

# FEDERATION UPDATE :

## Fleet Database :

06

### STATISTICS

CATEGORY: Command and Control  
Classification: Heavy Cruiser  
Class: Omega  
Name: U.S.S. Omega  
Naval Construction Contract: 25743  
Date Entering Service: 52570.0

### DIMENSIONS

Length: 662 m  
Width: 467 m  
Height: 115 m  
Tonnage: 3,000,000 mt  
Superstructure Points: 140  
Damage Chart: C  
Cargo Units: 650 scu  
Cargo Capacity: 32,500 mt  
Crew: 615                      VIP: 150

### TRANSPORTERS

6-person: 14                      Cargo, small: 5  
12-person: 8                      Cargo, large: 3  
22-person: 2

### SHUTTLECRAFT

Docking ports: 4  
Shuttlecraft bay: 1  
Work Bee: 20  
Shuttle Pod: 12                      Lifeboat, 10-per.: 35  
Std. Shuttle: 16                      Lifeboat, 20-per.: 25  
Heavy Shuttle: 10                      Lifeboat, 30-per.: 15

### ENGINEERING

Total Power Units Available: 278  
Movement Point Ratio: 7/1  
Warp Engine Type: FIWF-1, 2 nacelles  
Power Units Available: 2(50)  
Secondary Core Type: FICE-1 (core only)  
Power Units Available: 90  
Stress Charts: E/F  
Max. Safe Cruising: Warp 7  
Emergency Speed: Warp 9.65  
Max. Speed: 9.97  
Max. Speed using FICE-1: Warp 8  
Impulse Engine Type: FIG-4  
Power Units Available: 46  
Fusion Reactors/Thrusters: Chiokis Fusion Reactors

Number: 21  
Power Units: 21(2)

### WEAPONS

Beam Weapon Type: FH-15  
Number: 2

Firing Arcs: 300-degree Collimator Arc f/p/s  
Firing Chart: Y-2  
Max. Power: 30  
Damage Modifiers: +3 (1-15); +2 (16-23); +1 (24-28)  
Beam Weapon Type: FH-11  
Number: 8  
Firing Arcs: 1p, 1s, 2a/upper, 2a/lower, 1 upper, 1 lower  
Firing Chart: Y  
Max. Power: 20  
Damage Modifiers- +3 (1-11); +2 (12-20); +1 (21-24)  
Missile / Probe Launch Mechanism: Lawing-1  
Missile Weapon Type: FP-10 (max.) - can use types FP-1 to FP-10

Launch Tubes: 4  
Firing Arcs: 2f, 2a  
Firing Chart: S  
Arsenal: 350  
Launch Capacity: 6/ round, 1.5 rpm (per tube)  
Power to Arm: 3 per round  
Damage: 30

### SHIELDS

Shield Point Defense System  
Deflector Shield Type: FSU-3 (triple layered)  
Shield Point Ratio: 1/ 5  
Max. Shield Power: 27 (81)  
Shield Grids: 6  
Recovery Time: 2.7 secs.

### COMPUTER CONTROL

Ship Control and Navigation:  
2 Duotronics M-9A AICS cores  
Ship Engineering: Duotronics M-10/O AICS  
Sensors and Communication: Duo. M-10 AICS  
Fleet Tactics: Duotronics M-11 AICS  
Shield Point Defense: Duotronics M-11 AICS  
OPERATIONAL CAPABILITIES  
Range: 33,190 light years  
Expected Lifetime: 50 Std. yrs.  
Period between Refits: 15 Std. yrs.  
Primary Sensor Radius: 4.0 parsecs  
Automated Telemetry Control Rad. : 3.0 parsecs  
Tractor Beams: 2  
Max. Towing Capacity: 5,600,000 mt  
Max. Range: 78,000 km

## USS OMEGA Class

Max "Starbuck" Hall  
and  
Jeff Santabaaka

The OMEGA CLASS, while officially listed on the fleet roster as merely a heavy cruiser, is much more than that. With the fire-power of a GALAXY CLASS, the shielding of a Dreadnought, sensory capability equaling that of dedicated science vessels, and a communications outfit that rivals that at Starfleet Headquarters, it is no wonder that some have considered the possibility of creating a whole new classification for this vessel. Therefore it is an honor to present you with the vital statistics for Starfleet's new Command and Control Cruiser, the USS OMEGA!

