded a velocity of warp factor 19.33 for a period of 12 seconds.)

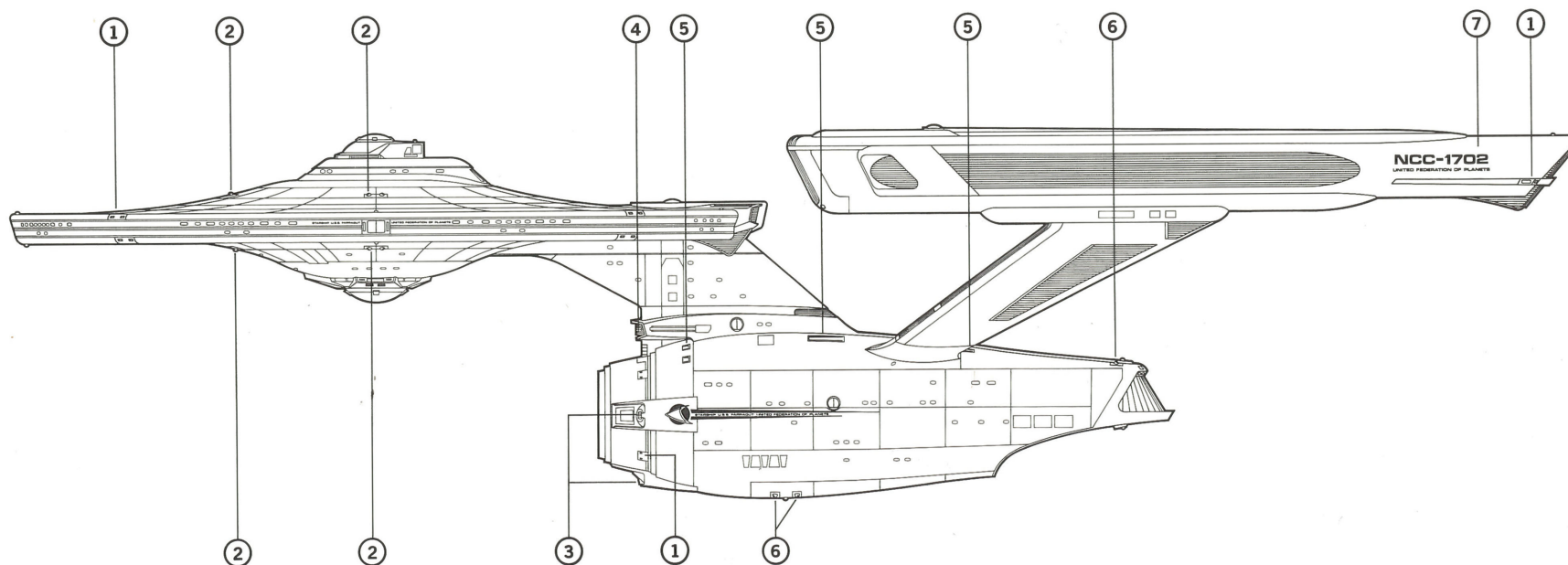
The secondary propulsion and maneuvering configurations of the operational ships (except for *America*) are identical to the earlier *Enterprise* class. CH 1847 is fitted with a larger impulse deck to allow for the installation of the SATH impulse system sometime in the near future. CH 1722, 1726, 1848, and 1849 are also scheduled to receive the new engine configuration.

**Weapons:** Both the single mount and twin mount phaser systems represent multi-model improvements over those of the *Enterprise* class. (The twin mount configuration is also superior to the RIM-14A system of the *Cyane*/FH 1890 class.) The new units are 21.4% more powerful at the target impact point.

The Mk 70 photon torpedo system is basically a refinement of similar auto-arming systems such as those in the *Ascension* (DN 2520) and earlier *Enterprise* classes.

Kolt series deflector spires were originally scheduled to be incorporated into all new-build ships of this class. The units were deleted in the design phase.

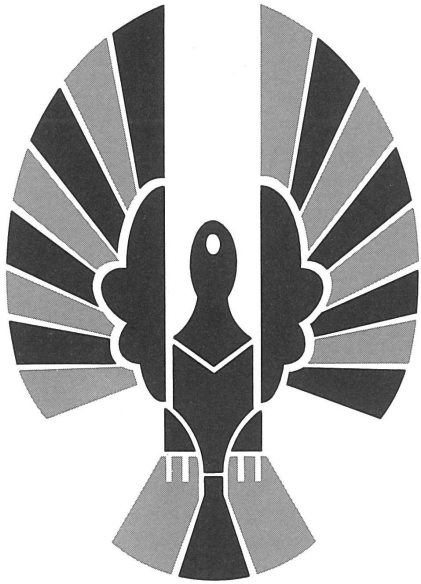
**Nomenclature:** CH 1845 was originally named *Robuste*; was renamed *Raritan* on 11 October 2287.



**Farragut** in 2290. Note the subtle design changes since her days as an *Enterprise* class starship.

1. Trentis reaction control system 2. RIM-15A phaser banks 3. QIK-69A sensors 4. Mk 70 Mod 2 torpedo tubes 5. QASR maneuvering thrusters 6. RSM-20B phaser banks 7. LN-64B Mod 3 warp drive units

# FRIGATES



# SURYA

## Class Frigates

This was the largest class of starships to be constructed by the Federation prior to the *Agilis* (PA 855) class. The design of these ships is relatively simple and the class as a whole is known for its excellent record of operational reliability. These ships were used extensively as convoy escorts in the 2250s and 2260s because of their design similarity to *Ptolemy* (TT 3801)-class transport/tugs.

Twenty-seven of these frigates were assigned to the Star Fleet Reserve Force in 2253 and remained under SFRF jurisdiction until 2264.

Twenty-two ships (FR 1860-81) were uprated during 2273-77 to form the *Avenger* (FH 1860) heavy frigate class. The remaining 16 ships were gradually assigned lesser tasks as starships of the *Daran* (FF 3201) and *Knox* (FR 1940) classes began entering service.

**Class:** Construction of these frigates was originally proposed in November 2238. Star Fleet was seeking to procure a large number of medium-size starships to patrol borderspace areas. (This definitive mission profile was assigned to the later *Agilis*-class perimeter action ships.) Bureau of Spacecraft design criteria required that the ships be simple, easy to maintain, and inexpensive to operate. Originally 72 ships of the approved design were authorized; this number was reduced to 28 on 15 November 2241. Eleven additional ships were authorized two months before construction began.

Thirty-two ships were completed in time to see action in the Four Years War; FR 1850-56, 1859-62, and 1866-75 all saw extensive action during the conflict. The *Pralaya* (FR 1855) was destroyed near Beta Aurigae in 2249 by Klingon-allied warships.

**Classification:** These ships were originally classified as frigates (FR 1850-1921) on 16 April 2240; final number of vessels authorized was 39, approved on 14 January 2242 and assigned hull numbers 1850-88.

The *Resolution* was originally authorized as FR 1850; reassigned hull number 1877 in December 2241 so as to place her at the end of the procurement list.

**Design:** The external design of these ships is based on the *Ptolemy* class, developed some twenty Earth-years earlier. Internally, however, these ships are very different, with a pronounced emphasis on modular assembly and mass production.

All major components (and their respective integrated systems) were exhaustively tested in the starship *Resolution* before completion of the "lead" ship. The *Resolution* was a *Detroyat* (DH 1100)-class heavy destroyer chosen to be the testbed for the *Surya* frigate design as a cost-saving measure. (The *Resolution* was uprated again in 2274 to *Avenger* specifications.)

All but the first five ships of this class were originally equipped with Duotronic computer systems (FR 1850-53 and 1877 were outfitted with Monotronic systems when built; they had Duotronic systems installed in 2250 and 2251). Duotronic III systems were fitted in FR 1850-54, 1856-59, and 1882-88 during 2276-79.

The original complement was to have been 285 (44 officers + 241 crew). This was increased in the design phase to 320. All Vickers-built ships (including the three remaining active ones) were designed with additional berthing facilities allowing a complement of 335.

The TacFleet ship *Noshiro*, built by Empress Spacecraft Design, has subtly different dimensions and is smaller than the other ships at 135,000 metric tons (standard). She also carries sophisticated tactical and warfare countermeasures equipment.

*Surya* class ships were designed with "jointed" engine support pylons, giving them an additional explosive bolt location for warp engine ejection.

All 16 of these ships are often grouped with the similar *Coventry* (FR 1230) class in force level discussions.

**Builders:** All new-build ships of this class were constructed within nine Earth-years. Seven different construction firms (10 different yards) were contracted, with the Empress and Zodiac facilities performing Class One starship construction for the first time.

*Weapons:* These ships were originally equipped with 21.5 QEV dilithium laser emplacements (4 banks). These were replaced with the current phaser armament beginning in 2255.

The *Noshiro* was to have received a RIN-6 phaser system after her assignment to TacFleet in 2259. Plans to install the system were dropped later that year; improved countermeasures equipment was installed instead.

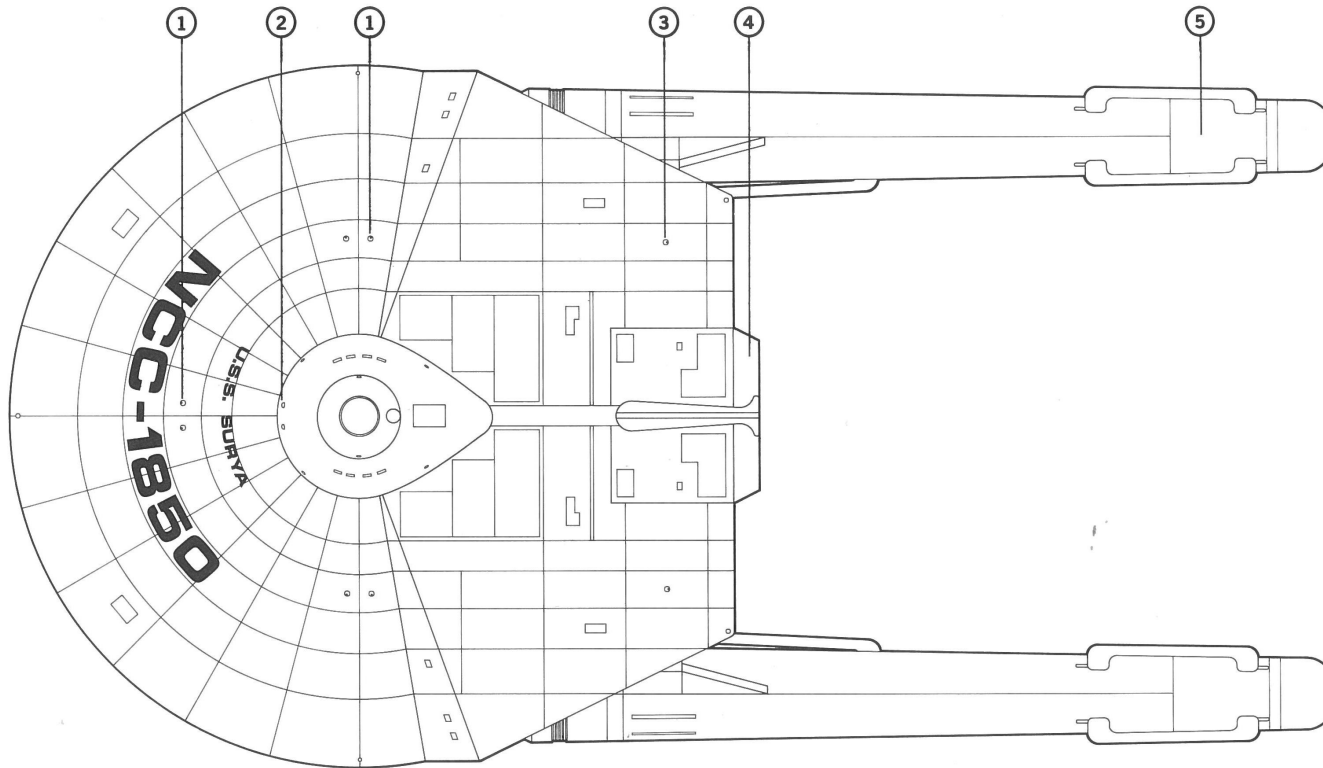
*Nomenclature:* FR 1876 was originally named *Indomitable*; was renamed *Nar-Tak Shir* on 04 January 2247.

#### 16 FRIGATES: "SURYA" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1850	<i>Surya</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	19 Mar 2242	12 Jan 2244	14 Dec 2244	<b>A2S</b>
NCC-1851	<i>Illusive</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	17 Dec 2243	21 Sept 2245	10 Mar 2246	<b>A3N</b>
NCC-1852	<i>Antrim</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	03 Feb 2244	15 Nov 2245	06 May 2246	<b>A3N</b>
NCC-1853	<i>Durmitov</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	26 June 2244	30 Mar 2246	14 Sept 2246	<b>A2S</b>
NCC-1854	<i>Kanaris</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	19 Aug 2244	12 May 2246	30 Nov 2246	<b>A3S</b>
NCC-1855	<i>Pralaya</i>	Star Fleet Division, San Francisco Yards, Earth	10 Apr 2245	08 Jan 2247	13 June 2247	Lost
NCC-1856	<i>Hashira</i>	Star Fleet Division, Singapore Naval Yards, Earth	10 Apr 2245	12 Feb 2247	19 July 2247	<b>AO</b>
NCC-1857	<i>Andalucia</i>	Star Fleet Division, Singapore Naval Yards, Earth	19 July 2245	06 Apr 2247	13 Sept 2247	<b>A3S</b>
NCC-1858	<i>Brilliant</i>	Star Fleet Division, Singapore Naval Yards, Earth	17 Sept 2245	28 June 2247	23 Dec 2247	<b>A2S</b>
NCC-1859	<i>Thetis</i>	Seskon Trella (Starcraft Design Section), Chagala, Tellar	SD 4578.06	SD 4761.08	SD 4798.04	<b>A1N</b>
NCC-1860	<i>Avenger</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	12 Nov 2245	19 Aug 2247	03 Feb 2248	Converted
NCC-1861	<i>Courageous</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	17 Nov 2245	16 Sept 2247	21 Mar 2248	Converted
NCC-1862	<i>Endurance</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	10 Dec 2245	06 Oct 2247	04 Apr 2248	Converted
NCC-1863	<i>Illustrious</i>	Seskon Trella (Starcraft Design Section), Chagala, Tellar	SD 4600.13	SD 4784.36	SD 4838.17	Converted
NCC-1864	<i>Reliant</i>	Vickers Shipbuilding Group Ltd., Terra Aphrodite, Venus	SD 4601.27	SD 4785.91	SD 4840.21	Converted
NCC-1865	<i>Vigilant</i>	Zodiac Interstellar Industries, Marsport, Mars	SD 4619.38	SD 4796.12	SD 4851.74	Converted
NCC-1866	<i>Dromio</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	17 Feb 2246	21 Dec 2247	21 May 2248	Converted
NCC-1867	<i>Balthasar</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	01 Mar 2246	08 Jan 2248	06 June 2248	Converted
NCC-1868	<i>Ardana</i>	Nunin Starflight Interstellar, Farbi Spacedocks, O'Ryan's Planet	SD 4629.38	SD 4820.14	SD 4861.19	Converted
NCC-1869	<i>Amiens</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	18 May 2246	16 Mar 2248	13 Sept 2248	Converted
NCC-1870	<i>Antipholus</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	22 May 2246	17 Apr 2248	10 Oct 2248	Converted
NCC-1871	<i>Dardanius</i>	Vickers Shipbuilding Group Ltd., New London, England, Earth	08 Aug 2246	25 May 2248	24 Nov 2248	Converted
NCC-1872	<i>Hippolyta</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	14 Nov 2246	12 Aug 2248	14 Jan 2249	Converted
NCC-1873	<i>Melkotia</i>	Seskon Trella (Starcraft Design Section), Chagala, Tellar	SD 4697.21	SD 4871.31	SD 4910.47	Converted
NCC-1874	<i>Sarpeidon</i>	Nunin Starflight Interstellar, Farbi Spacedocks, O'Ryan's Planet	SD 4698.76	SD 4875.16	SD 4921.39	Converted
NCC-1875	<i>Odin</i>	Star Fleet Division, Singapore Naval Yards, Earth	30 Dec 2246	16 Sept 2248	19 Feb 2249	Converted
NCC-1876	<i>Nar-Tak Shir</i>	Vickers Shipbuilding Group Ltd., Terra Aphrodite, Venus	SD 4701.34	SD 4878.14	SD 4937.14	Converted
NCC-1878	<i>Polonius</i>	Vickers Shipbuilding Group Ltd., Terra Aphrodite, Venus	SD 4725.11	SD 4901.35	SD 4950.77	Converted
NCC-1879	<i>Yonada</i>	Vickers Shipbuilding Group Ltd., Terra Aphrodite, Venus	SD 4753.39	SD 4933.81	SD 4982.18	Converted
NCC-1880	<i>Oberon</i>	Nunin Starflight Interstellar, Farbi Spacedocks, O'Ryan's Planet	SD 4768.78	SD 4950.14	SD 5000.10	Converted
NCC-1881	<i>Alacrity</i>	Star Fleet Division, Singapore Naval Yards, Earth	12 Nov 2247	06 Aug 2249	14 Feb 2250	Converted
NCC-1882	<i>Shiva</i>	Star Fleet Division, Singapore Naval Yards, Earth	04 Jan 2248	14 Oct 2249	01 Apr 2250	<b>A3N</b>
NCC-1883	<i>Regent</i>	Star Fleet Division, Singapore Naval Yards, Earth	15 Feb 2248	13 Nov 2249	10 May 2250	<b>A2S</b>
NCC-1884	<i>Spiro</i>	Star Fleet Division, Singapore Naval Yards, Earth	12 June 2248	28 Mar 2250	13 Sept 2250	<b>A4S</b>
NCC-1885	<i>Noshiro</i>	Empress Spacecraft Design & Building, Port Copernicus, Luna	SD 4868.19	SD 5041.18	SD 5093.81	<b>ATAC</b>
NCC-1886	<i>Ardent</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	21 May 2249	28 Feb 2251	10 July 2251	<b>A1N</b>
NCC-1887	<i>Niovi</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	15 Sept 2249	24 June 2251	10 Dec 2251	<b>A2S</b>
NCC-1888	<i>Argus</i>	Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth	12 Jan 2250	14 Oct 2251	14 Apr 2251	<b>A3S</b>

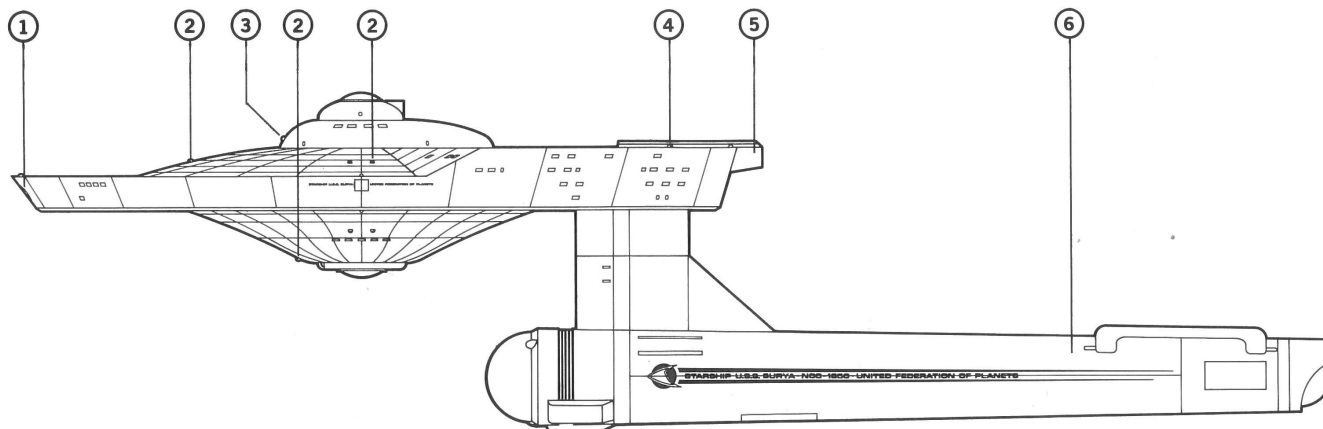
  

Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1877	<i>Resolution</i>	Star Fleet Division, San Francisco Yards, Earth		06 Sept 2243	05 Feb 2247	Converted



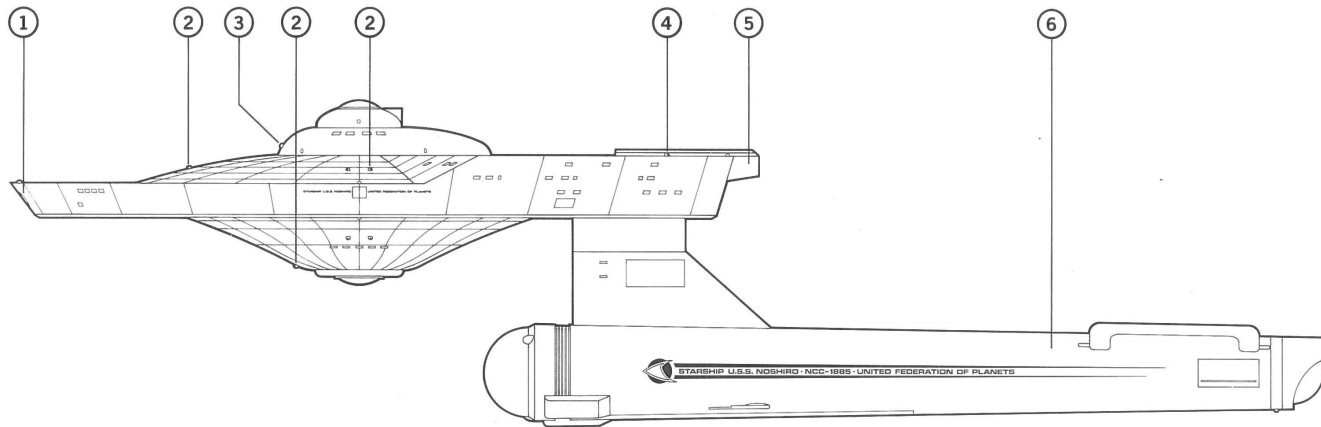
**Surya**

1. 27/2 phaser banks 2. Awalt torpedo tubes 3. 127/54 phaser banks 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units



**Surya**

1. Salm deflector mount 2. 27/2 phaser banks 3. Awalt torpedo tubes 4. 127/54 phaser banks 5. SBE impulse engines 6. PB-47 Mod 3 warp drive units



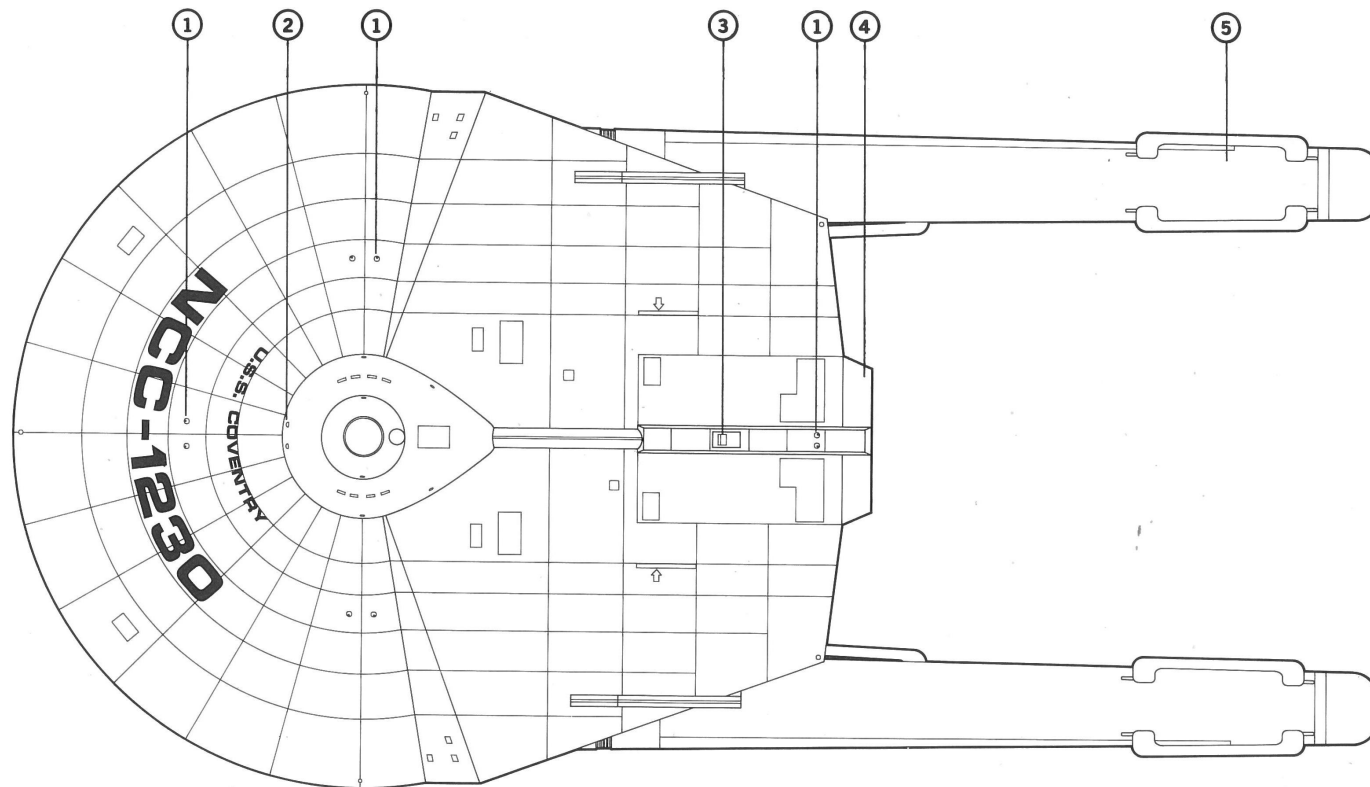
### Noshiro

Note the *Noshiro's* different "lines" and smaller overall size.