#### Design History:

The incident at Wolf 359 has had a far ranging and lasting impact upon Starfleet Operations and Planning. The accelerated procurement of Nebula Class Cruisers, rapid production of the Pegasus Class Heavy Cruiser, and increased emphasis on Combat Training at the Academy and within the fleet have been only some of the more obvious effects.

In spite of the Commanding Admiral's superb tactical coordination and excellent fleet battle-plan execution, an independent investigation determined that overall coordination and effectiveness could increase as much as fourfold with the introduction of a starship class dedicated solely to fleet Command and Control. In essence, a purpose-designed Flagship.

Starfleet Command was forced to rethink its concept of Flagships. While a policy was made to continue referring to the senior front-line exploration vessels in each sector as flagships, tactical coordination and fleet command would revolve around the newly designated Command and Control Cruisers.

Initial consideration centered on the possibility of retro-fitting several of the unfinished Galaxy Class frames to this role. However, extensive testing with the USS NOGURA NCC-54796 pointed up a number of inadequacies.

While internal volume was sufficient to the specific needs of the class, substantial redesign of the internal structure would be required to provide the support and supplies needed by the additional Anti-matter core and three additional

computer cores. Additional space would have to be developed for a doubled lateral sensor array, the internal power grid would have to be totally reworked, and the deflector arrays would have to be completely replaced.

As a result of these drawbacks, only the Nogura frame was fitted out to this role. The Nogura went on to serve mainly as a testbed for many of the new ideas that were to be incorporated into the OMEGA Class design. She also served in a stop-gap role until the commissioning of the USS OMEGA NCC-25743 on 22 July 2375. The USS NOGURA continues to serve as a research and training vessel in the Starfleet Reserve Fleet.

In the final design, the OMEGA Class ship is eight percent smaller than the GALAXY Class. A larger storage bay allows moderate damage to the ship to be repaired without the assistance of a starbase. The only irreparable damage would be loss of life and the severe damage or destruction of a warp nacelle.

#### COMPUTER SYSTEMS:

The systems testing with the NOGURA allowed for numerous refinements in the OMEGA Class' equipment. Early on, it was realized that the mission parameters were computer processing power intensive. It was decided at that stage to incorporate two additional Computer Cores into the Nogura. Later testing proved this to be less than ideal due to incompatibilities discovered between the subroutines of the engineering and shield control programs while the two were shoehorned into the same hardware.

As a result, the OMEGA was designed with six cores. Two Duotronics M-9A AICS are devoted to Navigation, Ship's Control, Ship's Systems, and Library Resources.

One Duotronics M-10 mod O AICS is designed specifically for Ship's Engineering. The 'mod O' was developed for the Omega due to the presence of the second antimatter core. Fleet doctrine calls for a separate computer to control each antimatter core in use. To get around this Starfleet R&D, in conjunction with Duotronics and the Daystrom Research Institute, came up

with the M-10 mod O. It consists of two distinct hemispheres, each one tasked with controlling one of the cores. Contact between the two hemispheres is limited and tightly controlled, with all information passing between them being run through the best debugging programs Federation science can produce.

Sensory and Communications share a standard Duotronics M-10 AICS. These systems cross connect with the Library Resource functions of the main computers and the Tactical System.

One Duotronics M-11 AICS is used for Fleet Tactical Evaluation and Extrapolation. A subroutine of this system is a holosystem that displays current tactical information in the Flag Bridge, allowing the Fleet Commander to literally step into the battle to see how things are developing.

The last computer is also a Duotronics M-11 AICS. This computer is dedicated to the new Shield Point Defense System, which is described in a following section.