1. Salm deflector mount 2. 27/2 phaser banks 3. Awalt torpedo tubes 4. 127/54 phaser banks 5. SBE impulse engines 6. PB-47 Mod 3 warp drive units

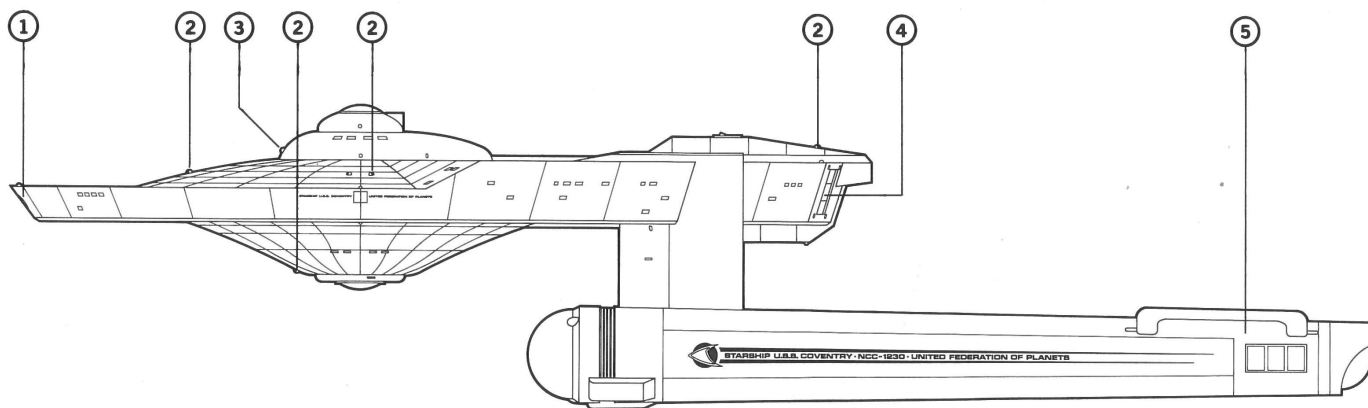
#### Current specifications of *Surya* class:

Displacement:	139,000 metric tons standard (135,000mt light, 143,000mt full load) NCC-1859: 137,500 metric tons standard (134,000mt light, 141,000mt full load) NCC-1885: 135,000 metric tons standard (132,500mt light, 139,000mt full load)	Duration:	Warp 6-Warp 8: 3.10 sec 4 Earth years, standard 11 Earth years, maximum
Length:	Overall 237.4m Primary Hull 134.6m Nacelles 152.4m	Complement:	320 (55 officers + 265 crew) NCC-1850, 1851, 1854: 335 (57 officers + 278 crew) NCC-1885: 310 (54 officers + 256 crew)
Beam:	127.1m	Embarked craft:	9+
Draft:	60.5m	Navigation:	NAVCAS Warp Celestial Guidance (System contractor: Prinzhenni S.N., Rio de Janeiro, Earth)
Propulsion:	Two (2) PB-47 Mod 3 dilithium-energized antimatter circumferential warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII) Four (4) SBE subatomic unified energy impulse units (System contractor: Scarbak Propulsion Systems, Cairo, Earth) "Asaks" chemical combustion reaction control system (System contractor: Orage Ijek, Aksajak, Andor)	Computers:	"Daystrom" Duotronic III (System contractor: Daystrom Computer Systems Inc., Lunaport, Luna)
Velocity:	Warp 6, standard Warp 8, maximum	Phasers:	6 banks of 2 each - 27/2 twin mount 2 banks - 127/54 compact single mount (System contractor: Aerospatiale, Rousseau, Mars)
Acceleration:	Rest-Onset Critical Momentum: 12.46 sec Onset Critical Momentum-Warp Engage: 2.04 sec Warp 1-Warp 4: 1.02 sec Warp 4-Warp 6: .66 sec	Photon torpedoes:	2 tubes - "Awalt" direct (System contractor: Racal Werft F.M.C., Stratos, Ardana)
		Defense:	RSAT/HIRAM force field and deflector system FSTR/TAC Fleet Strategic/Tactical Data System (Systems contractor: Trestis ar Trestis, Pangaeear, Izar)
		Life support:	CT-3/Centris artificial gravity generator "Coraza" radiation shielding (Systems contractor: Cristobal SM/S, Manila, Earth) "Ambrix" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



**Coventry**

1. RIN-6 phaser banks 2. Awalt torpedo tubes 3. navigational beacon 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units



**Coventry**

1. Salm deflector mount 2. RIN-6 phaser banks 3. Awalt torpedo tubes 4. landing bay 5. PB-47 Mod 3 warp drive units



# COVENTRY

## Class Frigates

### 13 FRIGATES: "COVENTRY" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1230	<i>Coventry</i>	Rapier Dynamics Group, Rio de Janeiro, Earth	29 July 2245	06 May 2247	17 Jan 2248	A1N
NCC-1231	<i>Socorro</i>	Newport News Shipbuilding, Louisiana, Earth	01 July 2245	30 Mar 2247	23 Dec 2247	A4S
*NCC-1232	<i>Santander</i>	Star Fleet Division, Puget Sound Yards, Earth	14 Aug 2245	20 Apr 2247	09 Feb 2248	A3N
*NCC-1233	<i>Assurance</i>	Newport News Shipbuilding, Louisiana, Earth	30 Nov 2245	11 Aug 2247	09 Apr 2248	A1N
*NCC-1234	<i>Dahlgren</i>	Athinai-Volos Ltd., Athens, Earth	23 Sept 2245	12 July 2247	07 Apr 2248	A2N
NCC-1235	<i>Jen Miri</i>	Star Fleet Division, Puget Sound Yards, Earth	08 Mar 2246	22 Oct 2247	01 June 2248	AO
*NCC-1236	<i>Constant</i>	Rapier Dynamics Group, Rio de Janeiro, Earth	13 Nov 2245	21 Aug 2247	29 Apr 2248	A1S
*NCC-1237	<i>Ashanti</i>	Athinai-Volos Ltd., Athens, Earth	01 Feb 2246	14 Oct 2247	09 May 2248	AO
NCC-1238	<i>Sverdlov</i>	Newport News Shipbuilding, Louisiana, Earth	01 June 2246	19 Feb 2248	01 Sept 2248	Lost
NCC-1239	<i>Eltanin</i>	Athinai-Volos Ltd., Athens, Earth	11 July 2246	02 Feb 2248	27 Sept 2248	A2N
*NCC-1240	<i>Resurgent</i>	Athinai-Volos Ltd., Athens, Earth	06 Dec 2246	19 Aug 2248	09 Mar 2249	AO
NCC-1241	<i>Auriga</i>	Star Fleet Division, Puget Sound Yards, Earth	19 Nov 2246	30 July 2248	02 Jan 2249	A1S
*NCC-1242	<i>Carriacou</i>	Rapier Dynamics Group, Rio de Janeiro, Earth	20 Jan 2246	03 Oct 2247	01 May 2248	A3N
*NCC-1243	<i>Indus</i>	Star Fleet Division, Puget Sound Yards, Earth	15 Jan 2247	28 Oct 2248	07 June 2249	A1N

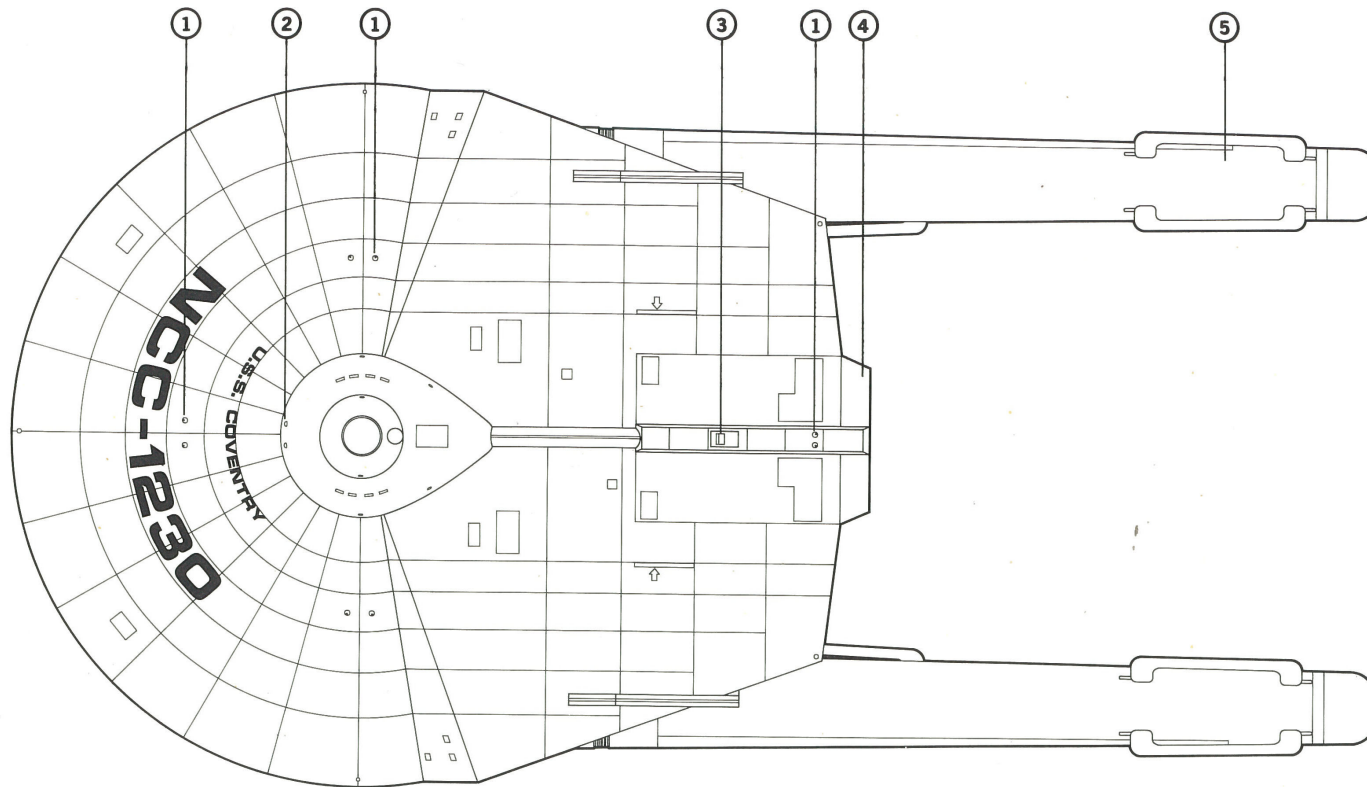
\*ASD-modified ships

The design of these ships is based on an improved *Surya* configuration with superior engineering and hangar facilities. The *Coventry* and *Constant* were delayed in construction because of shipyard problems; the *Dahlgren* was delayed because of an explosion on board while on post-shakedown availability; and the *Indus* because of numerous debates over the procurement of a fourteenth ship for the class. The *Eltanin* and *Auriga* are based at Star Station Praeses.

*Class:* Originally only 10 ships were authorized; FR 1240-42 were requested by

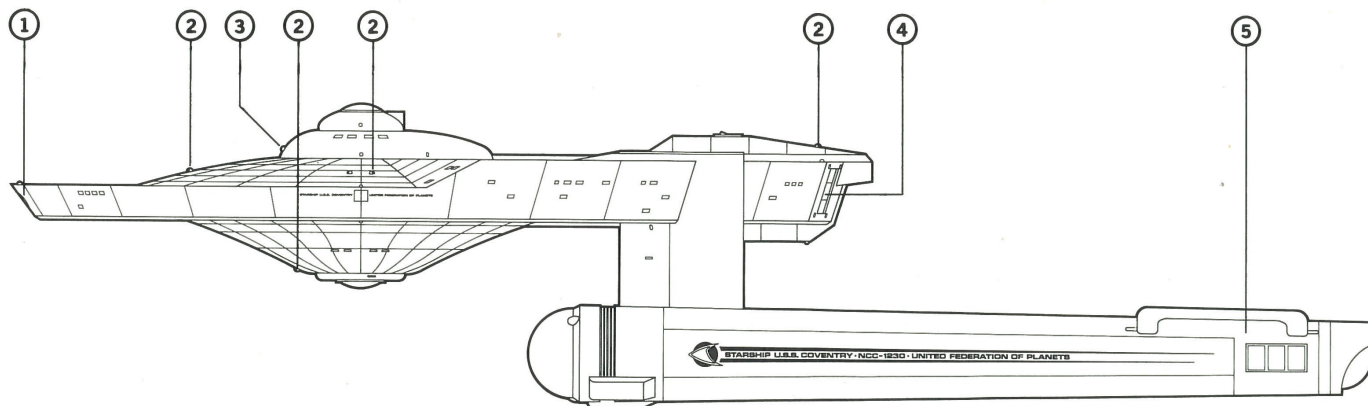
Star Fleet in December 2245 and ordered in March 2246. There was much disagreement about the need for such a large number of frigate-type vessels: 39 frigates of the *Surya* class (which was still building) had been ordered years earlier, and the *Coventry* class proved to be considerably sophisticated and consequently very expensive. Additional constraints were imposed by the outbreak of the Four Years War. The Fleet's final request for three additional ships (FR 1243-45) resulted in the approval of FR 1243 only.





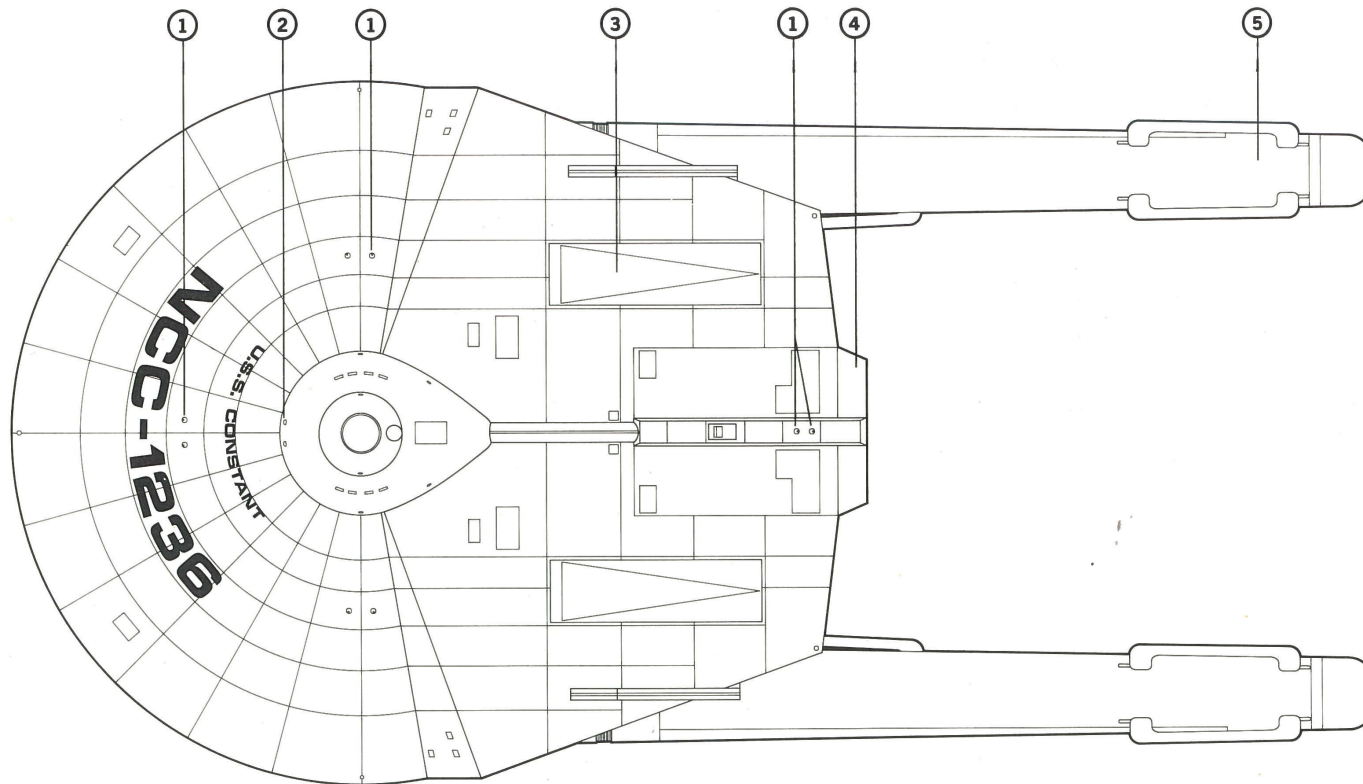
**Coventry**

1. RIN-6 phaser banks 2. Awalt torpedo tubes 3. navigational beacon 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units



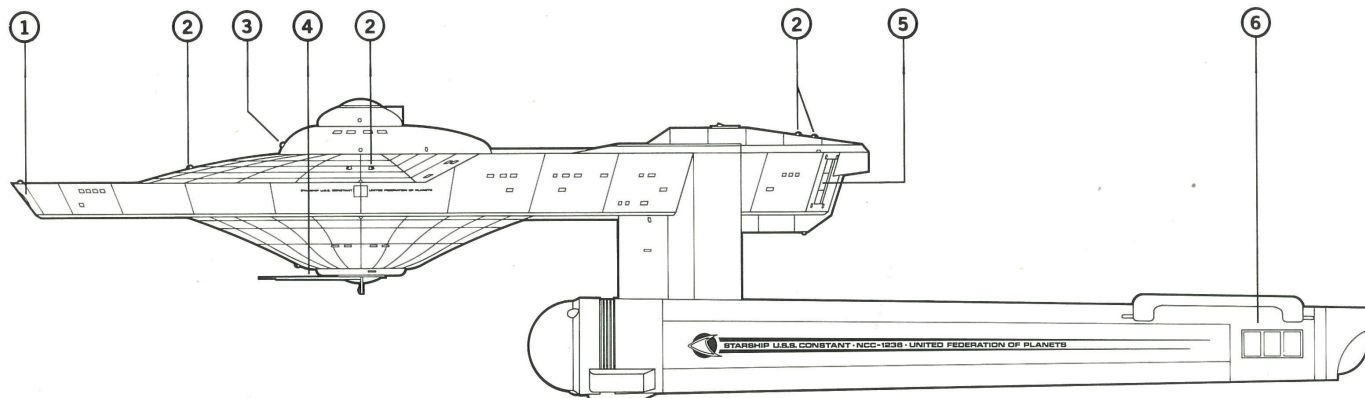
**Coventry**

1. Salm deflector mount 2. RIN-6 phaser banks 3. Awalt torpedo tubes 4. landing bay 5. PB-47 Mod 3 warp drive units



**Constant**

1. RIN-6 phaser banks 2. Awalt torpedo tubes 3. KRL series energy absorption plates 4. SBE impulse engines 5. PB-47 Mod 3 warp drive units



**Constant**

1. Salm deflector mount 2. RIN-6 phaser banks 3. Awalt torpedo tubes 4. Kolt ST5A deflector spire 5. landing bay 6. PB-47 Mod 3 warp drive units

Current specifications of *Coventry* class:

Displacement:	150,000 metric tons standard (141,000mt light, 156,000mt full load) NCC-1234, 1237, 1239, 1240: 148,900 metric tons standard (140,000mt light, 155,500mt full load)		
	Overall	Primary Hull	Nacelles
Length:	245.1m	153.5m	152.6m
Beam:	127.1m	127.1m	19.9m
Draft:	54.1m	32.8m	18.1m
Propulsion:	Two (2) PB-47 Mod 3 dilithium-energized antimatter circumferential warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII) Four (4) SBE subatomic unified energy impulse units (System contractor: Scarbak Propulsion Systems, Cairo, Earth) "Asaks" chemical combustion reaction control system (System contractor: Orage Ijek, Aksajak, Andor)		
Velocity:	Warp 6, standard Warp 8, maximum		
Acceleration:	Rest-Onset Critical Momentum: 12.03 sec Onset Critical Momentum-Warp Engage: 2.11 sec Warp 1-Warp 4: 1.83 sec Warp 4-Warp 6: 1.01 sec Warp 6-Warp 8: 2.54 sec		
Duration:	4 Earth years, standard 11 Earth years, maximum		
Complement:	315 (51 officers + 264 crew) NCC-1232, 1235, 1243: 321 (52 officers + 269 crew)		
Embarked craft:	10-11		

Navigation:	"Simmins/Navtor" Warp Celestial Guidance (System contractor: Prinzhenri S.N., Rio de Janeiro, Earth)
Computers:	NCC-1230, 1231, 1233, 1236, 1238, 1242: "Commodore" Duotronic II (System contractor: Farranti Mnemonics, Berkshire, Earth) NCC-1232, 1235, 1241, 1243: "Daystrom" Duotronic II; "Micas" Support Subsystem (Systems contractor: Daystrom Computer Systems Inc., Lunaport, Luna) NCC-1234, 1237, 1239, 1240: "Reynaur" Combination ST/A30 (System contractor: Plessey Group, Essex, Earth)
Phasers:	5 banks of 2 each - RIN-6 independent twin mount (System contractor: Agusta Anasadado Inc., Fuzes, Venus)
Photon torpedoes:	2 tubes - "Awalt" direct (System contractor: Racal Werft F.M.C., Stratos, Ardana)
Defense:	"B-Sentry" force field and deflector control system (System contractor: Prentice-Schafer Inc., Marsport, Mars) "Claw One" fire control system "Lynx" sensor and weapon system (Systems contractor: Signaal Electronic Enterprises Inc., Mediterranean, Earth) NCC-1232-34, 1236, 1237, 1240, 1242, 1243: Kolt ST5A deflector spire (System contractor: Kal Achal Conglessum, Takuv, Tellar)
Life support:	CT-3/Centris artificial gravity generator "Molluken" radiation shielding package (Systems contractor: Cristobal SM/S, Manila, Earth) "Ambrix" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

The *Sverdlov* (FR 1238) was lost with minimum crew aboard on stardate 4022. She was conducting performance evaluations for the failed PB-51 series warp units when the engines redlined and blew apart. Subsequent Star Fleet Inquiry Board determined the cause to be faulty seals in several antimatter containment bottles.

*Classification:* FR 1230-39 were originally classified as heavy frigates (FH 1230-39); they were changed to frigates on 30 November 2244. FR 1240-43 were ordered as frigates.

*Design:* These ships were built to an improved *Surya* class design with superior warp geometries, advanced computer systems and greater embarked craft capacity. The designs of the *Knox*, *Daran*, and *Avenger* classes are based on extrapolations of the *Coventry* and *Surya* frigate designs.

*Coventry* class ships have their PB-47 series warp engines mounted on short support pylons which feed directly into the primary hull. This engine location creates a smaller warp bubble in hyperspace and provides somewhat better acceleration times.

The computer installations were assigned to the various shipbuilders by Star Fleet while still in the contracting phase of development. Duotronic II systems or their equivalent are now provided (basic Duotronic systems were fitted when built). These units were surpassed when the *Suryas* were backfitted with a Duotronic III upgrade. Also, the installation of three markedly different computer systems by four contractors caused some problems with ship-to-ship computer communications that took some time to correct.

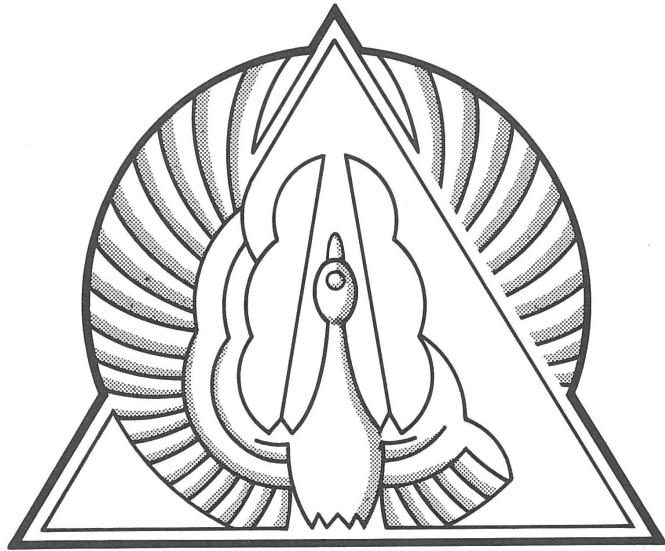
The hangar decks in the first ten ships are 45 meters long, 25 meters wide, and

9.5 meters high; in FR 1240-42 the hangar decks are 48 meters long, 23 meters wide, and 11 meters high. These ships can accommodate as many as 30 medium-size craft under certain conditions. The *Indus* was designed with one large hangar; each of her bay doors opens into the same massive landing/hangar complex. Her craft capacity is commensurately larger.

*Weapons:* This class was fitted with a highly integrated network of defensive systems. The "Claw One" fire control unit and "Lynx" weapon system are companion designs, each inoperable without the other. These were to have been mated with the Prentice-Schafer Sentry Protective Envelope (SPE) program, but repeated delays in the delivery of that system forced the installation of the considerably less-sophisticated "B-Sentry" design. A retrofit of the Signaal-designed "Corvus TTX" deflector program was considered in 2259, but was decided against after Bureau of Spacecraft inspections indicated that the "B-Sentry" units were performing adequately.

The *Ashanti* was test ship for the Mk 20 "Emperor" series MDPC (multi-directional phaser cannon). A single unit, installed from 2269 to 2274, was mounted above the ship's impulse engines.

*Modernization:* Eight *Coventrys* were modernized during 2261-62 to improve their ASD (anti-ship defense) capabilities (see listing). A Kolt "selective-target" deflector spire and extended-range sensors were installed; the *Constant* was additionally fitted with KRL series energy absorption plates on her primary hull. Plans to modernize the five remaining ships were cancelled in early 2263.



# AVENGER

## Class Heavy Frigates

These ships were all refitted from starships of the *Surya* (FR 1850) class. The *Avenger* design was originally intended to be produced as a new-build program with construction scheduled to begin in 2275 or 2276. However, after the Kznti IncurSION of 2272 Star Fleet decided to immediately begin conversions of *Surya*-class frigates to this configuration.

These heavy frigates have a fairly limited mission profile. They were designed primarily for use in various areas of the frontier but have spent a majority of their active lives patrolling inner Federation territory. They are not equipped with extensive scientific or exploratory facilities; they are equipped, however, with one of the most sophisticated armament packages ever incorporated into a Class One starship.

Eight of these ships were refitted beginning in 2284 to form the *Endurance* (FR 1862) exploratory frigate class.

The *Ardana* (FH 1868) and *Resolution* (FH 1877) are scheduled to be assigned to the SFRF in 2294 and 2295, respectively.

**Class:** The uprating of 22 *Surya*-class frigates was approved on 12 January 2273. Hull numbers 1860-81 inclusive were designated for refitting.

The *Illustrious* (FH 1863) and *Amiens* (FH 1869) were responsible for the discovery of the Romulan outpost Rihanii outside subquadrant 4 south in 2283. The *Avenger* (FH 1860) and *Alacrity* (FH 1881) defeated the heavy cruisers *Farragut* (CH 1702) and *El Dorado* (CH 1722) by substantial margins at the renowned "Balikatan" war games of 2286.

The heavy cruiser *Enterprise* (CH 1701) destroyed the *Reliant* (FH 1864) after that ship was commandeered by terrorists in 2287.

**Classification:** With the exception of FH 1877, these ships were originally authorized as frigates in January 2242. (FH 1877 was originally authorized as a heavy destroyer in 2221.) All ships were reclassified as heavy frigates in January 2273.

**Design:** These ships were designed to provide an improved defensive posture for the Fleet. A variety of sophisticated features were incorporated during their conversion from *Surya*-class frigates.

Linear feed chambers are located throughout the support pylons of the weapons and propulsion package. These shaft assemblies connect both the photon torpedo weapons pod and the MDPC units to the LN-64 warp engines. This provides a direct link to engine power if desired. Additionally, the entire weapons/propulsion assembly can be disengaged from the main hull if necessary.

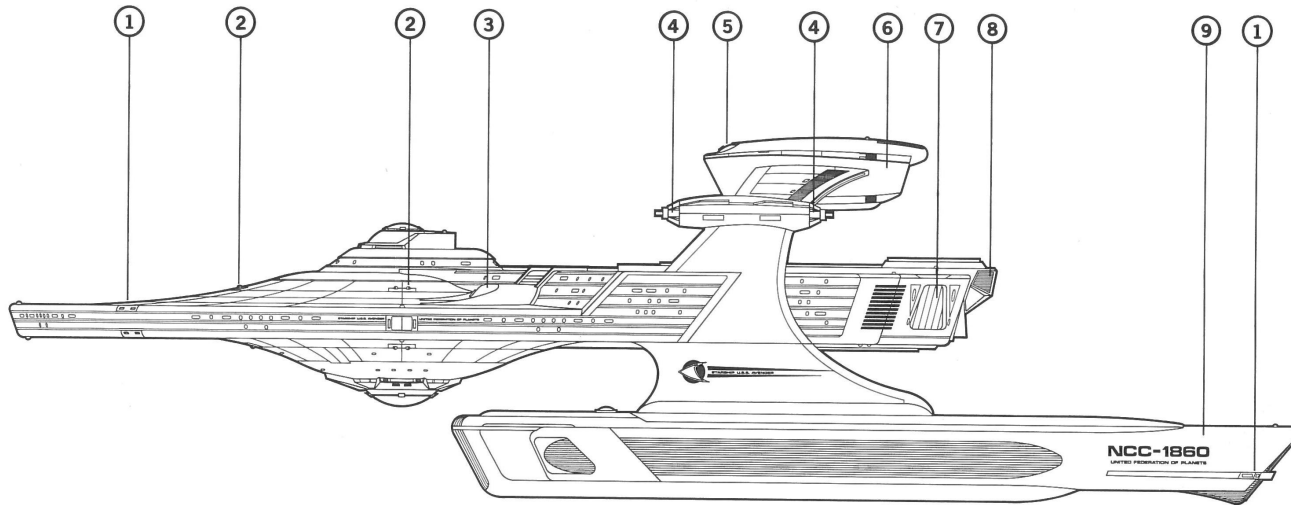
These ships were equipped during construction with the "Fasfax/Datatac" computer network. The "Artos" navigation suite and "Lancelot" deflector system were also fitted, making the internal systems configuration of these frigates the basis for the later *Daran* (FF 3201) and (to a lesser extent) *Knox* (FR 1940) classes.

The three frigates converted by Star Fleet Division's San Francisco facility (FH 1860, 1862, and 1874) were modified to the different Wright-Corder specifications; their "lines" are noticeably different from those of their sister ships. The different configuration was approved by the design branch of Star Fleet as a means of evaluating the operational effects of a more fluid design on warp field formation and balance. The ships routinely reported slower rates of dilithium decay than the other vessels.

The *Courageous* (FH 1861) was fitted with the enhanced ("B" series) CGCP/SCDS system after her assignment to TacFleet in 2282.

**Builders:** The *Dromio*, *Hippolyta*, *Odin*, and *Resolution* were delayed in construction - the first three ships because of problems at the shipyard and the *Resolution* because of design alterations necessary due to the fact that she was originally a *Detroyat* (DH 1100) class starship.