#### POWER SYSTEMS:

The OMEGA design is rare in its use of twin Antimatter cores for propulsion and on-board power. Additionally, the Omega design incorporates twenty-one fusion reactors to power the maneuvering thrusters and the ship's internal power grid. Ships batteries are capable of maintaining minimal life-support for seventy days, or shipwide life support and essential systems for twenty-one days. The ship's survival locker also contains the parts necessary for the construction of a solar sail to provide supplemental power in the event of a catastrophic disaster.

Main Power and Warp Propulsion is provided by an FIWF-1 antimatter core. This system provides power to the warp field coils in the nacelles as well as to the ship's EPS Power Grid and Tactical Systems.

The FICE-1 core serves as the primary auxiliary power system. In addition, it also provides power directly to the EPS grid, tactical, sensors, and communications. It is nominally in a 'Standby' mode, producing about five units of power. This way, it can go through a 'hot-start' procedure to fully operational

status in ten minutes. In the event of a primary core loss or shutdown, the FICE-1 can be cross-patched into the feeds for the warp field coils, allowing the vessel to proceed to a repair facility at a reduced warp velocity.

The impulse drive is the new FIG-4. This, plus 21 fusion thrusters built into the edges of the ship's hull, has greatly improved the maneuverability of the ship to exceed those of all vessels of heavy cruiser size and up. Standard procedure is for the fusion reactors to be on a one-third rotation. Seven are on line at all times, seven are in standby mode, and seven are in a maintenance cycle shutdown. During a Yellow Alert, standby reactors are brought on line and the cold reactors are brought to standby readiness. During a Red Alert all reactors are brought on-line. While the combined power of the fusion reactors is minimal when compared to the output of the two antimatter cores, they can support the essential systems while freeing up power that could be more effectively used for the shields or weapon systems.

#### WEAPON SYSTEMS:

By design, the OMEGA's primary weapons are her communication and sensory systems. However, should push come to shove, the Omega should be well capable of taking care of herself. The basic OMEGA CLASS weapons are as follows:

- 10 Phaser banks
  - 2 FH-15's, 300-degree arc phasers, upper and lower faces.
  - 8 FH-11's, strategically located to eliminate blind spots.
- The phaser systems have been designed to cover all possible attack vectors. Recent advances have been able to increase the range of these systems considerably.
- 4 Photorp tubes, 2 fore, 2 aft.
  - Capable of launching all classes of Starfleet torpedoes and probes. Launching system is the Lawing Model 1. The Lawing-1 incorporates a cylindrical magazine drum that holds up to six projectiles. The magazine is moved into position at the breach of the tube, and the projectiles are accelerated through the use of a magnetic field rail gun. Once clear of the shields, the projectiles

engines fire, propelling it to its designated target. One Lawing-1 uses the forward tubes, while another uses the aft tubes. Two tubes are required to allow sufficient cool down between firings. The Lawing-1 is capable of launching 18 projectiles per minute. Primary system designer - Civilian Engineer Darnell Lawing.

#### SHIELD POINT DEFENSE SYSTEM:

The shield system is the standard triple-layer variety used on dreadnought Class vessels. A single shield generator can provide protection for one-sixth of a ship's hull. The triple-layer shield system can multiply that protection three-fold, if needed. This particular field has seen great advances due to the knowledge acquired during the Borg Incident. The only difficulty in spreading this leap forward in shield technology to all Starfleet vessels is the need for a Duotronics M-11 AICS to run it.

The Shield Point Defense System (SPDS) is a revolution in the application of power devoted to defensive systems. SPDS can pin-point where an attack will strike on the hull and can redirect the energy of a shield generator to the precise region that will be hit. Current shield technology will only accept a temporary increase of two hundred percent, or triple the original shielding. With improvements in the materials and generators, this value will definitely increase.

The SPDS can only redirect energy that is already there; it cannot increase the amount of energy sent to that specific generator. It is important to remember that there is not enough energy to cover the entire ship with the triple layer of shields. SPDS controls power sent to the shields depending upon the possible vectors of attack; i.e. the forward section may have full power directed to its shield, while the aft section may have no shielding at all.