**Engineering:** The first five ships of this class to enter "drydock" (FH 1860, 1864, 1865, 1871, and 1873) were originally scheduled to receive "Achatas" LN-60 series



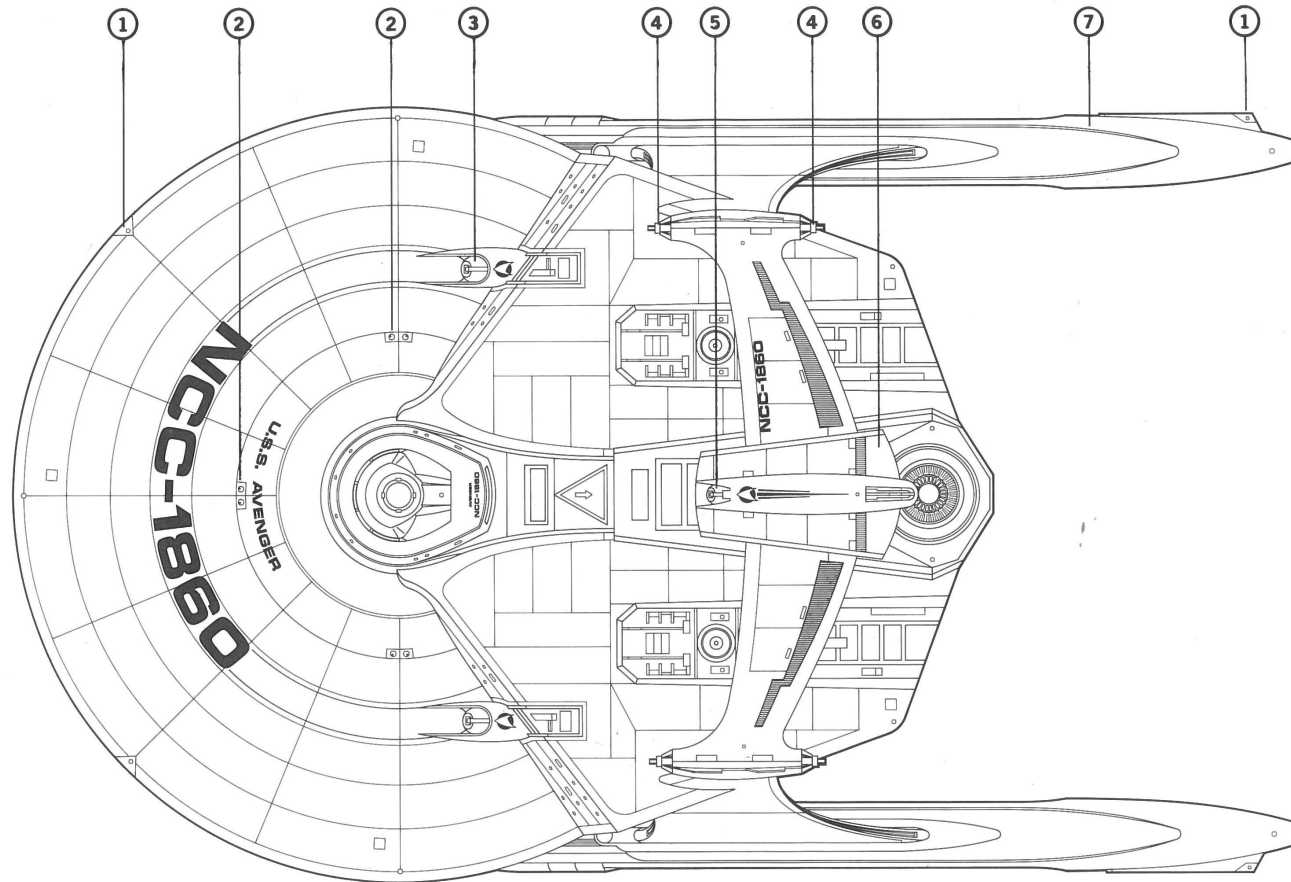
### Avenger

Current configuration of *Avenger*.

1. Trentis reaction control system
2. RIM-12C phaser banks
3. DSML sensors
4. Emperor 60 MDPC units
5. DSMLA sensor
6. Mk 22 Mod 1 torpedo tube housing
7. landing bay
8. RST impulse engines
9. LN-64 Mod 3 warp drive units

### 13 HEAVY FRIGATES: "AVENGER" CLASS

Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1860	<i>Avenger</i>	Star Fleet Division, San Francisco Yards, Earth	02 Mar 2273	16 May 2274	03 Feb 2275	<b>A2S</b>
NCC-1861	<i>Courageous</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	13 Jan 2276	29 Mar 2277	01 Oct 2277	<b>ATAC</b>
NCC-1862	<i>Endurance</i>	Star Fleet Division, San Francisco Yards, Earth	15 Feb 2274	23 Apr 2275	29 Oct 2275	Converted
NCC-1863	<i>Illustrious</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7403.2	SD 7505.66	SD 7539.4	<b>A1N</b>
NCC-1864	<i>Reliant</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	01 Apr 2273	27 June 2274	16 Feb 2275	Lost
NCC-1865	<i>Vigilant</i>	Star Fleet Division, Baltic Yards, Leningrad, Earth	01 Apr 2273	28 June 2274	10 Feb 2275	Converted
NCC-1866	<i>Dromio</i>	Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran	SD 7305.24	SD 7407.12	SD 7441.21	Converted
NCC-1867	<i>Balthasar</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	25 May 2275	05 July 2276	26 Jan 2277	<b>A3S</b>
NCC-1868	<i>Ardana</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	16 July 2275	09 Oct 2276	22 Mar 2277	<b>A2S</b>
NCC-1869	<i>Amiens</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7508.91	SD 7611.34	SD 7656.2	<b>A1N</b>
NCC-1870	<i>Antipholus</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7598.31	SD 7699.21	SD 7720.3	<b>A3N</b>
NCC-1871	<i>Dardanius</i>	Newport News Shipbuilding, Virginia, Earth	11 May 2273	19 Sept 2274	02 Apr 2275	Converted
NCC-1872	<i>Hippolyta</i>	Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran	SD 7307.84	SD 7410.17	SD 7455.62	Converted
NCC-1873	<i>Melkotia</i>	Newport News Shipbuilding, Virginia, Earth	02 Dec 2273	16 Mar 2275	01 Sept 2275	Converted
NCC-1874	<i>Sarpeidon</i>	Star Fleet Division, San Francisco Yards, Earth	12 Jan 2276	28 Mar 2277	31 July 2277	<b>AO</b>
NCC-1875	<i>Odin</i>	Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran	SD 7602.01	SD 7704.5	SD 7729.31	<b>A2N</b>
NCC-1876	<i>Nar-Tak Shir</i>	Newport News Shipbuilding, Virginia, Earth	05 Sept 2274	16 Nov 2275	23 Apr 2276	Converted
NCC-1877	<i>Resolution</i>	Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran	SD 7410.37	SD 7512.64	SD 7541.7	<b>A3S</b>
NCC-1878	<i>Polonius</i>	Star Fleet Division, Kuha Keihasalm, Sosma Docks, Arcturus III	SD 7411.13	SD 7601.28	SD 7642.3	<b>A2S</b>
NCC-1879	<i>Yonada</i>	Newport News Shipbuilding, Virginia, Earth	21 June 2274	07 Aug 2275	14 Feb 2276	<b>A4N</b>
NCC-1880	<i>Oberon</i>	Rapier Dynamics Group, New Aberdeen Naval Yards, Aldebaran	SD 7407.84	SD 7509.12	SD 7533.5	Converted
NCC-1881	<i>Alacrity</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	15 Jan 2275	30 Mar 2276	09 Aug 2276	<b>AO</b>



### Avenger

The plan view of the *Avenger* clearly illustrates the Lundar Wright-Horatio Corder design specifications. The *Sarpeidon* is also active in this configuration. The primary dimensions of these ships are as follows: 236.0m (length), 141.7m (beam), 67.8m (draft).

1. Trentis reaction control system
2. RIM-12C phaser banks
3. DSML sensors
4. Emperor 60 MDPC units
5. DSMLA sensor
6. Mk 22 Mod 1 torpedo tube housing
7. LN-64 Mod 3 warp drive units

warp engines. These units were not installed due to the previous contractual obligations of the supplier (Vickers Engineering) and the earlier constraints imposed by the Kznti Incursion.

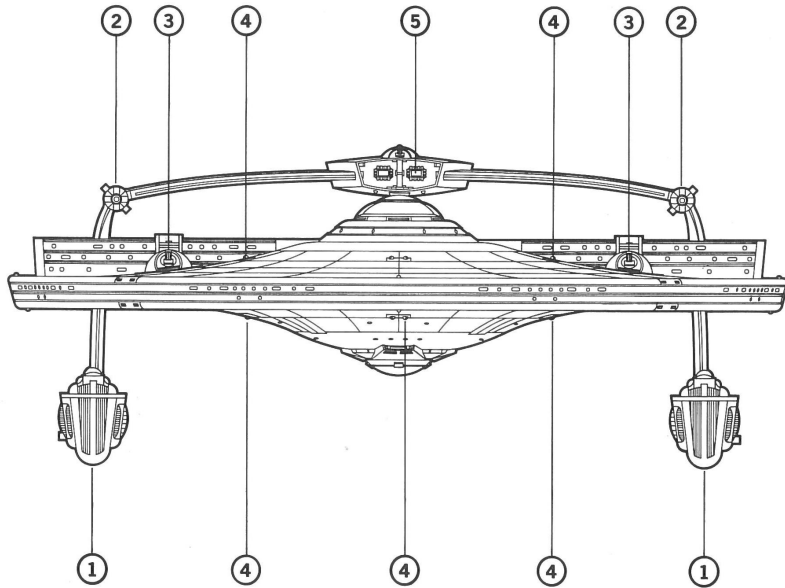
**Weapons:** The commanders of these ships have a variety of offensive options at their disposal. RIM-12C phaser banks are provided at six locations on the main hull. Additionally, a self-contained, Skat-Rar weapons pod (mounted on an overhead support pylon assembly) houses four Mk 22 series photon torpedo tubes; this system provides both front and rear torpedo fire arcs.

"Emperor" series multi-directional phaser cannons are mounted at the port and star-

board intersection points of the vertical and horizontal support pylons. These units may be replaced in the near future with either the "Savistant" omni-directional system or the much-delayed "Harrier" MDPC.

The Cetus weapon system is fitted, with the PRA-TAK fire control unit coordinating target acquisition for all weaponry. (Cetus and PRA-TAK are also fitted in the *Daran* class.)

**Embarked craft:** These were the first ships to embark large numbers of "Killer Bee" tactical assault craft. The number of these craft carried was reduced on some ships beginning in 2286.



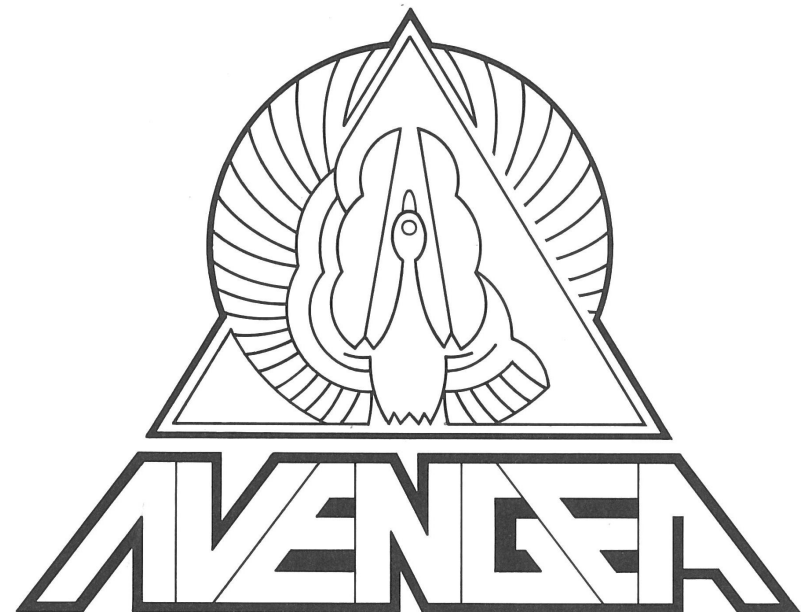
### Courageous

1. LN-64 Mod 3 warp drive units 2. Emperor 60 MDPC units 3. QIK-14K sensors  
4. RIM-12C phaser banks 5. Mk 22 Mod 1 torpedo tubes

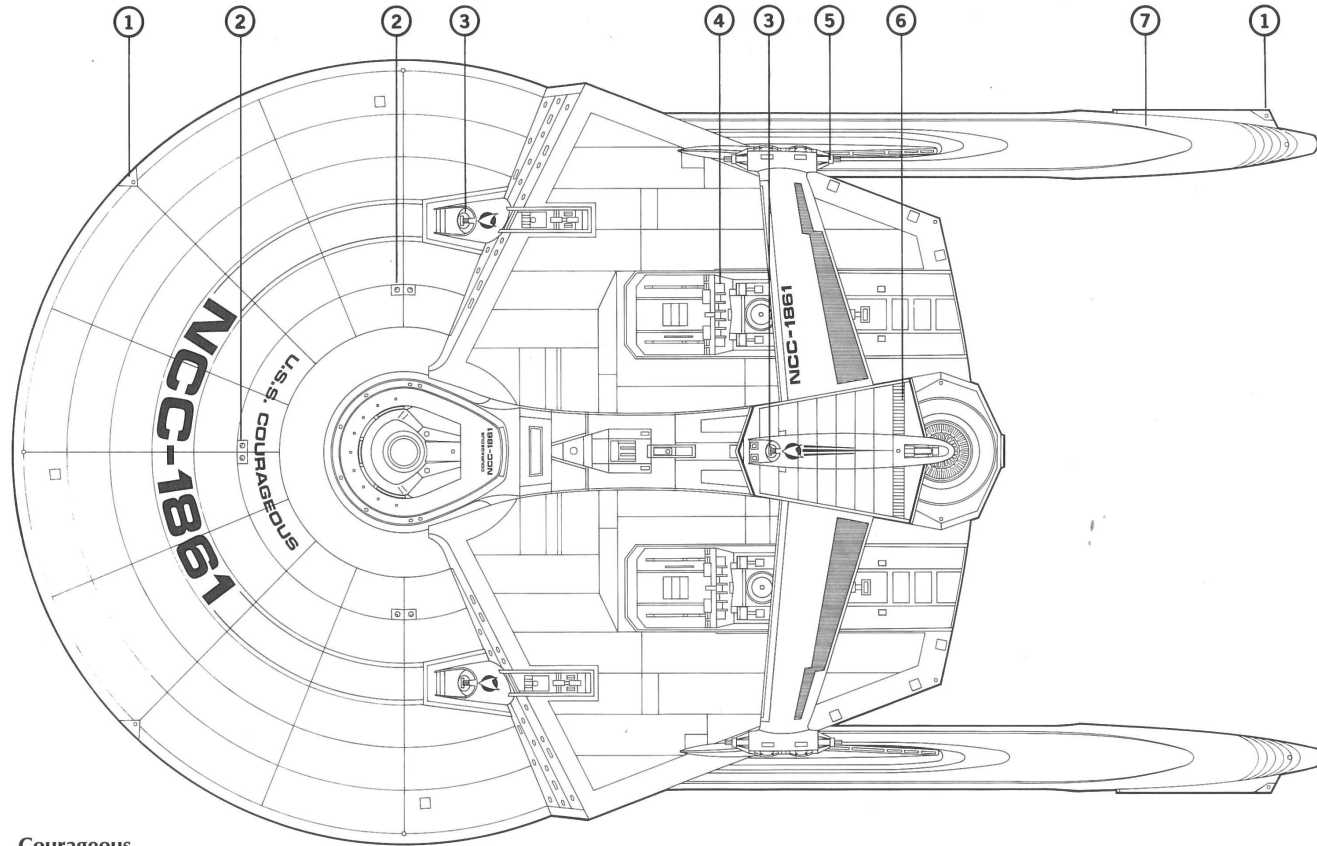
- Complement: 360 (91 officers + 269 crew)  
Embarked craft: 20+  
Navigation: "Artos" Warp Celestial Guidance  
(System contractor: Mandor Industries Ltd., Dalhalm, Delta IV)  
Computers: "Fasfax" Duotronic III; Datatac Support Subsystem  
(Systems contractor: Farranti Mnemonics, Berkshire, Earth)  
Phasers: 6 banks of 2 each - RIM-12C independent twin mount  
(System contractor: Agusta Anadado Inc., Fuzes, Venus)  
Megaphasers: 2 banks of 2 each - "Emperor 60" multi-directional cannon  
(System contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)  
Photon torpedoes: 4 tubes - Mk 22 Mod 1 direct  
(System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)  
Defense: "Lancelot" primary force field and deflector control system  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)  
Cetus weapon system; PRA-TAK fire control add-on  
(Systems contractor: Raakuv, Gaziwahaida, Andor)  
CGCP/SCDS cloaking generation, penetration and stasis countermeasure system  
(System contractor: Hycor, Woburn, Earth)  
Life support: MB-4A artificial gravity generator  
(System contractor: Cristobal SM/S, Manila, Earth)  
"Rastis" radiation protection package  
(System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
"Cerix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

### Current specifications of Avenger class:

- Displacement: 150,000 metric tons standard  
(144,000mt light, 156,000mt full load)
- |         | Overall | Primary Hull | Nacelles |
|---------|---------|--------------|----------|
| Length: | 234.9m  | 178.3m       | 154.8m   |
| Beam:   | 141.2m  | 141.2m       | 12.6m    |
| Draft:  | 58.8m   | 32.5m        | 17.8m    |
- Propulsion: Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Two (2) RST subatomic unified energy impulse units  
QASR particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Trentis" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)
- Velocity: Warp 7, standard  
Warp 11, maximum
- Acceleration: Rest-Onset Critical Momentum: 6.08 sec  
Onset Critical Momentum-Warp Engage: 1.23 sec  
Warp 1-Warp 4: .81 sec  
Warp 4-Warp 7: .70 sec  
Warp 7-Warp 11: 2.42 sec
- Duration: 5 Earth years, standard  
19 Earth years, maximum

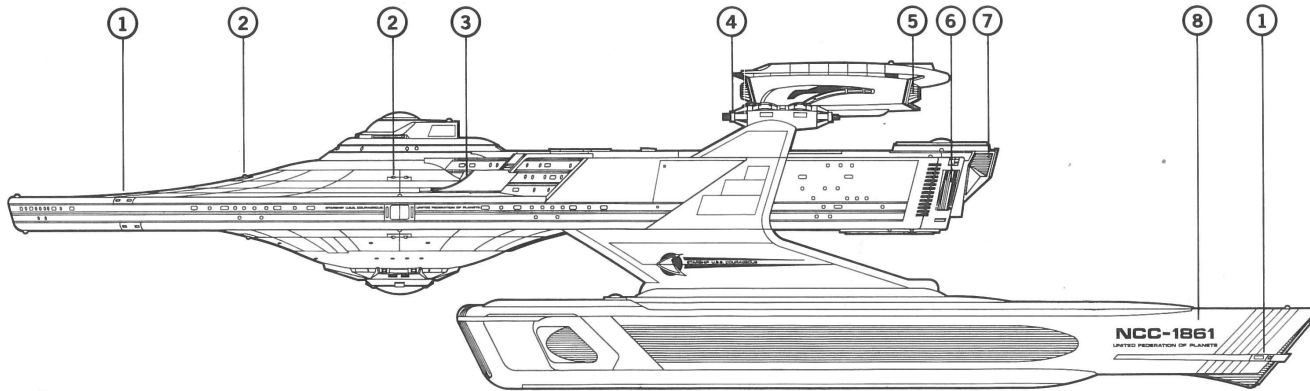


U.S.S. Avenger/NCC-1860



**Courageous**

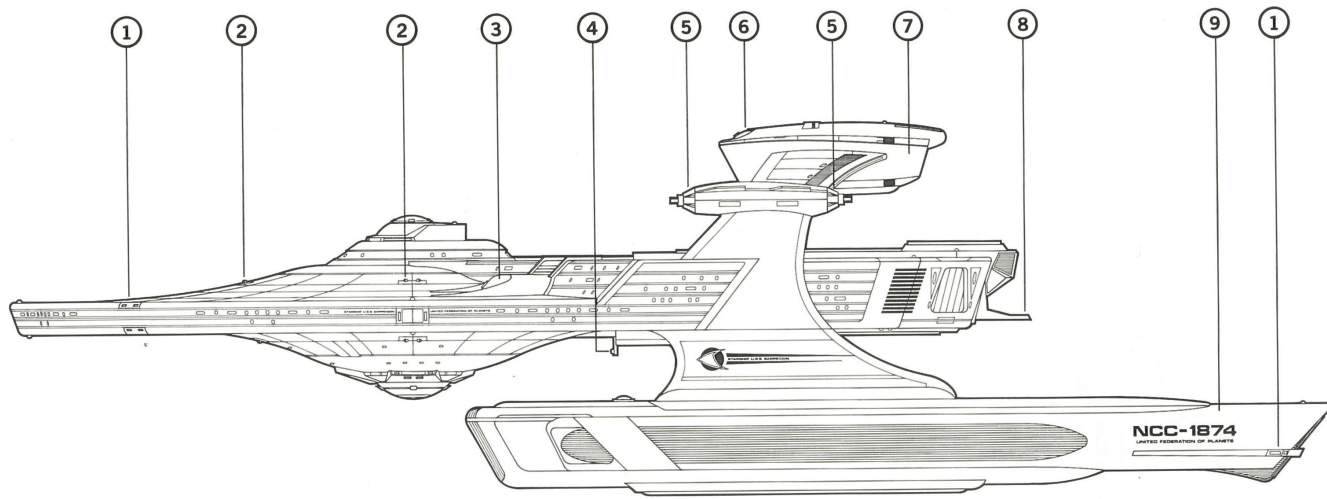
1. Trentis reaction control system 2. RIM-12C phaser banks 3. QIK-14K sensors 4. hangar support systems 5. Emperor 60 MDPC units 6. Mk 22 Mod 1 torpedo tube housing 7. LN-64 Mod 3 warp drive units



**Courageous**

1. Trentis reaction control system 2. RIM-12C phaser banks 3. QIK-14K sensors 4. Emperor 60 MDPC units 5. Mk 22 Mod 1 torpedo tubes 6. landing bay 7. RST impulse engines 8. LN-64 Mod 3 warp drive units



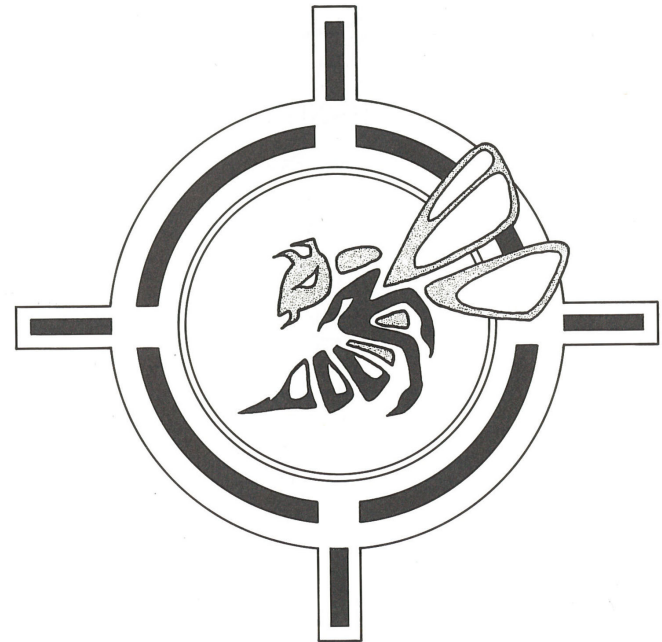


**Sarpeidon**

1. Trentis reaction control system 2. RIM-12C phaser banks 3. DSML sensors 4. Kem Beacon 5. Emperor 60 MDPC units  
 6. DSMLA sensor 7. Mk 22 Mod 1 torpedo tube housing 8. tactical drone launch 9. LN-64 Mod 3 warp drive units

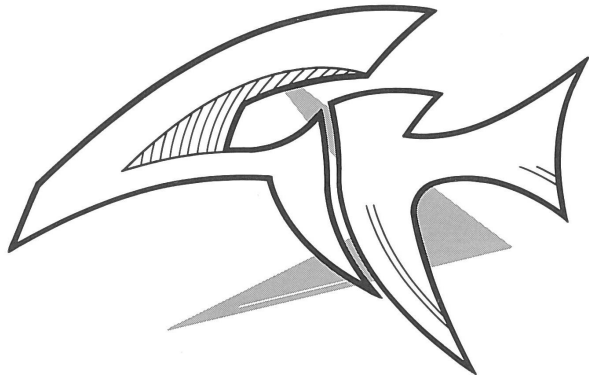


**Porjak Kim Lun squadron**  
 FH 1863, 1867, 1870, 1875



**Killer Bee squadron**  
 FH 1860, 1869, 1877

**Tactical Assault Pod Squadron Insignia**



Unauthorized

# DARAN

## Class Fast Frigates

### 11 FAST FRIGATES: "DARAN" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-3201	<i>Daran</i>	Arias Mastac, Prime Dockyards, Daran V	SD 5915.3	SD 6075.1	SD 6108.73	A3N
NCC-3202	<i>Haruna</i>	Ishikawajima Harima Industries, Yokohama, Earth	07 May 2274	16 June 2275	03 Dec 2275	AO
NCC-3203	<i>Eten</i>	Arias Mastac, Prime Dockyards, Daran V	SD 6068.25	SD 6199.32	SD 6209.6	A3S
NCC-3204	<i>Vinson</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 7135.42	SD 7255.8	SD 7293.34	AO
NCC-3205	<i>Ser'rath</i>	Hiemdahr-Gan Rixik, Andor	SD 8003.4	SD 8111.29	SD 8173.81	Lost
NCC-3206	<i>Dace</i>	Arias Mastac, Prime Dockyards, Daran V	SD 6170.7	SD 6288.29	SD 6358.71	A2S
NCC-3207	<i>Kidd</i>	Star Fleet Division, Cameron Naval Facility, Deneb V	SD 7200.5	SD 7302.48	SD 7391.84	A1N
NCC-3208	<i>Stark</i>	Ishikawajima Harima Industries, Yokohama, Earth	17 June 2275	29 June 2276	23 Nov 2276	A2S
NCC-3209	<i>Di Jahan</i>	Hiemdahr-Gan Rixik, Andor	SD 8108.27	SD 8223.54	SD 8291.73	A2N
NCC-3210	<i>Brooke</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	05 Mar 2275	11 Apr 2276	04 Oct 2276	A4S
NCC-3211	<i>Soryu</i>	Ishikawajima Harima Industries, Yokohama, Earth	07 July 2276	01 Aug 2277	19 Feb 2278	AO
NCC-3212	<i>Atalanti</i>	Vickers Shipbuilding Group Ltd., Cumbria, Earth	15 Apr 2276	02 May 2277	09 Oct 2277	A2S

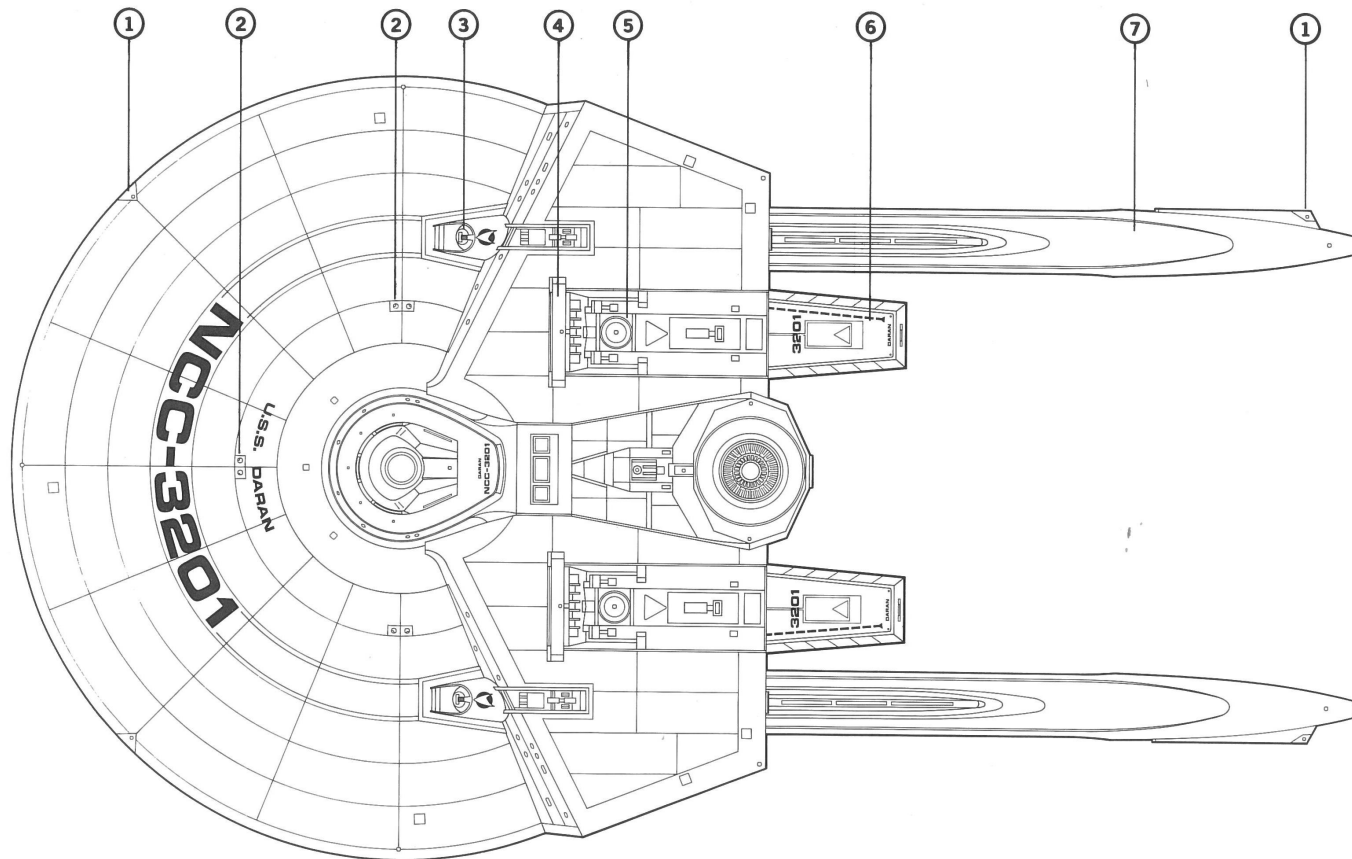
These ships, along with the *Knox* (FR 1940) class, are the most capable frigates currently in Star Fleet service, with excellent astronics and impressive offensive and scientific capabilities. They differ from the contemporary *Knox* class primarily in not having the "Emperor" series multi-directional phaser cannon (MDPC) or the Dobis weapon system. They are equipped, however, with the highly sophisticated Poincare SSDGI (Sciential Sensory Data-Gathering & Interpretation) exploratory suite; as a result, they are often assigned to research task forces for brief forays into unexplored Federation treaty territory.