#### MISSION PARAMETERS:

While the initial design sprang out of Starfleet's desire to develop a 'Fleet Command and Control Vessel' specifically targeted for defending against Borg encroachments, the ship they received has proven its worth

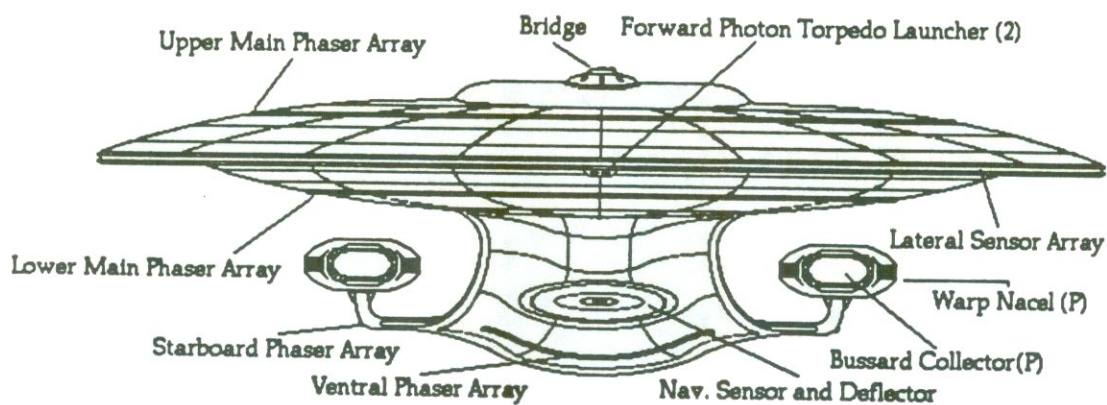
already in a number of non-combat situations. OMEGA Class missions to date include the evacuation of Shrevana IV, Search-And-Rescue Coordinator for the passenger liner SS AHNLACH, and the defusing of several incidents along the Cardassian Treaty Border.

With the production run now past its midpoint, Starfleet Command is looking to expand the scope of OMEGA Class operations. While most of Federation space is well charted, large portions remain unexplored. After the discovery of the Dyson sphere along one of the Federation's peripheral trade routes, the USS OMEGA and the USS HIGHLANDER NCC-1782D have been assigned to charting and exploring some of the gaps in the UFP's map.

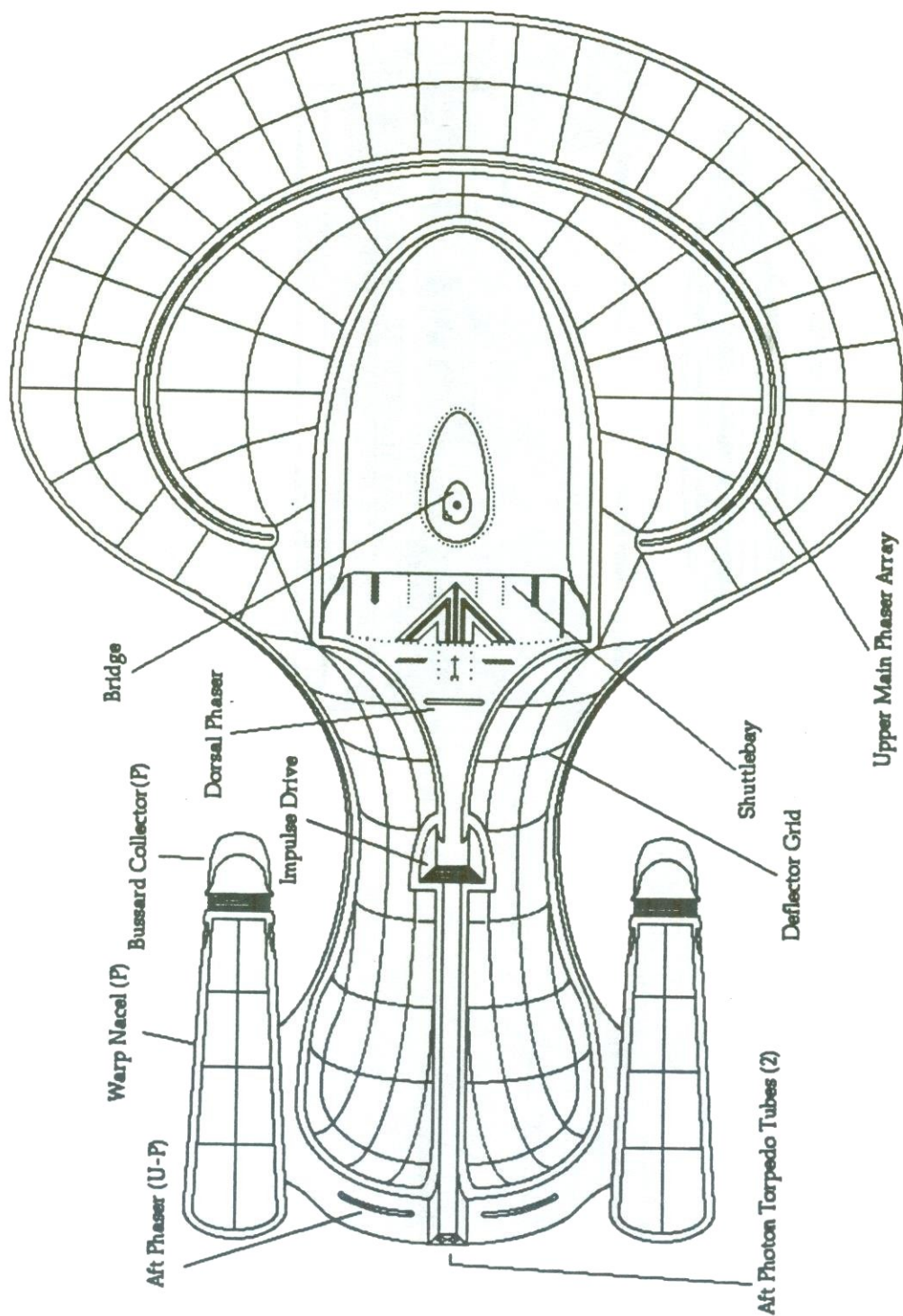
Once all eight are commissioned, as many as six could be assigned to internal exploration. This would allow Starfleet Command to utilize these vessels unique abilities while keeping them close at hand in the event that they might need to fulfill their intended role.