*Class:* Original 13 ships ordered on 15 November 2273. Five additional ships were authorized in 2275 (FF 3213-17); the construction of the last four ships (FF 3214-17)

was deferred later that year in favor of the slightly more capable *Knox* class. FF 3213 was cancelled in February 2276.

The *Ser'rath* (FF 3205) was destroyed in a border skirmish after confronting a Klingon warship which was apparently a renegade. Support vessels were too far distant to provide assistance in time. Forty-seven of the 345 crew escaped in shuttlecraft and lifeboats.

The *Stark* (FF 3208) was severely damaged on stardate 7955.5 when defense craft of the Gorn Hegemony fired upon what they reportedly believed was an unidentified ship that did not respond to hailing messages. Thirty-three of the ship's crew were lost and the Federation filed a formal protest. The frigate was repaired at Yokohama,



#### Daran

1. Trentis reaction control system 2. RIM-10C phaser banks 3. QIK-25AL sensors 4. WADE deflector units 5. hangar support systems  
6. landing platforms 7. LN-64 Mod 4 warp drive units

arriving on 17 October 2280 and returning to space in January 2281 (recommissioned on 12 March 2281).

*Classification:* These ships were ordered as frigates (FR); changed to fast frigates on 01 August 2275 to emphasize their lack of "megaphaser" units in comparison to *Knox* and *Avenger* classes.

*Design:* The *Daran* design is based somewhat on a scaled-down *Avenger* arrangement, having a shorter raised-hull section and no upper weapons carriage. The 25 *Knox*-class frigates have the same hull, propulsion, and auxiliary systems.

Combination wide-angle deflector emitter units (WADE) and selective, high intensity sensors are mounted in box-like configurations on the upper hull. (The last three ships have these units in the improved, bow position.) These ships were also fitted with extended landing platforms below their hangar bay doors (these were not fitted on the *Knox* class). These platforms provide a larger landing-target acquisition area, enabling the ships to accommodate a wider variety of embarked craft. The *Brooke* and *Atalanti* are fitted with one landing platform on the port bay only. The platforms

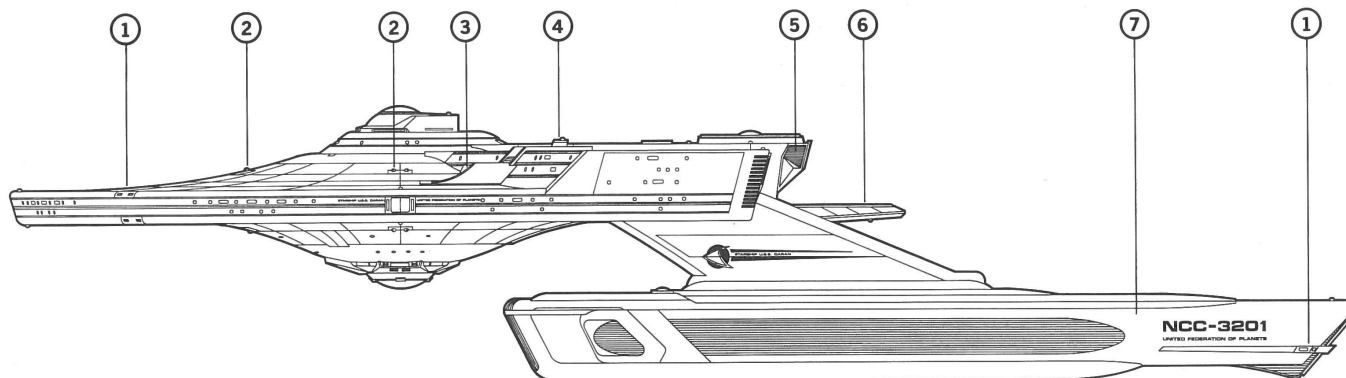
vary in length from 12 to 17 meters.

The navigation, computer, and weapon systems of these ships are among the most sophisticated in the Fleet. The "Fasfax/Datatac" computer combination is one of the most efficient and trouble-free systems ever installed in a Class One starship. The "Artos" Navigational Guidance Suite is fitted in several other classes, including the *Knox*, *Avenger*, and several dreadnought types.

The *Dace* (FF 3206) is scheduled to replace the *Ser'rath* in TacFleet in the near future. She will be backfitted with the Close-In Deflector Shield System (CIDSS) and the "B" variant of the Hycor-designed cloaking and stasis countermeasure unit. Other *Darans* may also receive CIDSS on a selected-vessel basis.

*Engineering:* These ships are equipped with the Model 4 version of the LN-64 linear warp drive engine. These units are designed to produce more efficient engine flux and a tighter, more compact warp bubble. Their operational specifications are ideally suited for use with smaller, single-hull ships such as these.

Scarbak RST impulse units have been fitted to the *Darans* and other classes of similar



### Daran

1. Trentis reaction control system 2. RIM-10C phaser banks 3. QIK-25AL sensors 4. WADE deflector units 5. RST impulse engines  
6. landing platform 7. LN-64 Mod 4 warp drive units

#### Current specifications of *Daran* class:

Displacement:	139,000 metric tons standard (135,000mt light, 141,000mt full load)
	Overall            Primary Hull            Nacelles
Length:	243.6m            145.0m            154.8m
Beam:	141.2m            141.2m            12.6m
Draft:	49.6m            32.5m            17.8m
Propulsion:	Two (2) LN-64 dilithium-energized antimatter linear warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII) Two (2) RST subatomic unified energy impulse units QASR particle beam maneuvering thrusters (Systems contractor: Scarbak Propulsion Systems, Cairo, Earth) "Trentis" pulsed laser reaction control system (System contractor: Orage Ijek, Aksajak, Andor)
Velocity:	Warp 7, standard Warp 11, maximum
Acceleration:	Rest-Onset Critical Momentum: 5.68 sec Onset Critical Momentum-Warp Engage: 1.19 sec Warp 1-Warp 4: .88 sec Warp 4-Warp 7: .76 sec Warp 7-Warp 11: 2.08 sec
Duration:	5 Earth years, standard 19 Earth years, maximum
Complement:	345 (85 officers + 260 crew) NCC-3201: 331 (81 officers + 250 crew)
Embarked craft:	4+
Navigation:	"Artos" Warp Celestial Guidance (System contractor: Mandor Industries Ltd., Dalhalam, Delta IV)
Computers:	"Fasfax" Duotronic III; Datatac Support Subsystem (Systems contractor: Farranti Mnemonics, Berkshire, Earth)
Phasers:	NCC-3201, 3203, 3206: 6 banks of 2 each - RIM-10C independent twin mount NCC-3202, 3204, 3205, 3207-12: 6 banks of 2 each - RIM-12C independent twin mount (Systems contractor: Augusta Ansadado Inc., Fuzes, Venus)

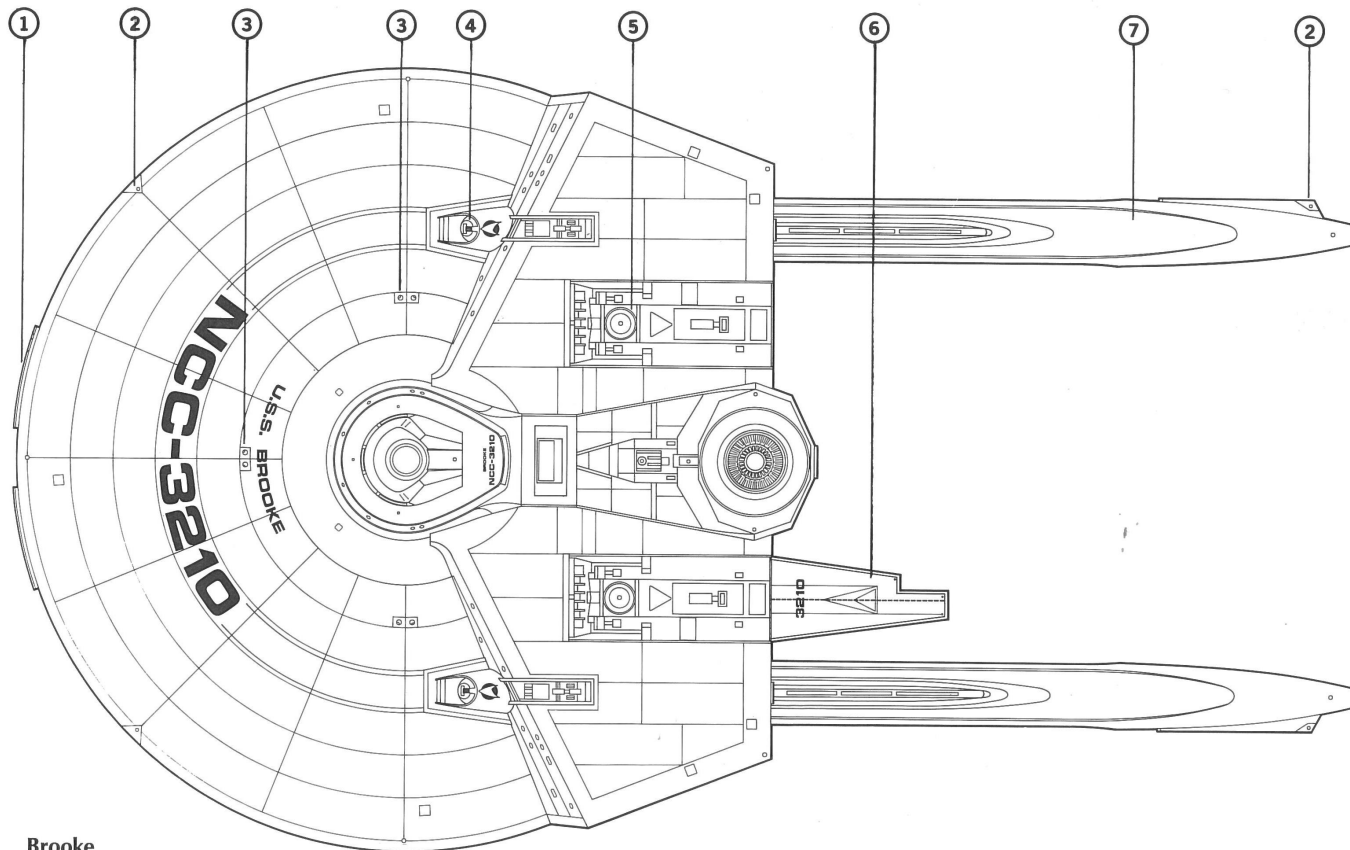
Photon torpedoes:	None
Defense:	"Lancelot" primary force field and deflector control system (System contractor: Prentice-Schafer Inc., Marsport, Mars) Cetis weapon system; PRA-TAK fire control add-on (Systems contractor: Raakuv, Gaziwahaida, Andor) CGCP/SCDS cloaking generation, penetration, and stasis countermeasure system (System contractor: Hycor, Woburn, Earth)
Life support:	MB-5 artificial gravity generator (System contractor: Cristobal SM/S, Manila, Earth) "Rastis" radiation protection package (System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus) "Cerix" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

size. Several ships have reported performance problems with these engines, however, and a retrofit of the more powerful RSN series is being considered.

**Weapons:** The basic *Daran* design provides for the subsequent installation of additional weapon systems, specifically the Mk 60 MDPC at the same location as on the *Knox* class. A torpedo armament was not fitted in anticipation of approval of the "Harrier" MDPC program. These units were designed with superior specifications than the "Emperor" series. With the continued postponement of the "Harrier" program, however, these ships may receive "Emperor" MDPC units like their near-sisters. In addition, the forward upper and lower phaser emplacements could be replaced by the Mk 9 "Savistant" ODPC (omni-directional phaser cannon).

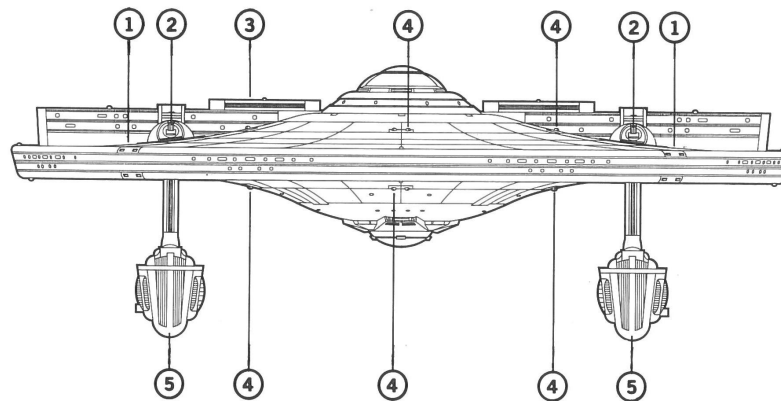
The Cetis computer weapon system is fitted. The PRA-TAK (Peripheral Range Actuated) fire control unit is an independent system with an extremely sensitive target acquisition program (though not as sophisticated as TACAR units).

**Nomenclature:** The names *Daran*, *Haruna*, *Soryu*, and *Atalanti* were originally assigned to additional ships of the *Ascension* (DN 2520) dreadnought class which were cancelled in 2272. Reassigned to FF 3201, 3202, 3211, and 3212 on 12 September 2273.



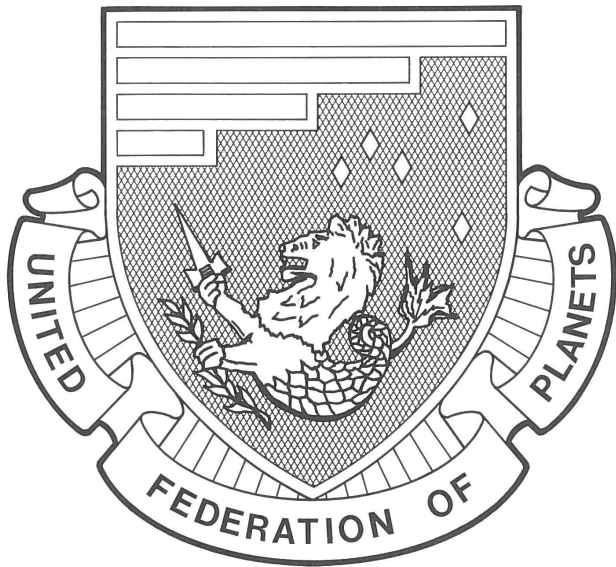
**Brooke**

1. WADE deflector units 2. Trentis reaction control system 3. RIM-12C phaser banks 4. QIK-25AL sensors 5. hangar support systems  
 6. landing platform 7. LN-64 Mod 4 warp drive units



**Daran**

1. Trentis reaction control system 2. QIK-25AL sensors 3. WADE deflector units 4. RIM-10C phaser banks 5. LN-64 Mod 4 warp drive units

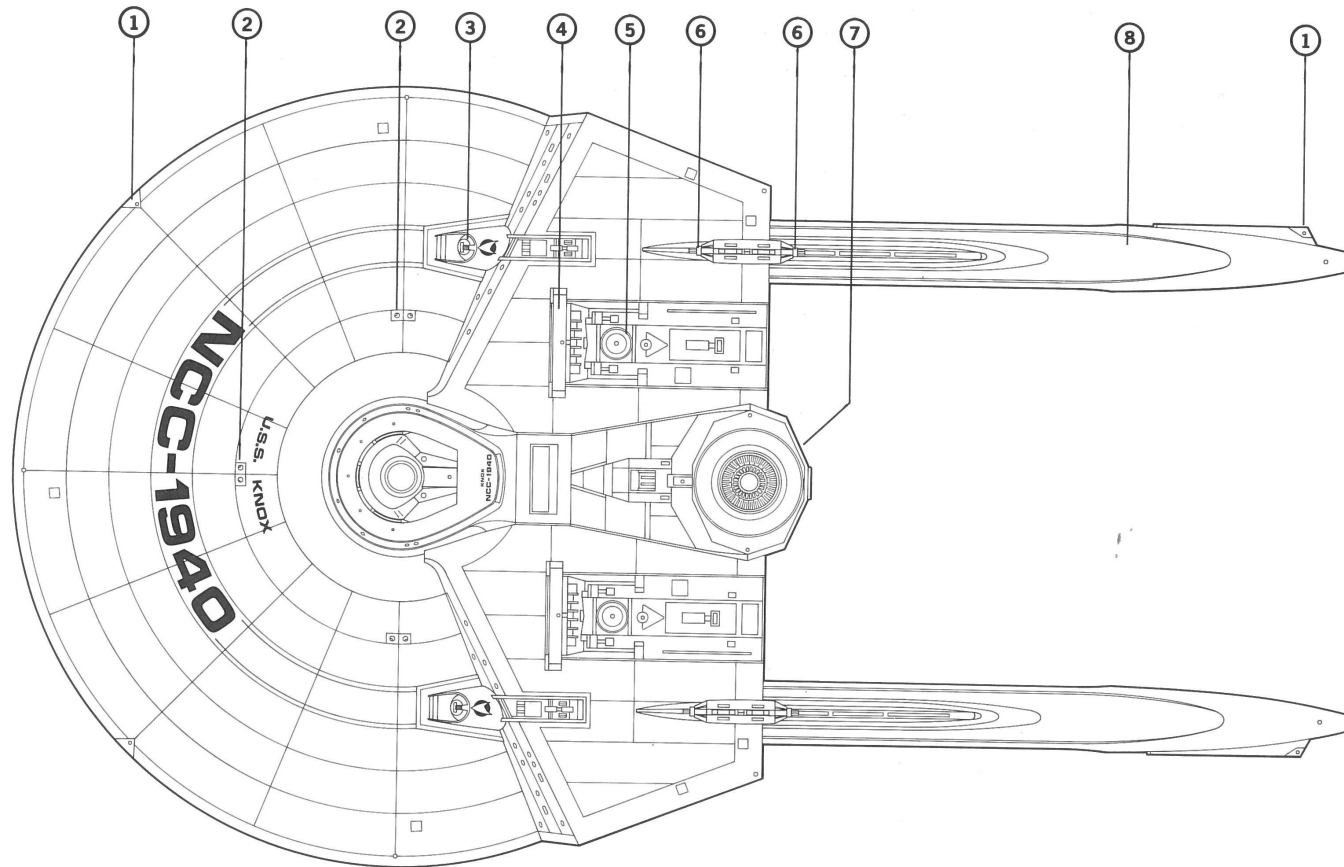


# KNOX

## Class Frigates

### 25 FRIGATES: "KNOX" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1940	<i>Knox</i>	Newport News Shipbuilding, Virginia, Earth	25 Aug 2275	03 Oct 2276	17 May 2277	A2N
NCC-1941	<i>Bir Hakeim</i>	Newport News Shipbuilding, Louisiana, Earth	14 Nov 2275	19 Dec 2276	01 July 2277	A3S
NCC-1942	<i>Seneschal</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6575.3	SD 6683.55	SD 6715.62	A3N
NCC-1943	<i>Enhance</i>	Newport News Shipbuilding, Virginia, Earth	15 June 2276	02 Aug 2277	11 Jan 2278	AO
NCC-1944	<i>Asturias</i>	Newport News Shipbuilding, Louisiana, Earth	23 July 2276	30 Sept 2277	27 Feb 2278	A1S
NCC-1945	<i>Kiri</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6661.47	SD 6792.35	SD 6823.54	ATAC
NCC-1946	<i>Opportune</i>	Newport News Shipbuilding, Virginia, Earth	15 Jan 2277	10 Mar 2278	06 Sept 2278	A4N
NCC-1947	<i>Sivrihisar</i>	Newport News Shipbuilding, Virginia, Earth	03 Aug 2277	09 Sept 2278	19 Feb 2279	A3S
NCC-1948	<i>Le Malin</i>	Newport News Shipbuilding, Louisiana, Earth	20 Feb 2277	02 Apr 2278	01 Nov 2278	A2S
NCC-1949	<i>Thach</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6698.75	SD 6801.5	SD 6854.27	A2S
NCC-1950	<i>Springeren</i>	Newport News Shipbuilding, Louisiana, Earth	14 Feb 2278	26 Feb 2279	12 June 2279	A1N
NCC-1951	<i>Cassiopee</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6783.29	SD 6878.51	SD 6915.83	A2N
NCC-1952	<i>Kaya</i>	Newport News Shipbuilding, Virginia, Earth	18 Dec 2277	06 Jan 2279	15 June 2279	ATAC
NCC-1953	<i>Ability</i>	Newport News Shipbuilding, Louisiana, Earth	12 Jan 2279	22 Jan 2280	09 July 2280	A3S
NCC-1954	<i>Pico</i>	Newport News Shipbuilding, Virginia, Earth	30 May 2278	12 June 2279	18 Nov 2279	AO
NCC-1955	<i>Incharron</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6870.3	SD 6993.28	SD 7018.4	A1N
NCC-1956	<i>Diligence</i>	Newport News Shipbuilding, Louisiana, Earth	10 Dec 2279	15 Dec 2280	08 May 2281	A3N
NCC-1957	<i>Atrevida</i>	Newport News Shipbuilding, Virginia, Earth	16 Oct 2278	01 Nov 2279	11 Mar 2280	A4N
NCC-1958	<i>Swift</i>	Newport News Shipbuilding, Virginia, Earth	07 Feb 2279	19 Mar 2280	03 Aug 2280	A3N
NCC-1959	<i>Peleliu</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 6971.44	SD 7083.85	SD 7116.17	A4S
NCC-1960	<i>Matapan</i>	Newport News Shipbuilding, Louisiana, Earth	22 Oct 2280	16 Nov 2281	23 Apr 2282	Lost
NCC-1961	<i>Espadon</i>	Newport News Shipbuilding, Louisiana, Earth	27 Sept 2281	11 Nov 2282	09 May 2283	AO
NCC-1962	<i>Skate</i>	Newport News Shipbuilding, Kin Raach, Alpha Centauri VII	SD 7105.34	SD 7179.28	SD 7200.5	A2N
NCC-1963	<i>Miramichi</i>	Newport News Shipbuilding, Virginia, Earth	13 Aug 2279	12 Sept 2280	04 Feb 2281	A3S
NCC-1964	<i>Utsira</i>	Newport News Shipbuilding, Virginia, Earth	25 Jan 2280	01 Feb 2281	27 June 2281	A3N
NCC-1965	<i>Carron</i>	Newport News Shipbuilding, Virginia, Earth	29 June 2280	28 June 2281	01 Dec 2282	A3S



### Knox

1. Trentis reaction control system 2. RIM-10C phaser banks 3. QIK-25AL sensors 4. WADE deflector units 5. hangar support systems  
6. Emperor 60 MDPC units 7. RST impulse engines 8. LN-64 Mod 4 warp drive units

This was the first major class of starships in which all of the vessels were fitted with a "megaphaser" capability instead of a torpedo armament. The *Knox*-class frigates began building just over one Earth-year after the similar *Daran* (FF 3201) class. Several of these ships are shifting to the Star Fleet Reserve Force (SFRF), the first "new" ships to be assigned to the reserves since the Four Years War. After the forward deployment role of the *Coventry* (FR 1230) and *Surya* (FR 1850) frigate classes was de-emphasized, the *Knox* class was increasingly looked upon as a replacement for these ships in the Federation's outer quadrants.

Two of these ships are already active with the SFRF, and six are scheduled to be assigned to the reserves by 2292.

**Class:** Early Star Fleet planning provided for 50 ships of this class. Later shipbuilding authorization reduced the number of ships to be built, in part because of the planned *Fury* class, a smaller frigate-type ship intended specifically for SFRF operation (see *Fury*/FS 30055 class).

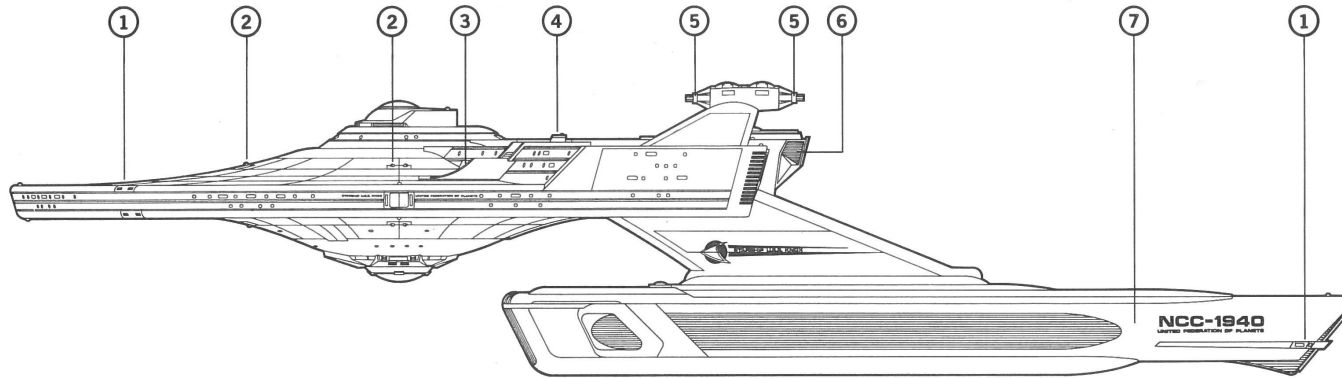
The *Matapan* (FR 1960) was lost with an entire TacFleet task force in 2283 during

the MTK Security Action beyond Federation treaty territory (outside subquadrant 2 north). No survivors were found.

**Classification:** The first ten ships of this class were authorized as heavy frigates (FH 1965-74); changed to frigates and reclassified FR 1965-74 on 11 September 2274. They were changed to FR 1940-49 on 31 July 2275. FR 1950-65 were ordered as frigates on 23 February 2276.

**Design:** These ships are basically a design extension of the *Daran* class, which in turn was derived from the *Avenger* (FH 1860)-class heavy frigate. Early design concepts provided a single hangar on centerline with impulse drive units either below the bay doors or on both sides of the hangar ("split" by the the hangar bay). The design was revised to provide side-by-side hangars as in the *Daran* class (but without extended landing platforms). WADE deflector and sensor units are fitted on the upper hull.

These ships are equipped with the highly successful "Fasfax" Duotronic III primary computer and Datatac Computer Support Subsystem. The "Artos" navigation suite is



### Knox

1. Trentis reaction control system 2. RIM-10C phaser banks 3. QIK-25AL sensors 4. WADE deflector units 5. Emperor 60 MDPC units 6. RST impulse engines 7. LN-64 Mod 4 warp drive units

#### Current specifications of *Knox* class:

Displacement: 136,000 metric tons standard  
(133,000mt light, 139,000mt full load)

	Overall	Primary Hull	Nacelles
Length:	243.4m	144.6m	154.8m
Beam:	141.2m	141.2m	12.6m
Draft:	52.8m	32.5m	17.8m

Propulsion: Two (2) LN-64 Mod 4 dilithium-energized antimatter linear warp drive units  
(System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)  
Two (2) RST subatomic unified energy impulse units  
QASR particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Trentis" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 7, standard  
Warp 11, maximum

Acceleration: Rest-Onset Critical Momentum: 5.51 sec  
Onset Critical Momentum-Warp Engage: 1.12 sec  
Warp 1-Warp 4: .73 sec  
Warp 4-Warp 7: .63 sec  
Warp 7-Warp 11: 2.19 sec

Duration: 5 Earth years, standard  
19 Earth years, maximum

Complement: 350 (90 officers + 260 crew)  
NCC-1956-60: 338 (88 officers + 250 crew)  
NCC-1961-65: 330 (87 officers + 243 crew)

Embarked craft: 4+

Navigation: "Artos" Warp Celestial Guidance, L.D. Package  
(System contractor: Mandor Industries Ltd., Dalhalm, Delta IV)

Computers: "Fasfax" Duotronic III; Datatac Support Subsystem  
(Systems contractor: Farranti Mnemonics, Berkshire, Earth)

Phasers: 6 banks of 2 each - RIM-10C independent twin mount  
(System contractor: Augusta Ansadado Inc., Fuzes, Venus)

Megaphasers: 2 banks of 2 each - "Emperor 60" multi-directional cannon  
(System contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)

Photon torpedoes: None

Defense: "Lancelot" primary force field and deflector control system  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)  
NCC-1945, 1952: CIDSS Deflector Supplement  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)  
Dobis weapon system; PRA-TAK fire control add-on  
(Systems contractor: Raakuv, Gaziwahaida, Andor)  
CGCP/SCDS cloaking generation, penetration and stasis countermeasure system  
(System contractor: Hycor, Woburn, Earth)  
NCC-1945, 1952: Kolt ST10 deflector spire  
(System contractor: Kal Achal Conglessum, Takuv, Tellar)

Life support: MB-5 artificial gravity generator  
(System contractor: Cristobal SM/S, Manila, Earth)  
"Rastis" radiation protection package  
(System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)  
"Cerix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

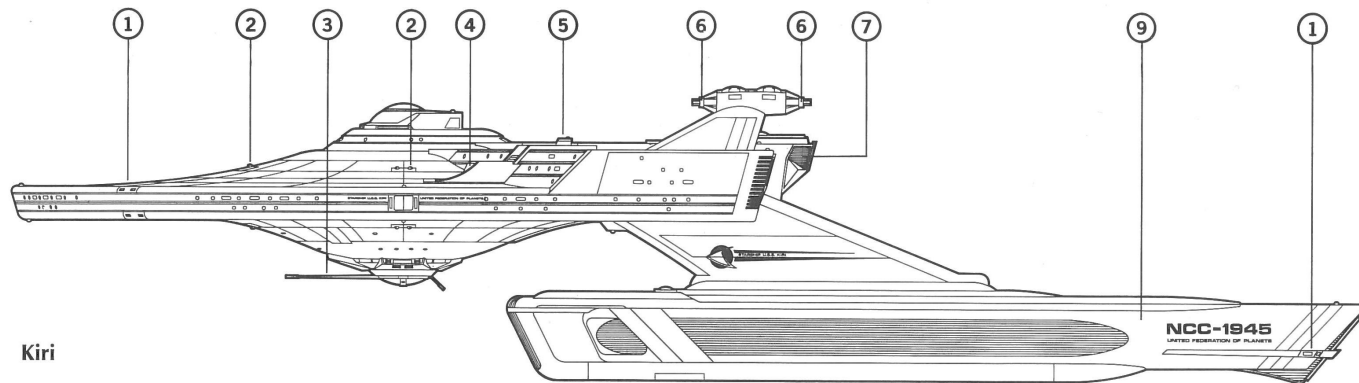
modified with the Deltan "Li Donus" (LD) system. This modification incorporates various Deltan navigational techniques into the primary operating mode at the navigator's discretion.

The TacFleet ships *Kiri* and *Kaya* are fitted with a Kolt ST10 deflector spire at their lower sensor dome location. Also equipped with the CIDSS deflector system and the CGCP/SCDS "B" cloaking and anti-stasis system.

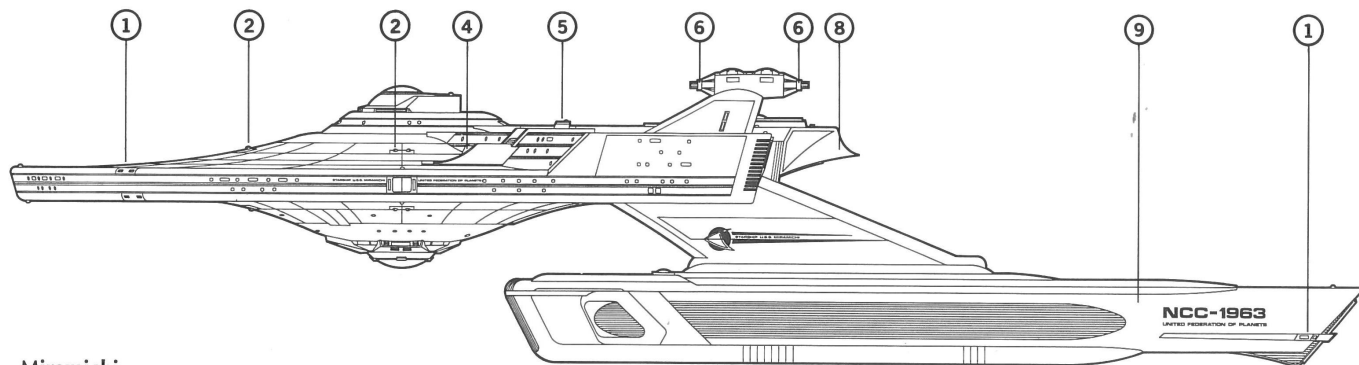
**Builders:** All 26 *Knox* class ships were built by Newport News, which utilized three separate yards during construction. The entire class was contracted with one firm to speed production, limit cost, and facilitate development by cutting down on the past practice of different shipbuilders stressing different areas of ship design. Newport News launched all ships of the class within five years (2276-2281).

**Engineering:** The *Knox* class is fitted with LN-64 Model 4 linear warp units; these provide slightly better acceleration times than in the *Daran* class due to the smaller size of these frigates. These ships are also equipped with an improved engine venting system which provides significantly enhanced safety margins.



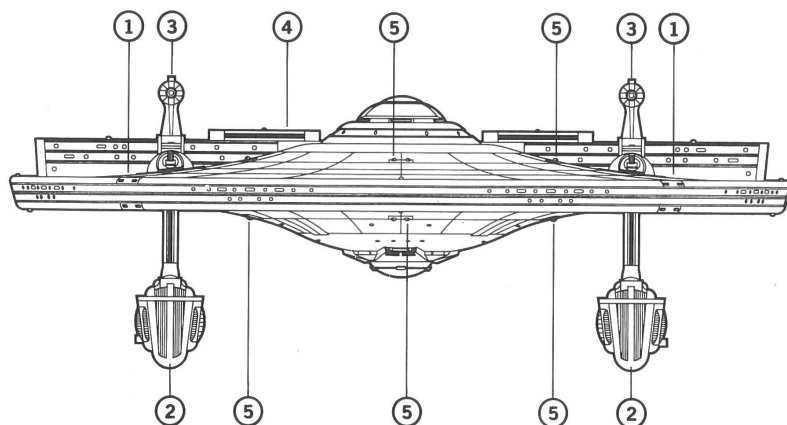


Kiri



Miramichi

1. Trentis reaction control system 2. RIM-10C phaser banks 3. Kolt ST10 deflector spire 4. QIK-25AL sensors 5. WADE deflector units  
6. Emperor 60 MDPC units 7. RST impulse engines 8. RST impulse engine shroud 9. LN-64 Mod 4 warp drive units



Knox

1. Trentis reaction control system 2. LN-64 Mod 4 warp drive units 3. Emperor 60 MDPC units 4. WADE deflector units 5. RIM-10C phaser banks

FR 1960, 1961, and 1963-65 have their RST impulse units fitted in a shroud to improve the safety of alighting craft during flight operations.

*Weapons:* The installation of MDPC phaser units prohibited the inclusion of a torpedo system in this class. This is only the second major starship class not provided with a torpedo armament (see *Daran*/FF 3201 class). Several SFRF ships may be fitted with the omni-directional "Savistant" phaser cannon (ODPC) in an experimental program to further evaluate that system.

This class is fitted with the Dobis weapon system, a variant of Cetus; Dobis is not equipped with such features as a standardized training system and defensive and exploratory group operation programs. Cetus is scheduled to be backfitted into the two TacFleet ships and may be installed in some SFRF ships as well.

*Embarked craft:* Knox class ships assigned to the SFRF will be provided with the Messina Class 3 reconnaissance scout.

*Nomenclature:* FR 1959 was originally named *Scipion*; was renamed *Peleliu* on stardate 7054.9 (with CH 1848 subsequently named *Scipion*).



# ENDURANCE

## Class Frigates

### 8 FRIGATES: "ENDURANCE" CLASS

Number	Name	Converted	Drydocked	Relaunched	Recommissioned	Status
NCC-1862	<i>Endurance</i>	Cosmadyne Corporation, Boston Shipyards, Earth	05 Apr 2285	16 Sept 2285	01 Dec 2285	A2N
NCC-1865	<i>Vigilant</i>	Star Fleet Division, Puget Sound Yards, Earth	15 Dec 2284	11 Apr 2285	17 Aug 2285	A3S
NCC-1866	<i>Dromio</i>	Star Fleet Division, Puget Sound Yards, Earth	22 Apr 2285	27 July 2285	09 Oct 2285	A1S
NCC-1871	<i>Dardanius</i>	Cosmadyne Corporation, Boston Shipyards, Earth	19 Jan 2286	04 Apr 2286	30 July 2286	A1N
NCC-1872	<i>Hippolyta</i>	Cosmadyne Corporation, Boston Shipyards, Earth	11 Sept 2285	02 Feb 2286	03 June 2286	A2N
NCC-1873	<i>Melkotia</i>	Star Fleet Division, Puget Sound Yards, Earth	19 Oct 2285	21 Feb 2286	06 June 2286	A1N
NCC-1876	<i>Nar-Tak Shir</i>	Cosmadyne Corporation, Boston Shipyards, Earth	10 Apr 2286	02 Sept 2286	15 Dec 2286	A3N
NCC-1880	<i>Oberon</i>	Star Fleet Division, Puget Sound Yards, Earth	18 July 2285	09 Nov 2285	16 Feb 2286	A2S

These ships were refitted from *Avenger* (FH 1860)-class heavy frigates. Their armament was significantly reduced and advanced scientific and exploratory facilities were installed. These frigates are assigned to the outer subquadrants, patrolling the many areas of unexplored Federation treaty territory.

The *Dardanius* (FR 1871) and *Hippolyta* (FR 1872) are scheduled to be assigned to subquadrant 4 north in 2293.

*Class:* The modification of a small number of *Avenger* class starships to this configuration was first considered by Star Fleet in early 2281. The conversion of the eight listed ships was officially approved in November 2282.

The conversion of these frigates was almost cancelled after the authorization of the *Cyane* (FH 1890)-class heavy frigates in February 2284. However, final shipyard approval for the *Endurance* class was authorized on 29 June 2284.

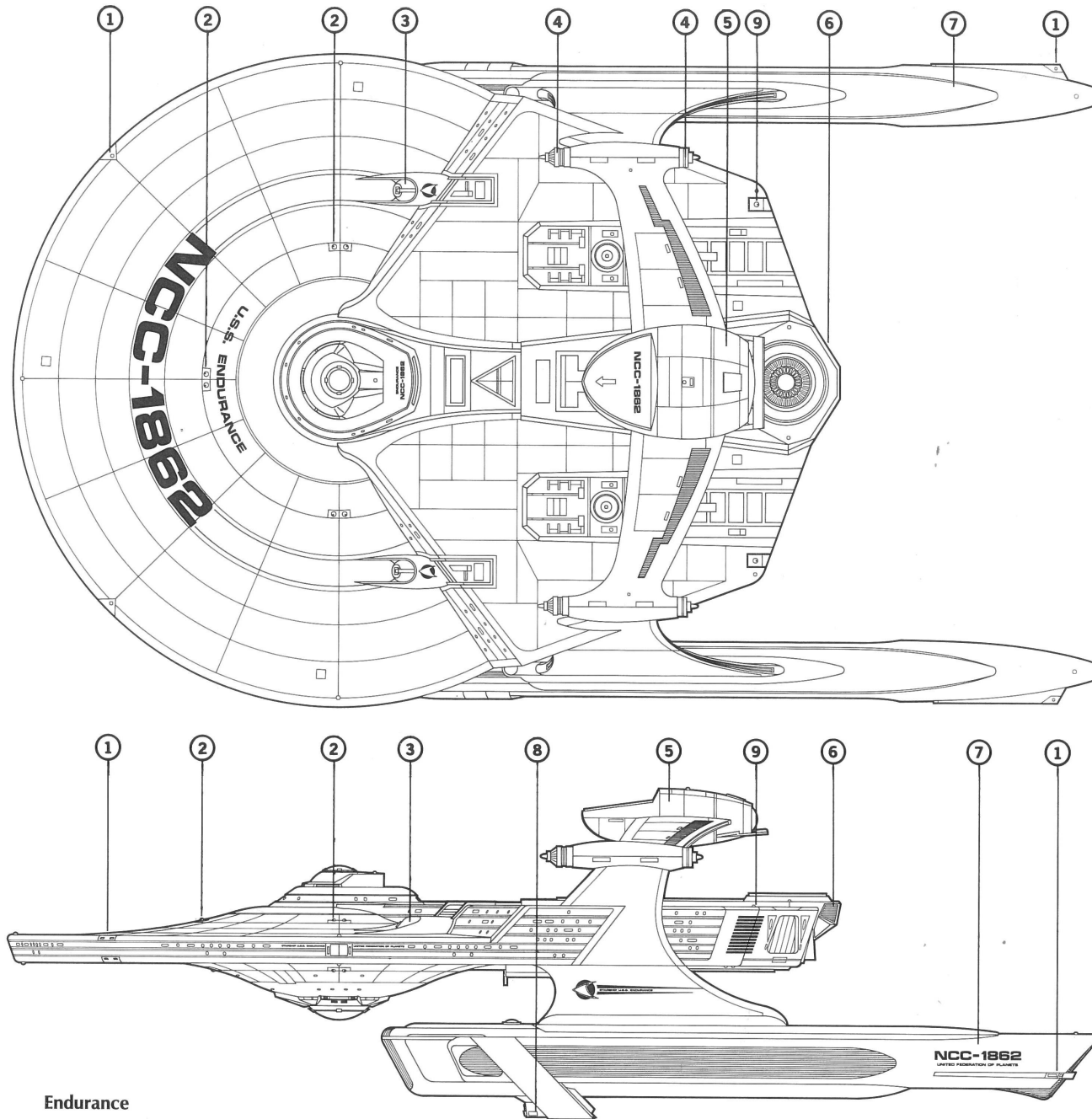
Both the *Vigilant* (FR 1865) and *Dromio* (FR 1866) were completed and recommis-

sioned before the "lead" ship *Endurance* (FR 1862); however, Star Fleet awarded the contracts to the two shipyards (in "packages" of four ships each) on a hull number basis, resulting in FR 1862 being designated lead ship.

*Classification:* These ships were classified as frigates in December 2284 to emphasize their reduced offensive potential and more exploratory mission profile in comparison to remaining *Avenger*-class heavy frigates.

*Design:* This class was created to more effectively utilize the heavily-armed *Avenger* frigate design, which proved somewhat ineffective during the peaceful years of the late 2270s. The internal systems configuration of these ships is basically unchanged (see *Avenger* class); the deletion of some weapon systems' command control is the primary modification.

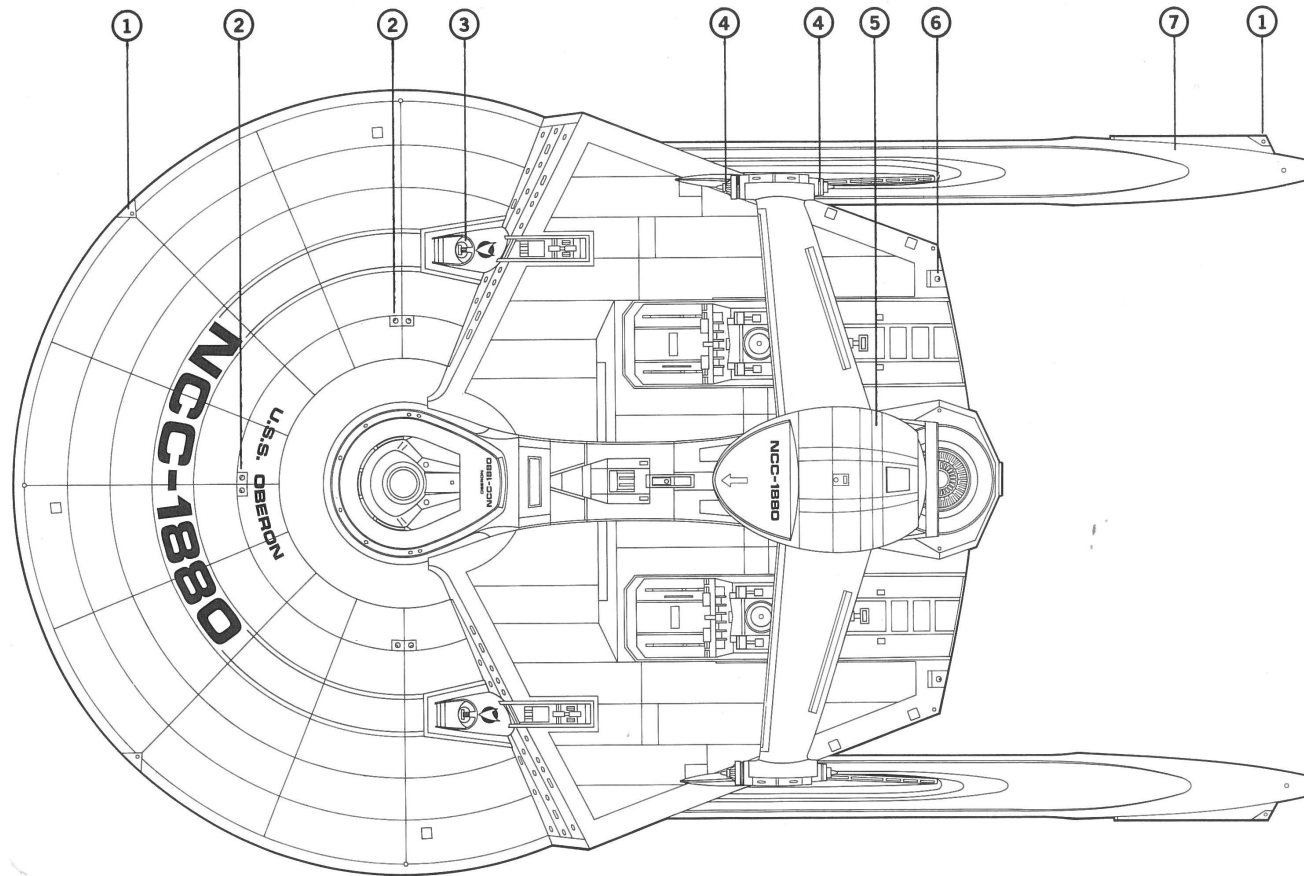
The Da Praesa exploratory package is fitted; its key element is the massive Costias-designed long-range data pod (LRDP), mounted in place of the photon torpedo wea-



**Endurance**

Current Wright-Corder configuration of *Endurance*.

- 1. Trentis reaction control system
- 2. RIM-12C phaser banks
- 3. DSML sensors
- 4. Chng Li A5 sensors
- 5. Costias LRDP
- 6. RST impulse engines
- 7. LN-64 Mod 3 warp drive units
- 8. KWIL sensor mounts
- 9. RSM-14B phaser banks



### Oberon

1. Trentis reaction control system 2. RIM-12C phaser banks 3. QIK-14K sensors 4. Chng Li A2H sensors 5. Costias LRDP  
6. RSM-14B phaser banks 7. LN-64 Mod 3 warp drive units

pons pod of the *Avenger* class. This unit houses all necessary primary operating systems, including an ultra-high intensity sensing unit faired into its front end. Additionally, KWIL short-range, precise sensors are mounted to the bottom of each LN-64 warp engine. These units are designed primarily for the analyzation of sentient alien phenomena and are linked directly to the scientific data banks of the ship's library computer.

The system of linear feed chambers located throughout the support pylon assembly was integrated with the Costias unit during conversion. This shaft system now supplies engine power directly to the LRDP, considerably increasing the unit's range and overall effectiveness. The KWIL units do not require direct power-channeling from the warp drive system.

Multi-function, mid-range, Chng Li sensor units are mounted in place of the "Emperor" multi-directional phaser cannons. These units were designed specifically for operation with the Da Praesa system.

The *Endurance* (FR 1862) was built to Wright-Corder specifications when originally

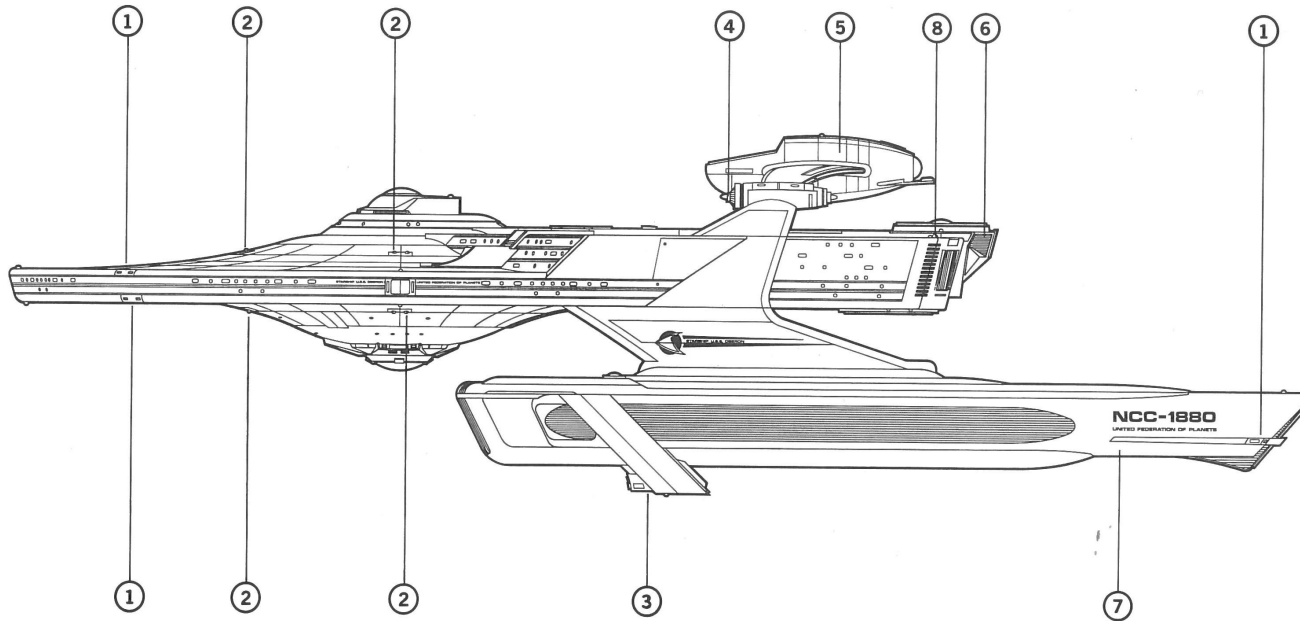
constructed as an *Avenger*-class heavy frigate. Her dimensions differ from the other ships.

FR 1873 and 1880 are equipped with fixed-array energy receptors on their upper hulls.

**Engineering:** The installation of KWIL sensor units on the undersides of the LN-64 warp engines resulted in some internal structural modifications to the linear warp units. Also, some engineering operator consoles were modified to permit monitoring of the simultaneous operation of the sensor units and warp drive system.

**Weapons:** The photon torpedo weapons pod and both MDPC units were removed during the conversion of these ships. The six RIM-12C phaser banks on the upper and lower main hull were retained; they are now supplemented by two RSM-14B series phaser banks mounted on the upper rear hull.

**Embarked craft:** These ships were equipped with a variety of small- and medium-size craft to complement their exploratory mission status. "Killer Bee" assault craft were removed from all ships by 2287.



**Oberon**

1. Trentis reaction control system 2. RIM-12C phaser banks 3. KWIL sensor mounts 4. Chng Li A2H sensors 5. Costias LRDP  
 6. RST impulse engines 7. LN-64 Mod 3 warp drive units 8. RSM-14B phaser banks

Current specifications of *Endurance* class:

<p>Displacement: 153,000 metric tons standard          (146,000mt light, 158,000mt full load)</p> <p>Length: Overall 234.9m          Beam: 141.2m          Draft: 65.8m</p> <p>Propulsion: Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units          (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)          Two (2) RST subatomic unified energy impulse units          QASR particle beam maneuvering thrusters          (Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)          "Trentis" pulsed laser reaction control system          (System contractor: Orage Ijek, Aksajak, Andor)</p> <p>Velocity: Warp 7, standard          Warp 11, maximum</p> <p>Acceleration: Rest-Onset Critical Momentum: 6.10 sec          Onset Critical Momentum-Warp Engage: 1.25 sec          Warp 1-Warp 4: .81 sec          Warp 4-Warp 7: .70 sec          Warp 7-Warp 11: 2.42 sec</p> <p>Duration: 5 Earth years, standard</p>	<p>Complement: 365 (95 officers + 270 crew)</p> <p>Embarked craft: 10+</p> <p>Navigation: "Artos" Warp Celestial Guidance          (System contractor: Mandor Industries Ltd., Dalhalam, Delta IV)</p> <p>Computers: "Fasfax" Duotronic III; Datatac Support Subsystem          (Systems contractor: Farranti Mnemonics, Berkshire, Earth)</p> <p>Phasers: 6 banks of 2 each - RIM-12C independent twin mount          2 banks - RSM-14B single mount          (Systems contractor: Agusta Anasadado Inc., Fuzes, Venus)</p> <p>Photon torpedoes: None</p> <p>Defense: "Lancelot" primary force field and deflector control system          (System contractor: Prentice-Schafer Inc., Marsport, Mars)          Cetus weapon system; PRA-TAK fire control add-on          (Systems contractor: Raakuv, Gaziwahaida, Andor)          CGCP/SCDS cloaking generation, penetration and stasis countermeasure system          (System contractor: Hycor, Woburn, Earth)</p> <p>Life support: MB-4A artificial gravity generator          (System contractor: Cristobal SM/S, Manila, Earth)          "Rastis" radiation protection package          (System contractor: Tidjikja/Atar Associated Industries, Rastaribi, Regulus)          "Cerix" waste regeneration systems          (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)</p>
---	--



# CYANE

## Class Heavy Frigates

These ships were originally proposed in 2279 as an added construction group to the existing *Avenger* (FH 1860) class. The Military Staff Committee dropped those plans later that same year, citing the relatively peaceful years since 2273 as the primary reason. Eight *Avenger* class starships were subsequently refitted for exploratory duty (see *Endurance*/FR 1862 class). However, after Klingon activity increased substantially beginning in 2283, construction of additional frigate-type ships was deemed necessary by Star Fleet. The *Avenger* design of ten Earth-years earlier was chosen as the basis for the *Cyane* heavy frigate class.

**Class:** These ships were proposed as new-build frigates in August 2283. Construction of 17 ships (FH 1890-1906) was approved on 09 February 2284. Final shipyard contracts were awarded on 27 March 2284.

The conversion of *Avenger*-class heavy frigates to *Endurance* specifications didn't begin until 15 December 2284, exactly four months after work on the *Cyane* class had begun. In order to maintain the commitment of the Military Staff Committee to funding 17 new-build heavy frigates, Star Fleet decided in June 2284 to proceed with the *Endurance* class conversions. FH 1900-06 were subsequently cancelled by the MSC in December of that year.

The *Cyane* (FH 1890) and *Reprisal* (FH 1896) challenged and later engaged three Klingon *Domis'avyi* ("Guardians of the border") over a territorial violation during Operation Distant Hammer in October 2288. All three vessels were quickly defeated. The *K'chjne* and an unidentified ship self-destructed; the *Mje'ask* was escorted to the Federation border and tracked into Klingon territory for several local hours.

**Classification:** The 17 ships of this class originally ordered in February 2284 were classified as heavy frigates. The 10 remaining ships retained this classification after the cancellation of FH 1900-06.

**Design:** These ships were equipped with the most up-to-date systems available at

the time of their construction. An improved navigation system, NAVCAS Select, is fitted in all ships. Original NAVCAS systems were first used in the *Surya* (FR 1850) and *Federation* (DN 2100) classes.

The "Etrista" Mk 5 computer configuration was developed in conjunction with the Vulcan Science Academy, and is arguably more capable than "Fasfax." (Installation of the newly-developed Duotronic IV system in *Auguste* was briefly contemplated in late 2287.) The "Okios Atur" logic unit is one of the few Kuchata systems currently in use on Class One starships. It is designed to continually and effectively balance the operating format of the "Etrista" computer system.

The "Percivale" deflector unit was adapted from the dreadnought (*Ascension*/DN 2520) configuration in anticipation of these ships engaging in frequent hostile action.