LTCDR Max 'Starbuck' Hall  
FO USS HIGHLANDER NCC-1782D  
Design Team Leader

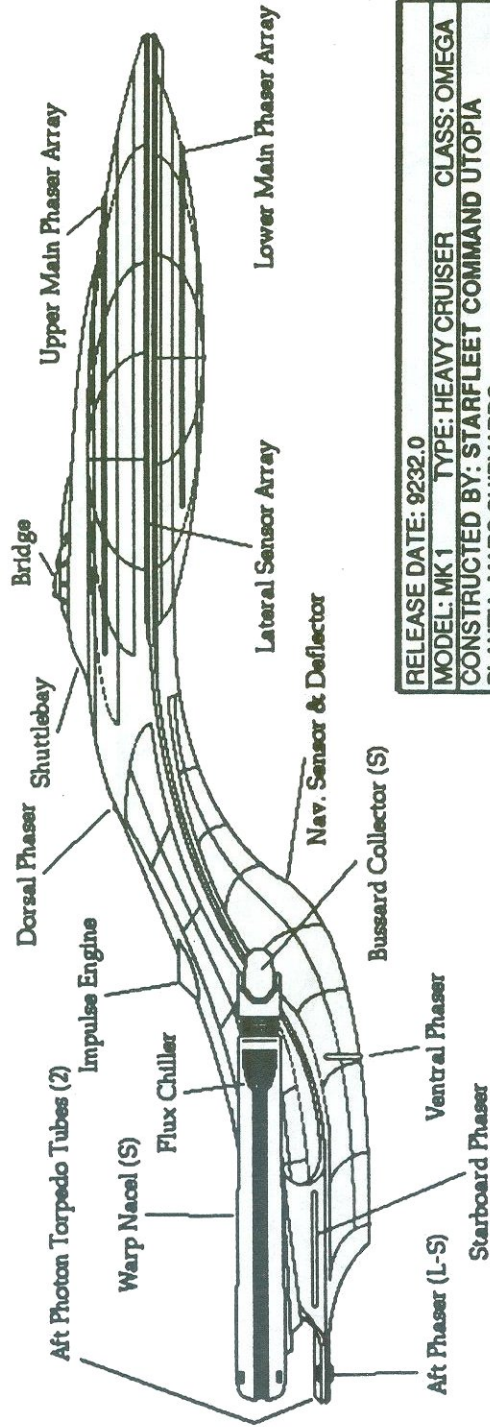




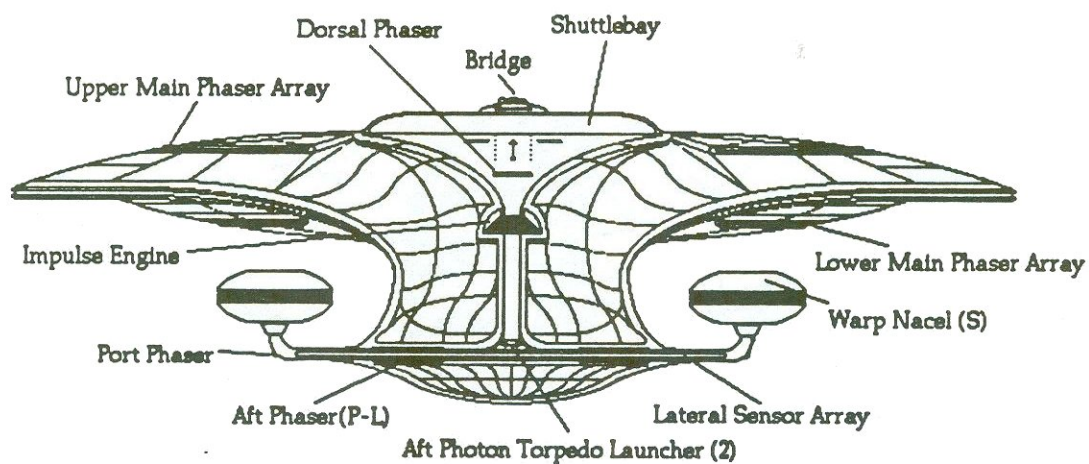
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CONSTRUCTED BY: STARFLEET COMMAND UTOPIA		
PLANTIA, MARS SHIPYARDS		
DRAWN BY: LTCDR MAX 'STARBUCK' HALL STARDATE: 9100.0		
APPROVED BY: COE, ROY J. FIRESTONE STARDATE: 9173.0		
CLASSIFIED, AVATAR STAFF ONLY		
SHT: FORWARD VIEW	SHT 1 OF 6	



RELEASE DATE: 9232.0	MODEL: MK 1	TYPE: HEAVY CRUISER	CLASS: OMEGA
CONSTRUCTED BY: STARFLEET COMMAND UTOPIA	PLANTIA, MARS SHIPYARDS		
DRAWN BY: LTCDR MAX 'STARBUCK' HALL	STARDATE: 9100.0		
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CLASSIFIED, AVATAR STAFF ONLY			
SHT: OVERHEAD VIEW			SHT 2 OF 6