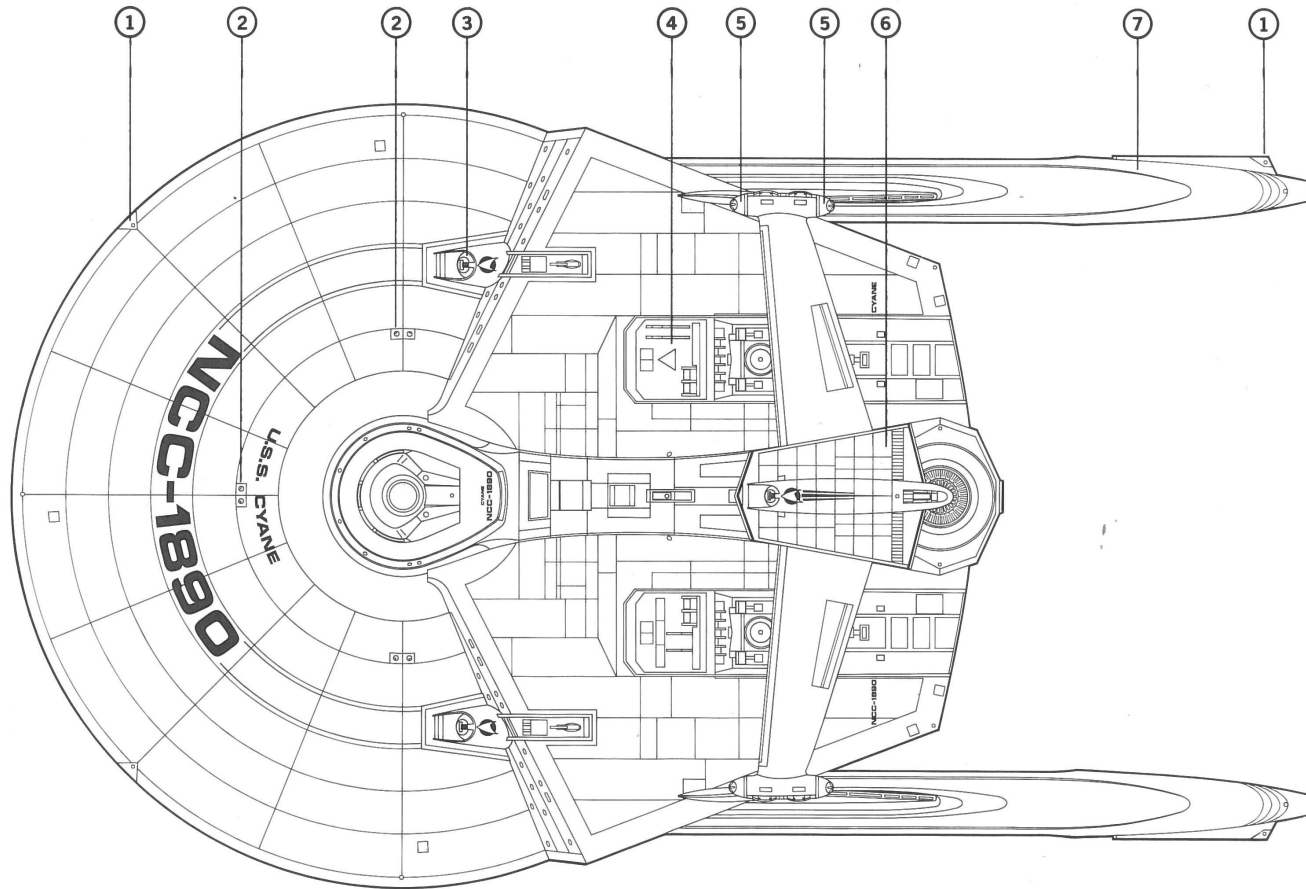
The *Sumter* (FH 1898) is equipped with the "B" variant of the CGCP/SCDS cloaking system.

ARU series radiation protection units were installed for the first time on these ships. The units are expected to have a higher operational reliability record than previous systems.

**Engineering:** These ships were originally scheduled to receive LN-64A warp units as in the *Tikopai* (CH 1800) class; LN-64 units were installed during construction after numerous reports of operational constraints within the LN-64A system.

**Weapons:** The amount of armament provided on these ships is identical to the earlier *Avenger* class; changes were made in system types only. Six RIM-14A phaser banks replace the earlier RIM-12C units on the upper and lower hull. This system produces a more concentrated beam and has a longer effective range than the previous design.

At the time they were ordered these ships were to have been equipped with the "Harrier" multi-directional phaser cannon system. However, Asakaze's "Talon" MDPC system is fitted instead due to continued delays in the "Harrier" program.

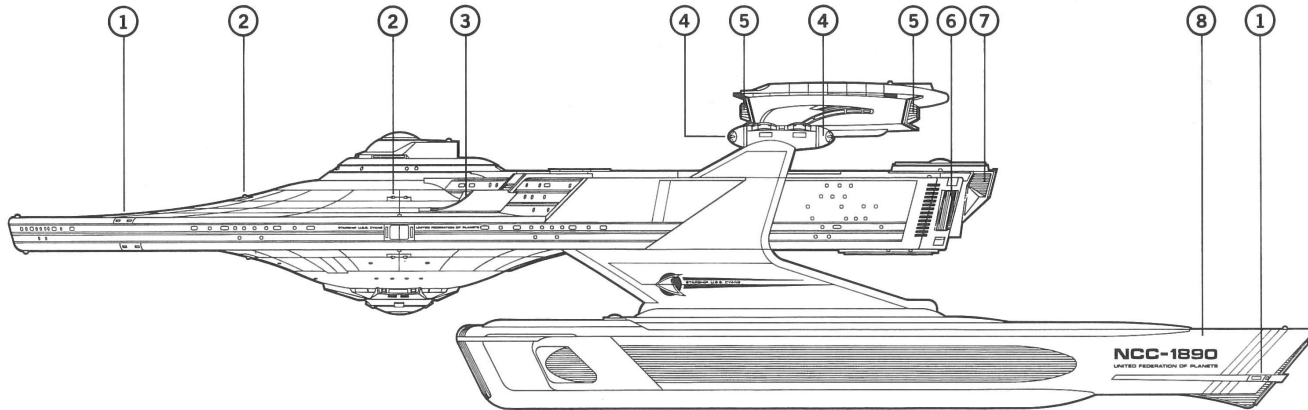


### Cyane

1. Trentis reaction control system 2. RIM-14A phaser banks 3. QIK-75 sensors 4. hangar support systems 5. Talon MDPC units  
6. Mk 25 Mod 1 torpedo tube housing 7. LN-64 Mod 3 warp drive units

### 10 HEAVY FRIGATES: "CYANE" CLASS

Number	Name	Builder	Laid Down	Launched	Commissioned	Status
NCC-1890	<i>Cyane</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	15 Aug 2284	13 Nov 2285	22 Sept 2286	A1N
NCC-1891	<i>Repose</i>	Cosmadyne Corporation, Houston Division, Earth	20 Sept 2284	05 Jan 2286	16 Sept 2286	A2N
NCC-1892	<i>Saratoga</i>	Ishikawajima Harima Industries, Yokohama, Earth	07 Jan 2285	29 Mar 2286	17 Nov 2286	AO
NCC-1893	<i>Tecumseh</i>	Cosmadyne Corporation, Boston Shipyards, Earth	11 Nov 2284	02 Mar 2286	08 Dec 2286	A2S
NCC-1894	<i>Savannah</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	15 Sept 2285	30 Dec 2286	12 July 2287	AO
NCC-1895	<i>Constellation</i>	Cosmadyne Corporation, Houston Division, Earth	09 Jan 2286	26 Mar 2287	14 Oct 2287	A2S
NCC-1896	<i>Reprisal</i>	Cosmadyne Corporation, Boston Shipyards, Earth	03 Mar 2286	11 Apr 2287	04 Nov 2287	A1N
NCC-1897	<i>Toresta</i>	Ishikawajima Harima Industries, Yokohama, Earth	07 Apr 2286	05 June 2287	13 Dec 2287	A3S
NCC-1898	<i>Sumter</i>	Litton-Sedeco Shipbuilding, Pearl Harbor Naval Facility, Earth	16 Dec 2286	28 Jan 2288	20 July 2288	ATAC
NCC-1899	<i>Auguste</i>	Cosmadyne Corporation, Boston Shipyards, Earth	17 Apr 2287	30 May 2288	02 Dec 2288	A2S



## Cyane

1. Trentis reaction control system 2. RIM-14A phaser banks 3. QIK-75 sensors 4. Talon MDPC units 5. Mk 25 Mod 1 torpedo tubes  
6. landing bay 7. RST impulse engines 8. LN-64 Mod 3 warp drive units

### Current specifications of *Cyane* class:

Displacement:	151,000 metric tons standard (146,500mt light, 156,000mt full load)		
	Overall	Primary Hull	Nacelles
Length:	235.1m	178.6m	154.8m
Beam:	141.2m	141.2m	12.6m
Draft:	60.3m	32.5m	17.8m
Propulsion:	Two (2) LN-64 Mod 3 dilithium-energized antimatter linear warp drive units (System contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII) Two (2) RST subatomic unified energy impulse units QASR particle beam maneuvering thrusters (Systems contractor: Scarbak Propulsion Systems, Cairo, Earth) "Trentis" pulsed laser reaction control system (System contractor: Orage Ijek, Aksajak, Andor)		
Velocity:	Warp 7, standard Warp 11, maximum		
Acceleration:	Rest-Onset Critical Momentum: 6.02 sec Onset Critical Momentum-Warp Engage: 1.10 sec Warp 1-Warp 4: .79 sec Warp 4-Warp 7: .70 sec Warp 7-Warp 11: 2.38 sec		
Duration:	5 Earth years, standard 20 Earth years, maximum		
Complement:	355 (87 officers + 268 crew)		
Embarked craft:	15+		
Navigation:	NAVCAS Select, Warp Celestial Guidance (System contractor: Prinzhenri S.N., Rio de Janeiro, Earth)		
Computers:	"Etrista" Duotronic III (System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V) "Okios Atur" Logic Subsystem (System contractor: Kuchata Pratus Ikyla, Arrasta, Daran V)		
Phasers:	6 banks of 2 each - RIM-14A independent twin mount (System contractor: Agusta Ansadado Inc., Fuzes, Venus)		

Megaphasers:	2 banks of 2 each - "Talon" multi-directional cannon (System contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)
Photon torpedoes:	4 tubes - Mk 25 Mod 1 direct (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)
Defense:	"Percivale" primary force field and deflector control system (System contractor: Prentice-Schafer Inc., Marsport, Mars) "Eyas" weapon system (System contractor: Keindoffer-Klaatsen DSC, Munich, Earth) "Mentor III" fire control system (System contractor: Trestis ar Trestis, Pangaeear, Izar) CGCP/SCDS cloaking generation, penetration and stasis countermeasure system (System contractor: Hycor, Woburn, Earth)
Life support:	MB-4C artificial gravity generator (System contractor: Cristobal SM/S, Manila, Earth) ARU/SI radiation protection systems (System contractor: Kym Lan Den Terra, New Kyoto, Earth) "Cerix 2" waste regeneration systems (System contractor: Jullundur-Lahore Ltd., Bombay, Earth)

Installation of Skat-Rar's Mk 25 photon torpedo system provided a "three-model" improvement over the Mk 22 system of the *Avenger* class.

An updated version of the "Eyas" weapon system is fitted in these ships. This system is similar to the "Eyas" unit that was first used in *Tikopai*-class heavy cruisers; however, primary and secondary operating scenarios now correspond to the advanced and varied armament of the *Cyane* class. The "Mentor" unit is also updated, with a variety of independent subsystems available in the event of main-line failure.

*Embarked craft:* These frigates can embark full squadrons of "Killer Bee" tactical assault craft if necessary (at least six are carried on most ships). The *Sumter* carries four "Meiji" tactical fightercraft in addition to her support units.



# APPENDIX:

## Strike Cruiser - *Belknap* Class

The *Belknap* (CS 2501)-class strike cruisers are among the most versatile, warp dynamic vessels in Star Fleet service. The 28 ships of this type constitute one of the largest classes of primarily "offensive" vessels ever built. The later *Impervious* (CS 2530)-class strike cruisers were based on the *Belknap* design.

Much of the internal configuration and layout of *Belknap* class ships, as with most Star Fleet Class One vessels, is classified. This appendix provides a summary examination of these ships, with emphasis on service histories and general internal arrangement. Unfortunately, only authorized personnel possessing the required security clearances may obtain access to official design specifications. Also, the reader is reminded that variations may exist in the internal configurations of these ships due to individual vessel modifications and/or changes in the original construction contracts. For a listing of unclassified modifications/alterations to the basic *Belknap* design, contact: Commanding Officer, Bureau of Information, Star Fleet Systems Command, San Francisco, United Americas, Earth.

### STRIKE CRUISER SERVICE RECORDS, 2289-2290

(Ship, Hull Number, Home Port)

#### Central Fleet

U.S.S. *Sovereign* (CS 2505), Starbase 12. Home port changed from Bekkaas Installation to Starbase 12 on 07 February 2289; operational control changed from subquadrant 2 south to quadrant zero on 17 February. Participated in Star Fleet exercise Prime

Determination held 23 February to 11 March, followed by a 17-day independent operational readiness exercise. Port visit Aj Kasij, Coridan IV, departing 29 April in company with the fast frigates *Haruna* (FF 3202) and *Soryu* (FF 3211) and the destroyer *Hashishiyun* (DD 516) for operations off of Alpha Eridani. In port visit Makarii, Alpha Centauri VII, 22 May for Grand Regent's Celebration. Departed for subquadrant 1 south for exploratory duty in company with the scouts *Cosmitus* (ST 609) and *Terni* (ST 612) and the heavy cruiser *Wasp* (CH 1721). Reportedly in port visit New Canberra, Aldebaran, with the strike cruiser *Seneca* (CS 2538) on 19 October. Assigned to TacFleet for six-week tactical training mini-cruise with the heavy cruisers *Yorktown* (CH 1704) and *Exeter* (CH 1706), operating in the Ky'Achta area of subquadrant 1 south. On 12 November a DF-7 assault craft of Alturat squadron crashed in the ship's hangar bay with major damage to the craft but with no injuries. Assigned defensive status in quadrant zero on 09 December.

U.S.S. *Essahir* (CS 2508), Starbase 9. Active subquadrant 2 north on 01 January 2289, having been at space continuously for 427 days. Port call at Starbase 13 beginning 23 January; low-priority maintenance performed. Returned to Earth 15 February. Entered regular overhaul at Pearl Harbor Naval Facility on 20 February. Assigned to subquadrant 1 north, taking part in exercise Ga'tan Trick held 02 April to 03 May, operating in company with the dreadnought *Unificatum* (DN 2102); the frigates *Springeren* (FR 1950) and *Swift* (FR 1958); and the through-deck cruiser *Devonshire* (CD 1979). Subsequently took part in anti-ship exercise Nessen 71A, entering subquadrant 1 south on 24 May. Assigned to classified duty 06 July. Re-entered quadrant zero 20 September; took part in security escort mission with the strike cruiser *Raan* (CS 2519) transferring Klingon prisoners to Starbase 23. Began exploratory cruise on 11 October. Units deploying with CS 2508 at this time were the heavy cruiser *Alfr* (CH 1741); the

fast frigate *Atalanti* (FF 3212); and the frigate *Noshiro* (FR 1885). Returned to Starbase 9 on 12 December. Departed 21 December, participating with Azurian vessels in joint exercise.

U.S.S. *Baikal* (CS 2513), Starbase 18. Drydocked at Newport News Shipbuilding, Virginia, Earth, on 23 September 2288 to commence complex overhaul, completed 15 July 2289. New systems installed included extensive secondary scientific systems and numerous improvements in the hangar and landing bays. The ship arrived at Starbase 18 on 11 August. Deployed for refresher cruise 15 August. In port Citadel, Cygnet XIV, 07 September when suddenly ordered to space in support of the merchant ship *Hyat'an Nuvos* which had drifted out of Federation territory after a propulsion failure. The *Hyat'an Nuvos* was taken under tow by the heavy cruiser *Binar* (CH 1819) for New Sparta. The *Baikal* was recalled to port before reaching the scene. Departed Starbase 18 on 23 September for patrol and observation duty in the vicinity of Kzin space. Returned 12 November, conducted two-week workup for extended-duration exploratory duty. Arrived at Starbase 5 on 06 December for assignment with other fleet units. To deploy on or about 22 January 2290.

U.S.S. *Briza* (CS 2515), Starbase 15. Returned to home port 26 August 2289 (five weeks early) from exploratory mission in subquadrant 4 south, having originally departed 15 May 2287. Operational stand down and crew leave September and October; data downloading and systems rejuvenation conducted. Deployed to subquadrant 3 south 29 October. Participated in FleetEx 223-5, held 12 November to 02 January 2290.

U.S.S. *Delphin* (CS 2537), Starbase 19. Took part in allied powers combined forces exercise (APCOM) held 2-27 February 2289, operating with Deltan, Mahat, and Karuv'ti units. Departed Starbase 19 on 23 March for patrol deployment. Participated in TacFleet exercise Norva Tome, held 02 June to 30 August on subquadrant 2 south/3 south border. Also took part in joint Star Fleet/Pokofi defense exercise Tadelto held early in October, and an anti-incursion exercise (ANTOR) with numerous starships, including the heavy cruisers *Thelonii* (CH 1742), *Anak* (CH 1821), and *Alnilam* (CH 1830). Returned to Starbase 19 on 28 November. Entered Cameron Naval Facility on 17 December for 12-week selected restricted availability (SRA).

## Northern Fleets

U.S.S. *Belknap* (CS 2501), Starbase 16. Deployed from Starbase 16 on 03 March 2289 for subquadrant 1 north cruise, beginning with participation in exercise Venture Corridor held 15 March to 09 May in the Kay Akai region. New TS-675 "Storn" long-range assault craft introduced into training activities during these exercises. In port visit New Springfield, Alpha III, 27 May followed by three-week operational readiness exercise. Port visit New Sacramento, Deneva, departing 16 July in company with the frigates *Coventry* (FR 1230) and *Indus* (FR 1243) and the heavy frigate *Illustrious* (FH 1863) for operations outside Federation treaty territory.

U.S.S. *Haversham* (CS 2504), Starbase 23. Deployed from home port 30 May 2289. Took part in exercise TreNorte 276 in early June. In port Trinity, Omega Fornacis III, during 19-30 July. Participated in data-gathering mission outside subquadrant 3 north

09 August to 28 October, operating from Tiburon. Units deploying with CS 2504 at this time were the exploratory cruiser *Tetherin* (CE 20027); the through-deck cruiser *Accent* (CD 1984); and the perimeter action ships *Alten* (PA 1019), *Atuga* (PA 1028), and *Benidraze* (PA 1040). Operated in the inner subquadrant area from 17 November to 20 December. On 12 December a DF-20 assault craft of Chirrippo squadron accelerated prematurely during launch mode and crashed into the landing bay wall. The pilot was killed instantly and the ship suffered "Class A" damage (requiring repair at a dockyard facility). The ship proceeded to Starbase 23 and was placed on operational stand down.

U.S.S. *Rishiri* (CS 2507), Starbase 21. In outer sectors of subquadrant 1 north on 01 January 2289, having been at space continuously for 943 days. Entered port at Starbase 21 on 23 September in company with other exploratory group units, having been at space continuously for 1,120 days, 103 of which were spent on station in the extreme northern subquadrant area. Began regular overhaul at Starbase 21 on 27 September; status listed as operational stand down. Systems rejuvenation completed 10 November. Deployed with numerous support units 25 November.

U.S.S. *Estocin* (CS 2511), Starbase 24. Port call at Austrasia, Makus, 7-15 January 2289. Deployed to outer subquadrant 2 north area on 16 January in company with the heavy cruiser *K'ushui* (CH 1801); the heavy frigate *Repose* (FH 1891); and the perimeter action ships *Hwicce* (PA 838), *Ashikaga* (PA 862), *Jelai* (PA 1061), and *Tachira* (PA 1066). CS 2511 made a port call at Hepteradas from 6-11 November, prior to proceeding home to Starbase 24, arriving 25 November. In SRA at year's end.

U.S.S. *Haven* (CS 2514), Starbase 8. Reportedly in port visit Libertad, Deneb V, with the large perimeter action ship *Kitimat* (PKA 1171) when ordered on 15 February 2289 to Senar area as the security situation within that planetary system deteriorated. Departed subquadrant 4 north in March to participate in TacFleet exercise Tiyoshyas (Teamwork) 731, held in northern sectors of quadrant zero. Returned to Starbase 8 on 17 April. SRA from late April to mid-July 2289. In port visit Kavetiklius, Deneb IV, 02 August for government celebration. Later in August took aboard four TS-675 "Storn" series assault ships from Rapallo squadron, Starbase 16 for three weeks of performance trials held off the Sidl nebula. Took part in exercise Tadelto in early October. Departed Starbase 8 on 27 October for subquadrant cruise. The *Haven* deployment group at this time included: the frigate *Atrevida* (FR 1957); the scouts *Indianola* (ST 608) and *Fall River* (ST 615); the corvettes *Paoki* (CV 3302) and *Varanasi* (CV 3318); and the perimeter action ship *Enfield* (PA 1129). Scheduled to complete mission in late 2290.

U.S.S. *Hai Din* (CS 2518), Star Station Cepheus. The *Hai Din* departed her home port in April 2287 with the heavy cruiser *Betelgeuse* (CH 1822). The ships are conducting an extended-duration exploratory mission outside subquadrant 3 north. They are expected to return in early 2291.

U.S.S. *Cicala* (CS 2540), Starbase 16. Departed Starbase 16 on 12 January 2289 for subquadrant 2 north deployment. Took part in exercise SciTest 12, 30 January to 18 February in the Toya-Sera area. Proceeded to southern subquadrant sectors, taking

part in joint military maneuvers with Karuv'ti forces. Units operating with CS 2540 at this time included: the strike cruiser *Sur Cha* (CS 2541); the heavy frigates *Odin* (FH 1875) and *Polonius* (FH 1878); the dreadnoughts *Compactat* (DN 2103) and *Temperance* (DN 2528); and the perimeter action ships *Siirt* (PA 841), *Patria* (PA 859), and *Esher* (PA 902). Returned to Starbase 16 on 10 March for scheduled two-week operational stand down. Departed 28 March on classified defense assignment; believed operating in northern subquadrant area.

U.S.S. *Mira* (CS 2542), Starbase 22. In 2289, CS 2542 spent 302 consecutive days at space on patrol, maintaining a continuous alert status with support units for nearly eight months. Departed the disputed Tholian Assembly border area late October. Returned to Starbase 22 on 17 November. CS 2542 was awarded the subquadrant "Mission Efficiency Award" for the third time and won the Utaves Medal (best ship in the Subquadrant Fleet), both firsts for a strike cruiser. Operational stand down from 23 November to 11 December. Entered Cameron Naval Facility on 20 December for eight-week SRA.

### Southern Fleets

U.S.S. *Bradley* (CS 2502), Starbase 27. In port visit Cleante, New Paris, 12 February 2289 with the heavy cruisers *Bonhomme Richard* (CH 1712) and *Jupiter* (CH 1734). Conducted independent preparatory cruise 20 February to 7 March. Returned to New Paris on 10 March. Deployed to exterior subquadrant 2 south on 19 March with *Bonhomme Richard* and *Jupiter* and the fast frigate *Stark* (FF 3208) for three-year exploratory mission.

U.S.S. *Khiritat* (CS 2503), Starbase 28. In selected restricted availability at Rigel November 2288 to March 2289. Conducted training operations off Rigel by late April. Took part in TacFleet exercise Norva Tome from 02 June to 30 August. Departed Starbase 28 on 15 September for subquadrant patrol deployment. Participated in joint Star Fleet/Karuv'ti exercise Atanatak in southern subquadrant sectors from 03 November to 02 December. The *Khiritat* deployment group at this time included: the heavy frigate *Auguste* (FH 1899); the fast frigate *Atalanti* (FF 3212); and the destroyer *Tamerlane* (DD 510). Port call at Lucerna, Rigel II, until mid-December.

U.S.S. *Concord* (CS 2506), Starbase 25. Entered starbase dockyard facility for 20-week SRA 22 January 2289, completed in June. Shipboard small craft support and damage control facilities enhanced. Underway 28 June to begin refresher training in the area of Beta Cygni. Northern sectors training cruise in July; in port Esan Spiritus, Beta Cygni II, 09 August, subsequently taking part in system-wide ceremonies in honor of the founding of the colony. The through-deck cruiser *Adamant* (CD 1986), the frigate *Peleliu* (FR 1959), and the perimeter action ship *Sybaris* (PA 1102) operated with the *Concord* during these events. Port calls at Citadel, Cygnet XIV, and New Princeton, Planet Q, before returning to Starbase 25 on 17 September. Operational stand down for low-end maintenance. Deployed for subquadrant patrol mission on 06 October, reportedly operating with the fast frigate *Brooke* (FF 3210). Returned to Starbase 25 on 17 December. In SRA at year's end.



U.S.S. *Concord*/NCC-2506

U.S.S. *Jarrett* (CS 2509), Star Station Tiran. In port visit Dut'ulanem, Gamma Orionis VII, 11 January 2289, with the heavy cruiser *Endeavor* (CH 1716). Both ships deployed on 27 January for subquadrant cruise; returned to the Tiran 03 April. The *Jarrett* conducted an independent preparatory cruise 15 April to 02 May; linked-up with *Endeavor* on 18 May for exploratory mission outside subquadrant 2 south. Mission completion expected sometime in 2292.

U.S.S. *Fahrion* (CS 2510), Starbase 10. In selected restricted availability at Cosma-dyne, Boston, Earth, 12 December 2288 to 27 May 2289. Arrived Starbase 10 on 23 June. Took part in tactical maneuvering exercises with the fast frigates *Eten* (FF 3203) and *Dace* (FF 3206) and the strike cruisers *Matsurra* (CS 2512) and *Aveley* (CS 2543). Returned to Starbase 10 on 09 August. Inspections by area admiralty until 15 August. Departed 17 August for subquadrant patrol deployment with the *Eten*. Ordered to outer subquadrant sectors on 20 September in support of the patrol cutter *Mysia* which had suffered major engine room damage (due to uncontrollable energy surges in her intermix shaft assembly). The *Fahrion* secured the sector as the starship tender *Achaea* began repair procedures. In mid-October the *Fahrion* returned to space off of Starbase 10, conducting small craft qualification operations with Military Staff Committee members aboard as observers. Conducted training operations from 04 November to 17 December. The *Fahrion* was scheduled to enter selected restricted availability at Rigel during January 2290.

U.S.S. *Mikuma* (CS 2516), Starbase 20. Returned to home port 17 November 2289 from extended-duration exploratory mission, having originally departed 26 October 2286 with the heavy cruiser *Hornet* (CH 1714). Operational stand down and preliminary systems inspection 20-29 November; began SRA 05 December. Scheduled to deploy in March 2290.

U.S.S. *Shangri-La* (CS 2517), Starbase 18. Departed Starbase 18 on 11 January 2289 for subquadrant 4 south deployment. Took part in exercise Sevidar 551 held 23 January to 06 March in the southern subquadrant region. Proceeded to Cygnet area, taking part in exercise Centerpiece 10 held 07 April to 21 August, operating in company with other deployment group units: the heavy cruiser *Achernar* (CH 1732); the frigate *Spiro* (FR 1884); the through-deck cruiser *Adroit* (CD 1983); and the perimeter action ships *Korinthos* (PA 848) and *Naze* (PA 870). Collided with the *Adroit* on 26 August after a failure in her close-quarters maneuvering (CQM) system. The *Shangri-La* continued operations and underwent repairs at Starbase 18 for the minor damages suffered; the *Adroit* sustained nominal damage. Assigned classified defensive status 25 September; departed home port on 30 September, believed operating in outer subquadrant area.

U.S.S. *Seneca* (CS 2538), Starbase 28. In selected restricted availability until late April 2289. Deployed from Starbase 28 on 17 May. Conducted training cruise through mid-July. In port Starbase 14 from 30 July to 06 August. Subsequently took part in TacFleet special operations exercise held 15 August to 04 September. Operated in the northern subquadrant area 16 September to 07 November; port visit New Canberra, Aldebaran, with the strike cruiser *Sovereign* (CS 2505) on 19 October. Placed under temporary TacFleet jurisdiction on 23 November; believed operating with the strike cruiser *Matsurra* (CS 2512) until mid-December.

U.S.S. *Ki Rin* (CS 2539), Starbase 19. Entered regular systems overhaul at Starbase 19 on 11 February 2289. Under way off Daran 04 April for refresher operations. Deployment in the southern subquadrant region 17 May to 25 July. Placed on local authority status 15 August for system defense force operations in the Daran V area. Reported operating with other subquadrant units in the northern subquadrant 3 south/quadrant zero border area.

U.S.S. *Aveley* (CS 2543), Starbase 26. Home port changed from Starbase 21 to Bekkaas Installation 23 February 2289; operational control changed from subquadrant 1 north to subquadrant 2 south on 28 February. Operated with other subquadrant units through mid-July; subquadrant tactical maneuvering exercises 21 July to 08 August. Conducted comprehensive training mission 17 August to 15 September. Reassigned to subquadrant 3 south on 19 October; operational control changed from Bekkaas Installation to Starbase 26 on 22 October. Two-week stay at Daran V, returning to Starbase 26 on 11 November. Entered SRA on 18 November, continuing at year's end.

U.S.S. *Alor* (CS 2544), Starbase 14. Conducted independent preparatory cruise in early February 2289. Returned to Starbase 14 on 25 March; received additional crew members and underwent extended-mission preparation 28 March to 09 April. Departed for exploratory mission on 16 April in company with the heavy cruiser *Androcus* (CH 1738). Mission completion sometime in 2291.

### TacFleet

U.S.S. *Matsurra* (CS 2512), Starbase 2. Operational stand down until mid-June 2289. Conducted tactical exercises with other Class One units during July and August. Classified status from 27 August through mid-November. Joint TacFleet/Star Fleet exercises with the strike cruiser *Seneca* (CS 2538) during December.

U.S.S. *Raan* (CS 2519), Starbase 7. Classified operations 28 January through 04 May 2289; believed operating exterior subquadrant 3 south. In port Starbase 7 from 23 May to 18 June; data downloading and systems rejuvenation conducted. TacFleet training cruise 30 June to 19 August. In port visit Ophiuchus Colony, 27-30 August. Transfer of Klingon prisoners to Starbase 23 in September with strike cruiser *Essahir* (CS 2508). Returned to Starbase 7 on 12 October. In SRA until mid-December.

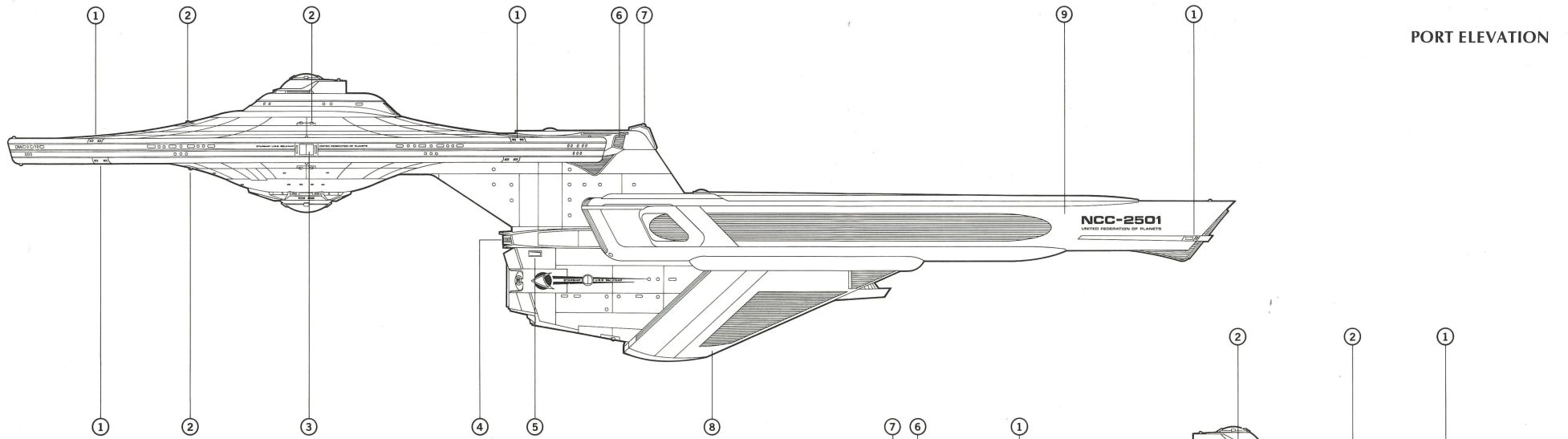
U.S.S. *Sur Cha* (CS 2541), Starbase 5. In port Starbase 5 through mid-February 2289. Operated with Karuv'ti forces 24 February to 07 March in subquadrant 2 north. Maneuvers with the shuttlecarrier *Ichkeul* (SC 2201) in the subquadrant 2 south area until 23 April. Classified status from 12 May through 25 October. In home port during November. Deployed to Klingon-Federation border 03 December.

### Training Ship

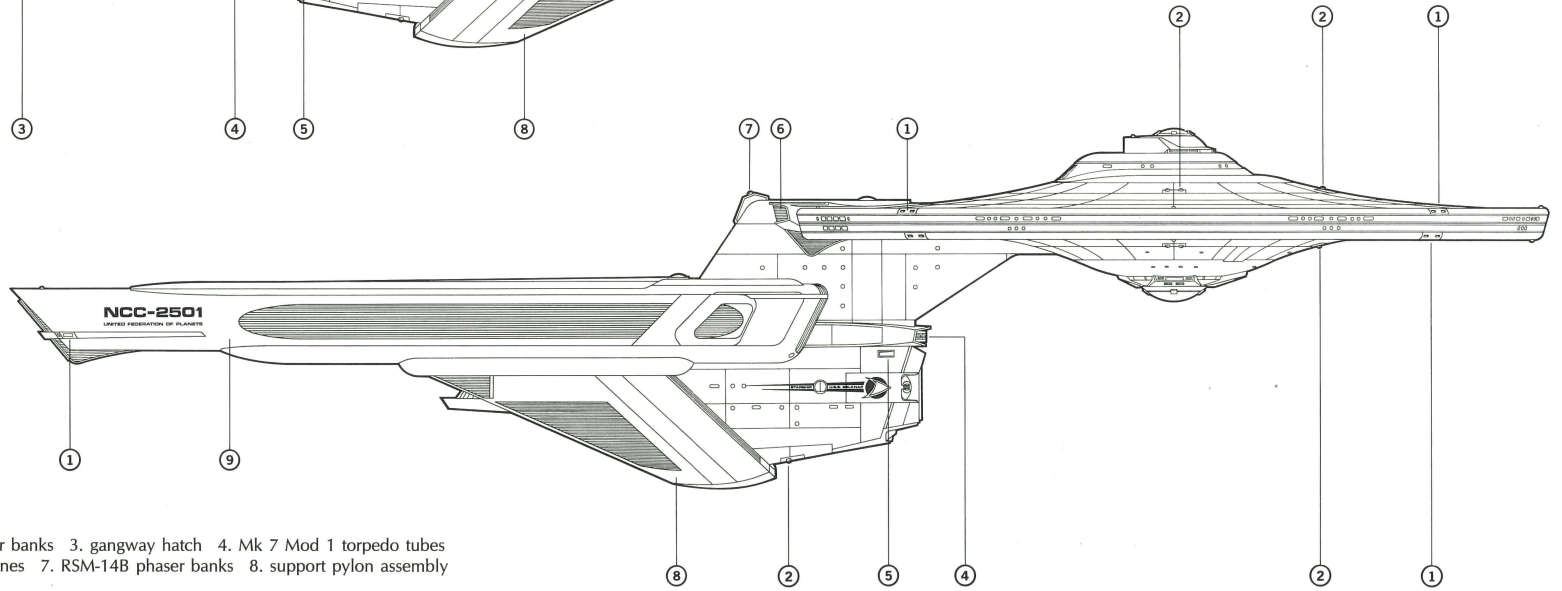
U.S.S. *Decatur* (CST 2500), Starbase 1. In home port for routine scheduled overhaul 11 February to 07 March 2289. Assigned to Star Fleet Academy rotation 11 March. Midshipman training cruise 23 March to 11 May, deploying from Academy number four. In port Starbase 3 from 24 May to 10 June for installation of experimental sensor equipment. Midshipman training cruise 25 June to 19 August, deploying from Academy number one. Operations with Star Fleet Reserve Force in September and October. Training deployment 27 October to 23 November with members of Star Fleet Junior Officers Association on board for observation. Departed Starbase 3 on 17 December for extended-duration training cruise, scheduled to return in April 2290.

*We can chart our destiny straight and true  
We can turn the stars around  
Head for new horizons, but before we do  
We've got to save our ship, before our ship goes down*

Blood, Sweat & Tears  
— 1973



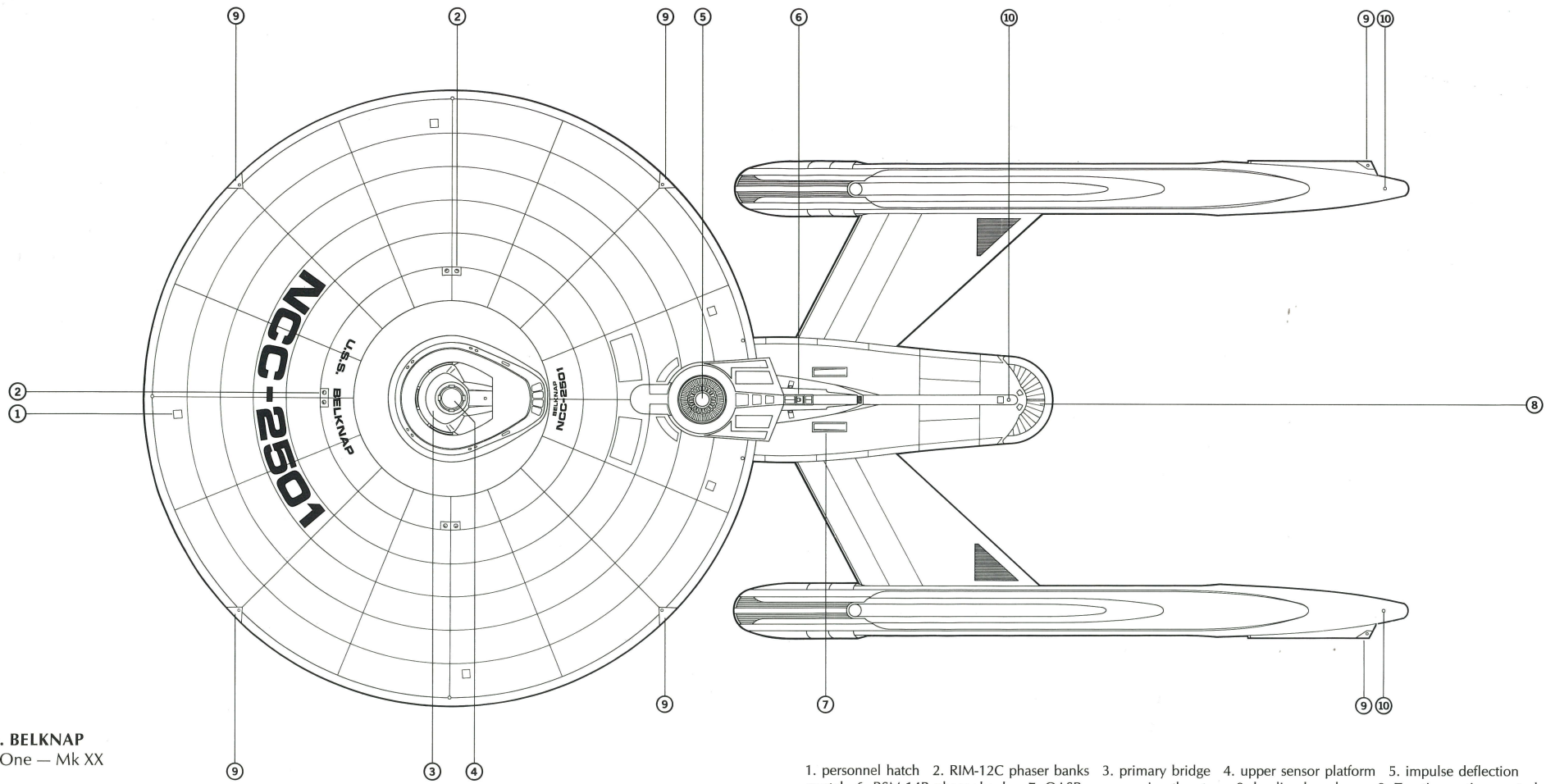
PORT ELEVATION



**U.S.S. BELKNAP**  
Class One — Mk XX  
Strike Cruiser  
NCC-2501

**STARBOARD ELEVATION**

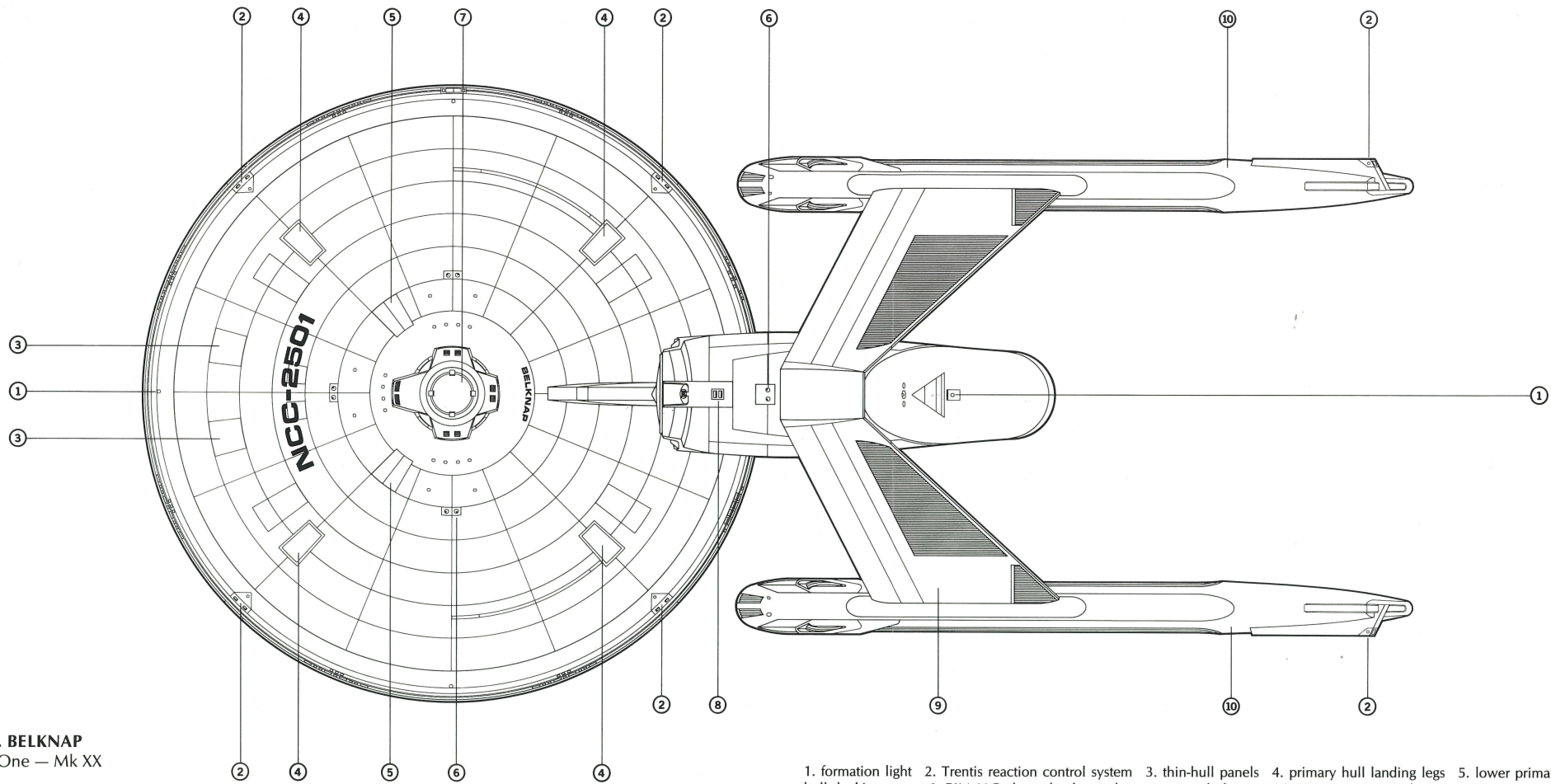
- 1. Trentis reaction control system
- 2. RIM-12C phaser banks
- 3. gangway hatch
- 4. Mk 7 Mod 1 torpedo tubes
- 5. QASR maneuvering thrusters
- 6. RSL impulse engines
- 7. RSM-14B phaser banks
- 8. support pylon assembly
- 9. LN-64 Mod 3 warp drive units



**U.S.S. BELKNAP**  
Class One — Mk XX

**OUTBOARD TOP PLAN**

1. personnel hatch 2. RIM-12C phaser banks 3. primary bridge 4. upper sensor platform 5. impulse deflection crystal 6. RSM-14B phaser banks 7. QASR maneuvering thrusters 8. landing bay doors 9. Trentis reaction control system 10. formation light



**U.S.S. BELKNAP**  
Class One — Mk XX

**OUTBOARD BOTTOM PLAN**

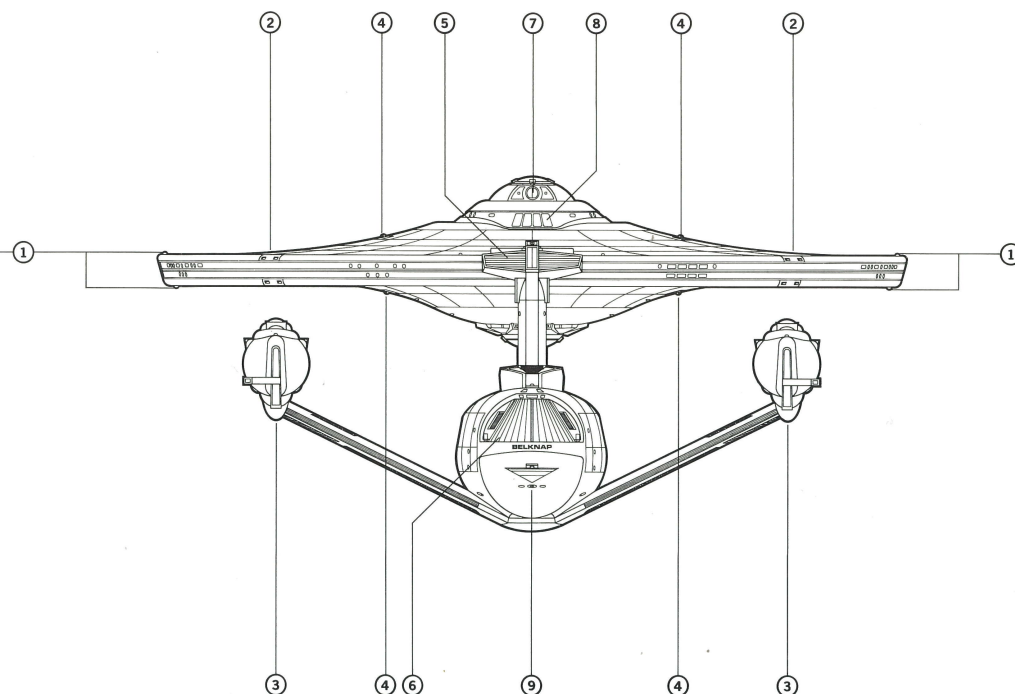
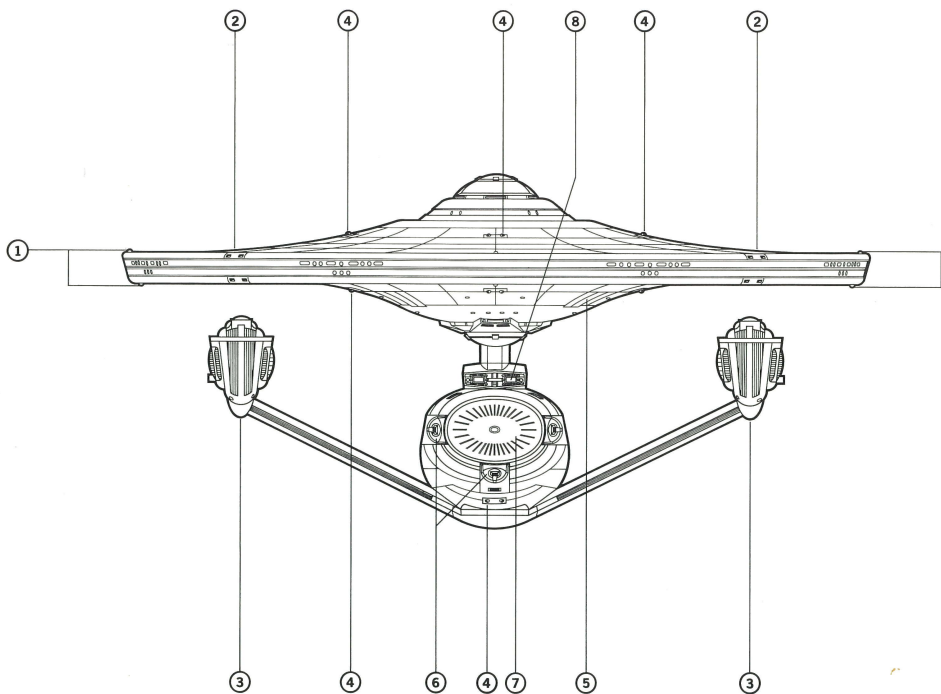
- 1. formation light
- 2. Trentis reaction control system
- 3. thin-hull panels
- 4. primary hull landing legs
- 5. lower primary hull docking ports
- 6. RIM-12C phaser banks
- 7. lower sensor platform
- 8. QASR maneuvering thrusters
- 9. support pylon assembly
- 10. LN-64 Mod 3 warp drive units



**BOW ELEVATION**

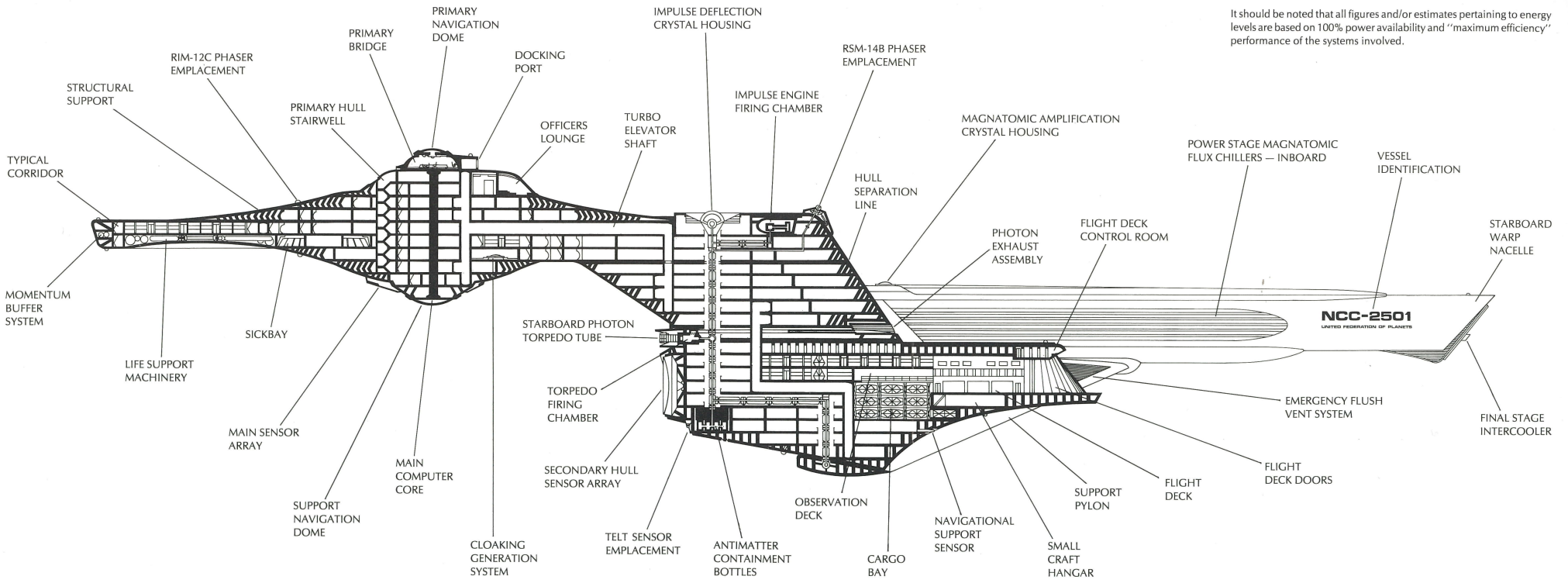
**U.S.S. BELKNAP**  
Class One — Mk XX

**STERN ELEVATION**



1. formation light 2. Trentis reaction control system 3. LN-64 Mod 3 warp drive units 4. RIM-12C phaser banks  
5. lower primary hull docking ports 6. Telt A5 sensor emplacements 7. Vernier SA9 sensor/deflector mount 8. Mk 7  
Mod 1 torpedo tubes

1. formation light 2. Trentis reaction control system 3. LN-64 Mod 3 warp drive units 4. RIM-12C phaser banks  
5. RSL impulse engines 6. landing bay doors 7. bridge docking port 8. lounge windows 9. long-range, high-intensity  
sensor



It should be noted that all figures and/or estimates pertaining to energy levels are based on 100% power availability and "maximum efficiency" performance of the systems involved.

**U.S.S. BELKNAP**  
Class One — Mk XX

**INBOARD PROFILE CUTAWAY**

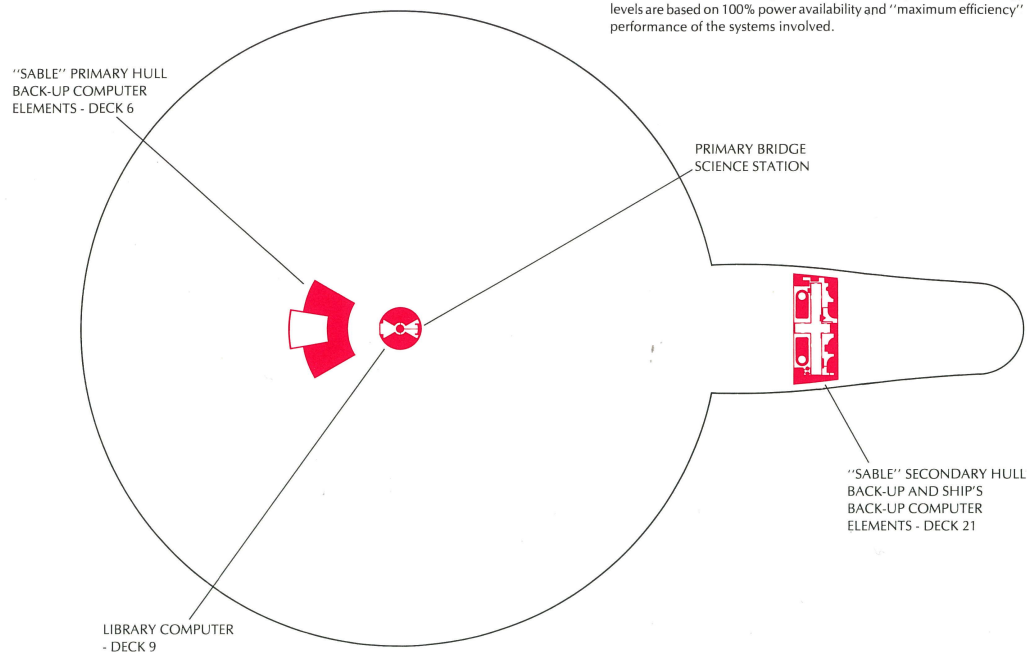
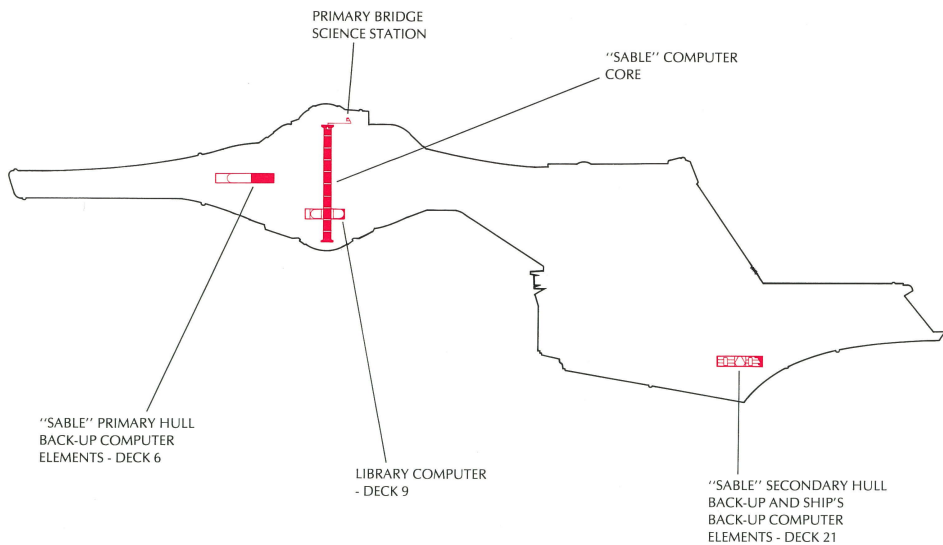
**Defensive Systems**

Force field maximum energy impact load:	not available (estimated $1.380 \times 10^{15}$ joules @ 4.80 seconds to full recovery)
Close-In Deflector Shield maximum energy impact load:	not available (estimated $3.375 \times 10^{20}$ joules)
Deflector shield maximum energy impact load:	not available (estimated $2.986 \times 10^{25}$ joules @ full power to 8 shields; $2.481 \times 10^{26}$ joules @ full power to any one shield)
Cloaking generator maximum power:	93 x Earth normal gravity

Cloaking penetrator range:	$2.623 \times 10^9$ KM
Stasis countermeasure shield maximum load:	not available (estimated $7.180 \times 10^6$ luytens)
Cloaking device intermix conduit:	Bali 4000 Series Magnetic Flux Antimatter Valve (System contractor: Bali Industries, Tanami Spacebridge, Australia, Earth)
Defensive systems grid:	L523 .15 M Graviton Conduction Tubing (System contractor: Prentice-Schafer Inc., Marsport, Mars)

**U.S.S. BELKNAP**  
Class One — Mk XX

**COMPUTER SYSTEMS**



It should be noted that all figures and/or estimates pertaining to energy levels are based on 100% power availability and "maximum efficiency" performance of the systems involved.

**Computer Systems**

**Main computer:** "Sable" 1210 Node Network, channeled Duotronic III  
**Secondary/Back-up core:** "Sable" Mainline, channeled Duotronic II  
**Emergency core:** "Guardian" Duotronic Emergency Systems Monitor (Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
**Library computer:** NCC-2501-18: K1A Crystal Exator Information Supplement (System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
 NCC-2519, 2537-44: Dataram Crystal Exator Library Support Subsystem (System contractor: Farranti Mnemonics, Berkshire, Earth)  
**Navigation:** Primary: "Hawkeye" 32G Series Navigational Monitor  
 Primary mode supplement, NCC-2518, 2538-44: NAVTAC Tactical Guidance Component

**Defense:**

**Weapons:**

**Propulsion:**

Secondary/Back-up: "Hawkeye" 32C Series Navigational Monitor  
 Emergency: Model 1570 Astral Data & Control Computer (Systems contractor: Plessey Group, Essex, Earth)  
**Primary:** "Sable" Node 55-210 Duotronic Component  
 Secondary/Back-up: "Sable" 406 Duotronic Defense Control Computer (Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
**Primary:** "Sable" Node 225-410 Duotronic Component  
 Secondary/Back-up: "Sable" 510 Duotronic Weapons Monitor (Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
**Primary:** "Sable" Node 425-657 Duotronic Component  
 Secondary/Back-up: Zynnda Drive Systems Monitor (Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)

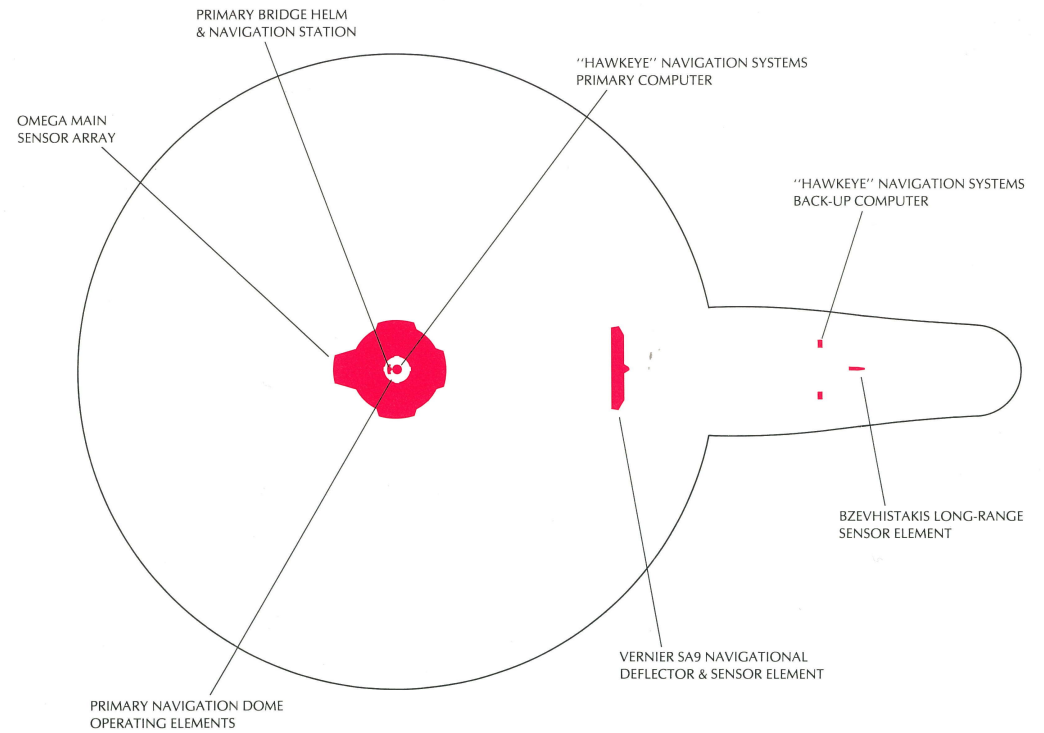
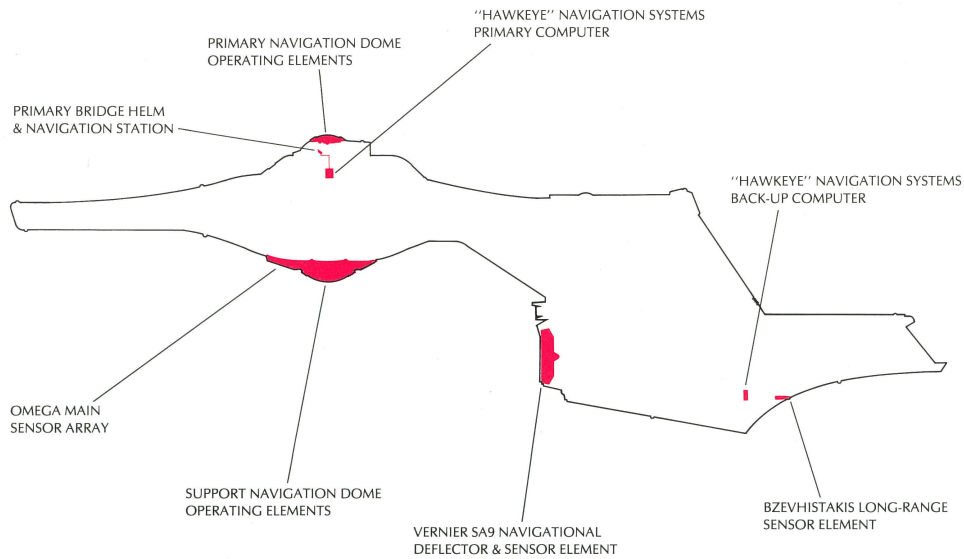
**Life support:**

**Flight data recorder:**

**Emergency:** IPC (Impulse/Precise Control) Motions Governing Unit (System contractor: Bonaventure Data Group, California, United Americas, Earth)  
**Primary:** "Sable" Node 710-980 Duotronic Component  
 Secondary/Back-up: "Sable" 696 Duotronic Life Support Computer  
 Emergency: "Sable" 300 Duotronic Life Support Computer (Systems contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)  
 "Sable" Duotronic Dump; SK 33/10 Shunt (System contractor: Eristaffe-Zynn Space Systems, Sebaldhasta, Deneb V)

**U.S.S. BELKNAP**  
Class One — Mk XX

**NAVIGATION SYSTEMS**



Navigation Systems  
C. Dob Omega Main Sensor Array -  
Kreider Warp Anemometer  
Planetary Hypsometer  
Warp Celestial Hypsometer  
Object Clearance Indicator  
Space Matter Densitometer  
(Systems contractor: Alto/Sekkulen I.F.D., Tiber Basin, Mars)

Primary (Upper) Navigation Dome -  
Driftmeter  
Induction Compass  
Warp/Celestial Gyro Gate  
Cosmic Pelorus  
Position Indicator/Subspace Direction Finder  
Subspace Compass  
YPR (Yaw/Pitch/Roll) Indicator  
(Systems contractor: Plessey Group, Essex, Earth)

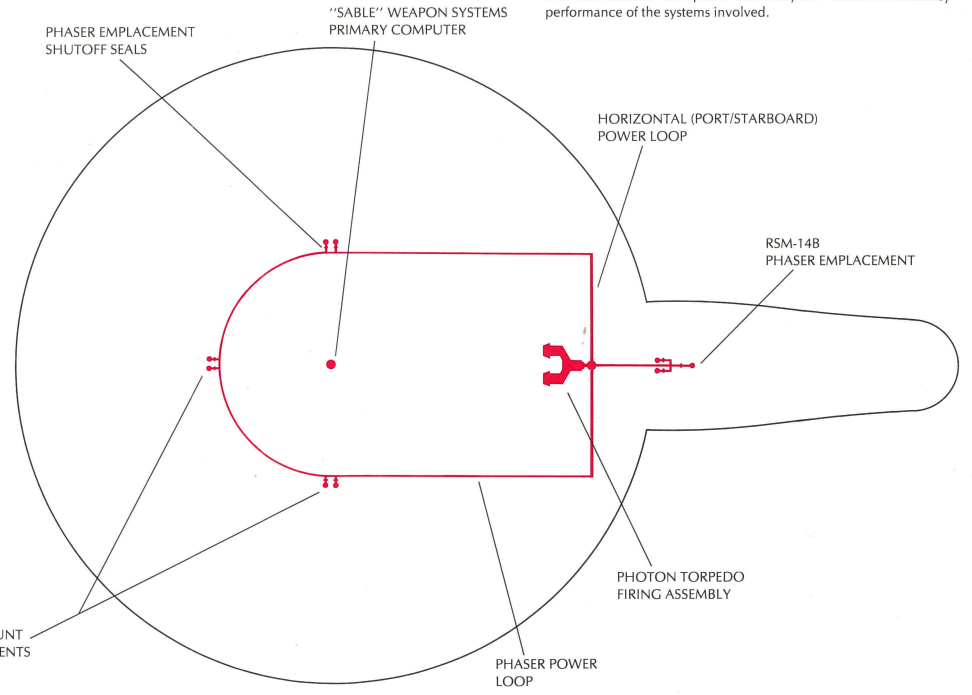
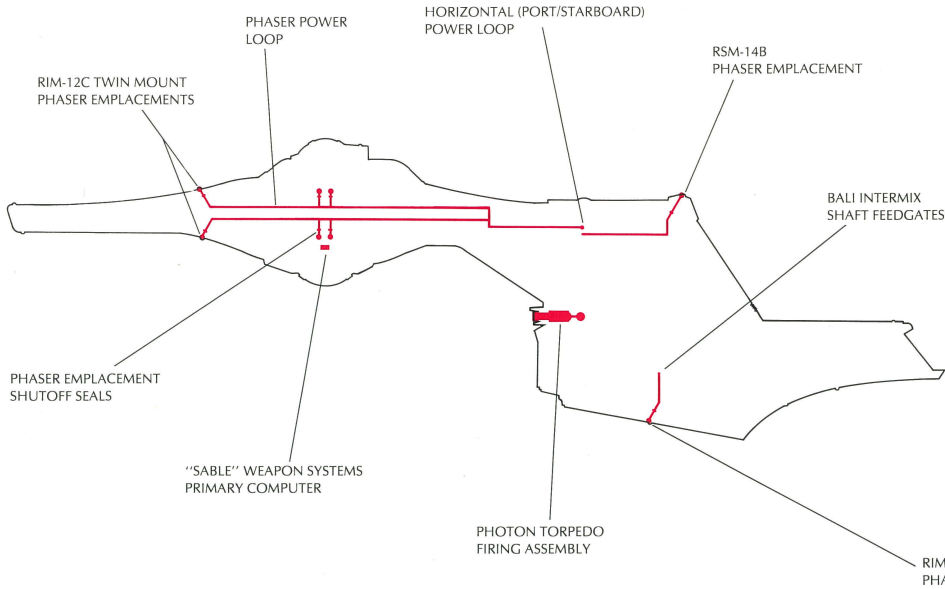
Support (Lower) Navigation Dome -  
Astrograph  
Astrometer  
Astroscope  
Warp Dynamic Indicator  
Chronometer/Time Synchronization Receiver  
Warp/Celestial Dynamometer  
Warp/Celestial Goniometer  
Variometer  
(Systems contractor: Plessey Group, Essex, Earth)

Astrogator -  
Navigation Central Processing Unit  
Navigation Secondary Processing Unit  
Navigation Equation Processor  
"Hawkeye" Warp Celestial Guidance Programming  
(Systems contractor: Plessey Group, Essex, Earth)  
Inertial Reference Platform -  
(System contractor: Illifi/Paruge, Aranab Tretos, Delta IV)

Secondary Hull Sensor Array -  
Vernier SA9 Combined Sensor Element with  
TU 50 Elliptic Field Source Deflector  
(System contractor: Penn Industries, Meridian City, Mars)  
Navigational Support Sensor -  
ADI 75000 Series Long-Range Sensor  
(System contractor: Bzevhistakis Kor Congresssum, Bortis, Tellar)

**U.S.S. BELKNAP**  
Class One — Mk XX

**WEAPON SYSTEMS**



It should be noted that all figures and/or estimates pertaining to energy levels are based on 100% power availability and "maximum efficiency" performance of the systems involved.

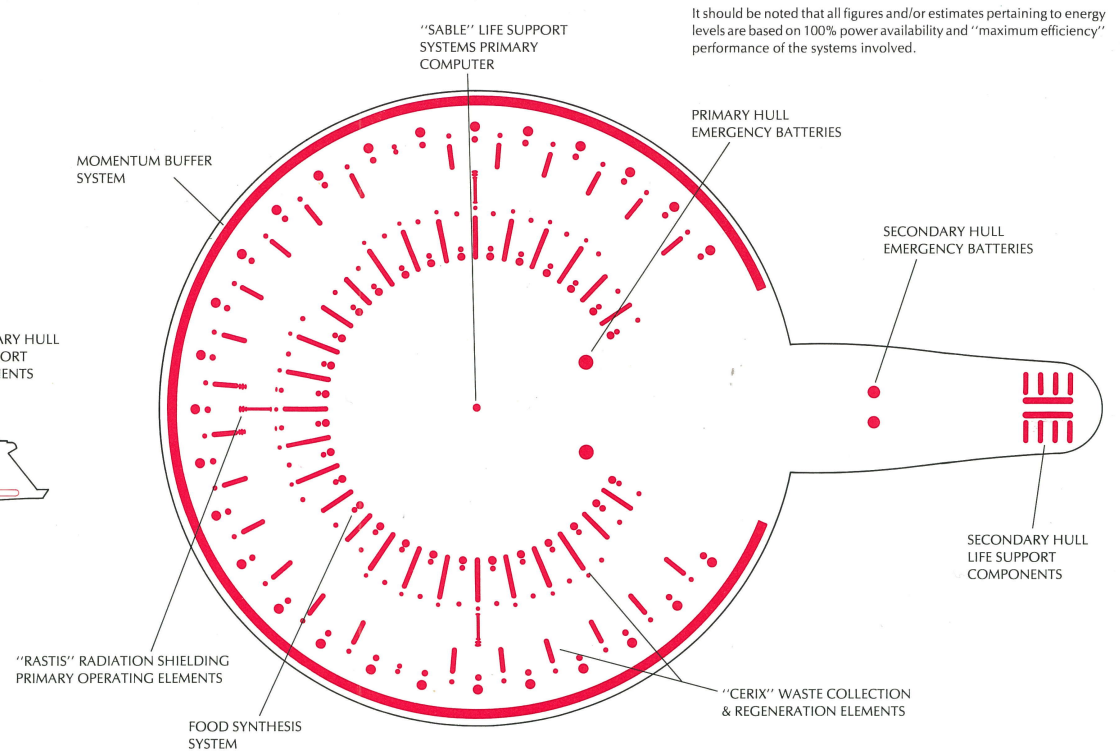
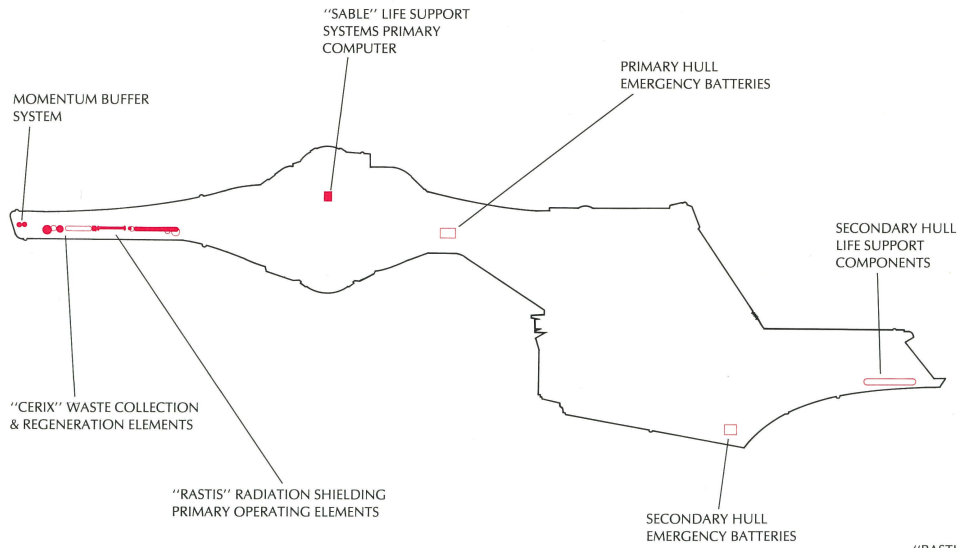
Weapon Systems  
 Photon torpedo load capacity: 42 per 8 second firing rotation at maximum torpedo explosive force  
 Magno-photon accretion hold capacity:  $6.28 \times 10^{18}$  QEV  
 Maximum torpedo explosive force: not available (estimated  $6.303 \times 10^{18}$  joules)  
 Maximum phaser intensity: RIM-12C: not available (estimated  $4.184 \times 10^{16}$  joules @ one meter beam width for 128 seconds duration)  
 RSM-14B: not available (estimated  $1.112 \times 10^{17}$  joules @ one meter beam width for 164 seconds duration)

Intermix direct feedgate: Bali 350 Series Magnetic Flux Antimatter Valve (System contractor: Bali Industries, Tanami Spacebridge, Australia, Earth)  
 Phaser bank activator: PCJ 616 Flux Coil  
 Phaser turret motivator: 36 TRAC (Systems contractor: Agusta Anasado Inc., Fuzes Basin, Venus)  
 Targeting computer: C-Ekta Terillis (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)  
 Targeting computer lock program: Classified

Firing computer: Ekta Terikti (System contractor: Skat-Rar Weapon Systems, Ezuruk, Andor)  
 Targeting/firing integrator program: Classified  
 Firing/deflector integrator program: Classified  
 Self-destruct computer: Series 5220 Diligent (System contractor: Eristaffe-Zynn Space Systems, Sebalhdasta, Deneb V)

**U.S.S. BELKNAP**  
Class One — Mk XX

**LIFE SUPPORT SYSTEMS**



It should be noted that all figures and/or estimates pertaining to energy levels are based on 100% power availability and "maximum efficiency" performance of the systems involved.

**Life Support Systems**

Artificial gravity field strength: 0 - 2.8x Earth normal gravity

Artificial gravity system: MC-3E Graviton Manipulator  
(System contractor: Cristobal SM/S, Manila, Earth)  
B 312 .02 M Graviton Conduction Tubing  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)

Waste regeneration systems: Solid: "Cerix" TSB Subatomic Redistributors  
Liquid: "Cerix" TSM Subatomic Redistributors  
Gaseous: "Cerix" TSP Subatomic Redistributors  
(Systems contractor: Jullundur-Lahore Ltd., Bombay, Earth)

**Radiation shielding:**

Maximum with all defensive systems down:  
Electromagnetic: 6.228 ryles  
Particular:  $2.480 \times 10^{12}$  nauds  
Radiation shielding operates at 72% of norm against Berthold radiation, 67% of norm against Delta radiation, 65% of norm against Celebium radiation, and 58% of norm against Mesmer radiation.

**Momentum buffers:**

Internal temperature range: -260°C to 140°C

Internal lighting levels: 0 - 13,500 lumens/meter<sup>2</sup>

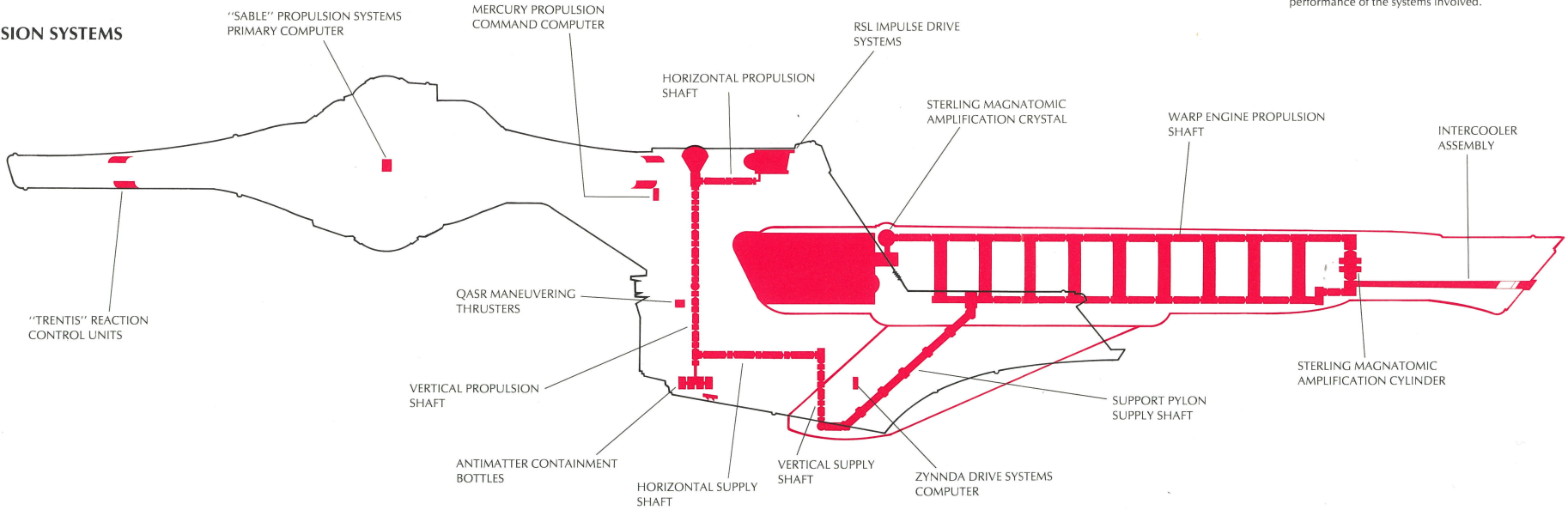
Food Synthesis: Maxineta Sustenance Processors

(System contractor: Flon Du Leis, Paris, Earth)

Q 150 1.0 M Graviton Conduction Multicoil Tubing  
(System contractor: Prentice-Schafer Inc., Marsport, Mars)

**U.S.S. BELKNAP**  
Class One — Mk XX

**PROPULSION SYSTEMS**



It should be noted that all figures and/or estimates pertaining to energy levels are based on 100% power availability and "maximum efficiency" performance of the systems involved.

**Propulsion Systems**

Horizontal propulsion shaft:	.06 M Dillithium Gas Piping Prometheus 300 Magnetic Flux Antimatter Conduit
Vertical propulsion shaft:	Z-Charge Phaser Transmission Tube .06 M Dillithium Gas Piping Prometheus 310 Magnetic Flux Antimatter Conduit
Horizontal supply shaft:	Z-Charge Phaser Transmission Tube .06 M Dillithium Gas Piping Prometheus 350 Magnetic Flux Antimatter Conduit
Vertical supply shaft:	.06 M Dillithium Gas Piping Prometheus 370 Magnetic Flux Antimatter Conduit
Support pylon supply shafts:	.06 M Dillithium Gas Piping Prometheus 508 Magnetic Flux Antimatter Conduit
Warp drive propulsion shafts:	.06 M Dillithium Gas Piping Prometheus 620 Magnetic Flux Antimatter Conduit

**Shaft coupling and cutoff units:**

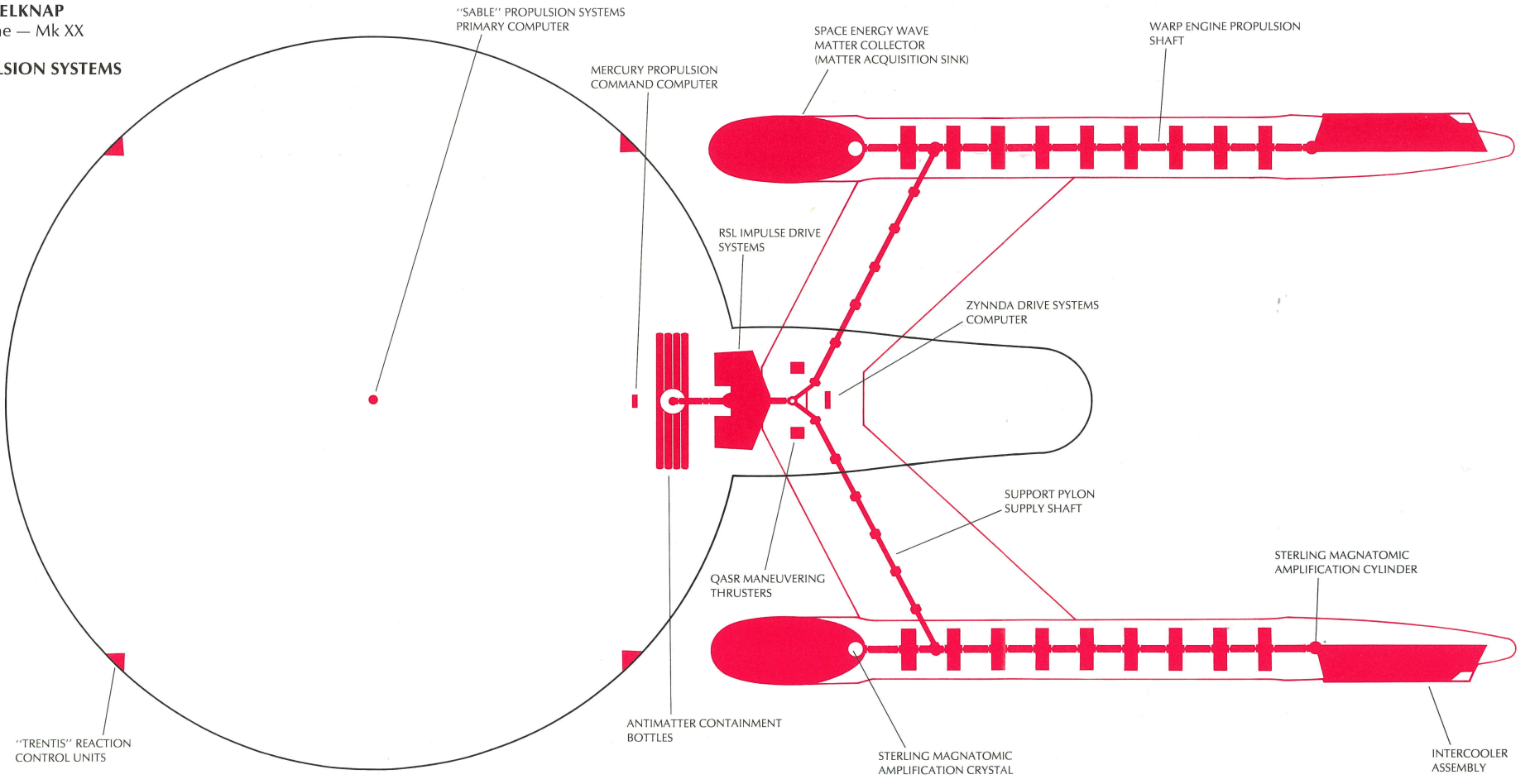
	.7 M Counterflux Antimatter Venturi Valves (Systems contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)
Plasma formation:	Sterling 10 Sol Magnatonic Amplification Crystal
Antiplasma formation:	Sterling 10 Sol Magnatonic Amplification Cylinder (Systems contractor: Jeffries Transdimensional Dynamics, Toronto, United Americas, Earth)
Matter acquisition sink:	Space Energy Wave Matter Collector
Flux constrictors:	Feli 5038 dillithium-charged refraction rods & magnatonic carrier coils
Inboard power stage flux chillers:	Feli 121 dillithium-charged refraction rods & magnatonic carrier coils
Outboard power stage flux chillers:	Feli 723 dillithium-charged refraction rods & magnatonic carrier coils (Systems contractor: Cochrane Warp Dynamics, Minos al Rijil, Alpha Centauri VII)

**Emergency flush system:**

	Space Energy Wave Dillithium Gas Evacuators (System contractor: Nestiri Associated Industries, Old Colony, 61 Cygni A IV)
Impulse deflection crystal:	Leor 3-Yield Dillithium Crystal Firing Assembly (System contractor: Sarlis, Par Fir, Vulcan)
Final stage intercoolers:	Multiple Gravitonic Injector Housing (System contractor: Arkararata Government Consortium, Edos)
Inlet flow sensors:	Level 12 Sensitivity Space Normal Matter Sensors (System contractor: Visi Un Da, Arlapida Harbor, Izar)
Propulsion computer systems:	Mercury 4100 Duotronic II Propulsion Command System with independent secondary & emergency units (System contractor: Daystrom Computer Systems Inc., Lunaport, Luna)

**U.S.S. BELKNAP**  
Class One — Mk XX

**PROPULSION SYSTEMS**





"THE DEFINITIVE PUBLICATION ON THE SUBJECT . . . A MUST FOR ANY BEING INTERESTED IN STAR FLEET STRENGTH."

*-Starship Design*

"THIS MANUAL SHOULD BE REQUIRED READING FOR EVERY STRATEGIC PLANNER IN THE FEDERATION."

*-Starship Interstellar*

"AN UNRIVALED REFERENCE TEXT . . . LAVISHLY ILLUSTRATED, EASY TO USE, AND HIGHLY INSIGHTFUL. **SHIPS** HAS SURPASSED THE OTHER 'STANDARD REFERENCES' AS THE MOST COMPREHENSIVE GUIDE TO STAR FLEET VESSELS"

*-Academy Literary Review*

"THE BEST COVERAGE OF FEDERATION SPACEGOING SERVICES . . . A TREASURE CHEST OF INFORMATION."

*-TacFleet Journal*

"THE MOST THOROUGH AND AUTHORITATIVE GUIDE TO THE CONSTANTLY CHANGING COMPOSITION OF STAR FLEET, TACFLEET, AND THE NUMEROUS RESERVE, SUPPORT, AND AUXILIARY FORCES."

*-Interstellar Combat*

## DEFENSE FORCES INSTITUTE

BAY COLONY COMPLEX  
PIONEER VALLEY  
UNITED AMERICAS, EARTH

ISBN 0-9656016-0-9

\$29.95



9 780965 601603