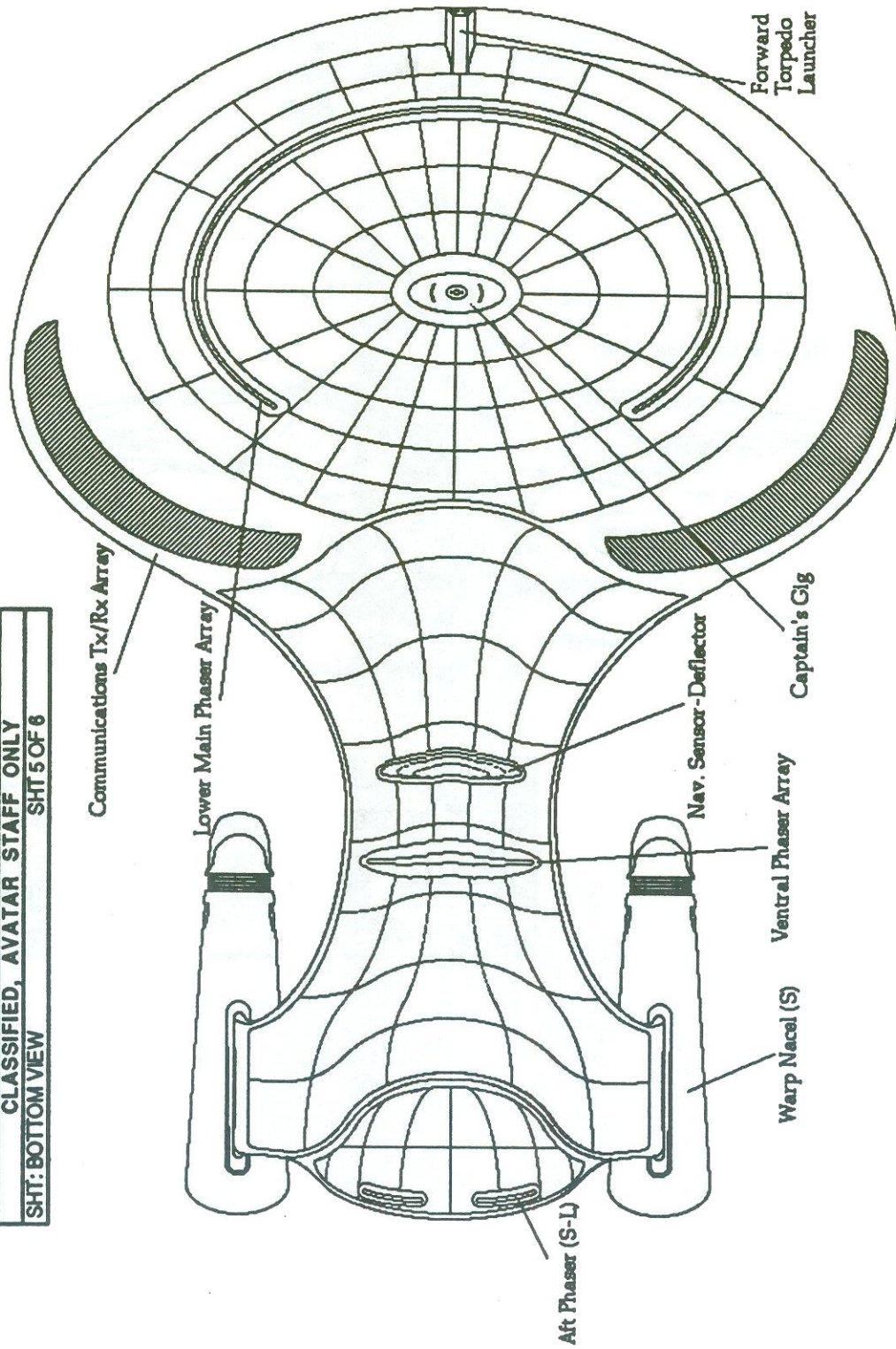


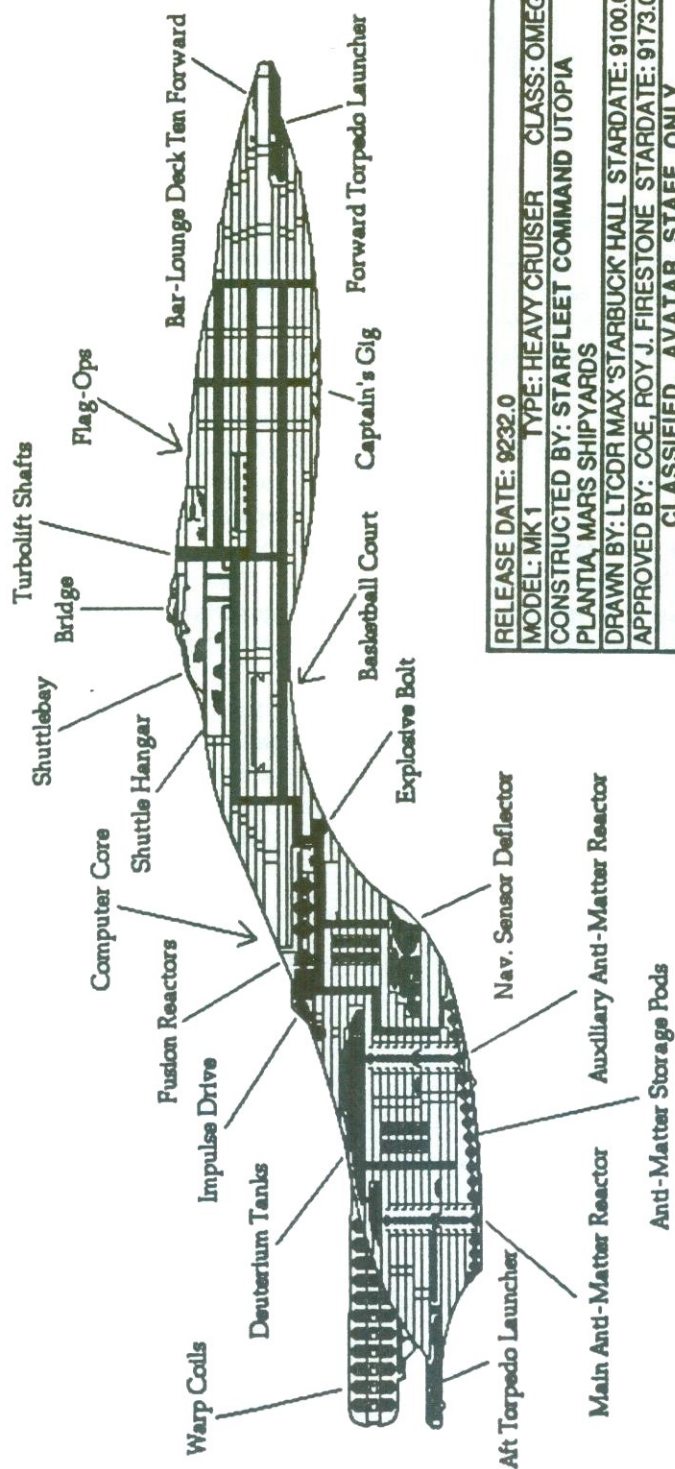
RELEASE DATE: 9232.0	
MODEL: MK 1	TYPE: HEAVY CRUISER CLASS: OMEGA
CONSTRUCTED BY: STARFLEET COMMAND UTOPIA	
PLANTIA, MAPS SHIPYARDS	
DRAWN BY: LTCDR MAX 'STARBUCK' HALL	STARDATE: 9100.0
APPROVED BY: COE, ROY J. FIRESTONE	STARDATE: 9173.0
CLASSIFIED, AVATAR STAFF ONLY	
SHT: STARBOARD VIEW	SHT 3 OF 6



RELEASE DATE: 9232.0		
MODEL: MK 1	TYPE: HEAVY CRUISER	CLASS: OMEGA
CONSTRUCTED BY: STARFLEET COMMAND UTOPIA PLANTIA, MARS SHIPYARDS		
DRAWN BY: LTCDR MAX 'STARBUCK' HALL STARDATE: 9100.0		
APPROVED BY: COE, ROY J. FIRESTONE STARDATE: 9173.0		
CLASSIFIED, AVATAR STAFF ONLY		
SHT: AFT VIEW	SHT 4 OF 6	

RELEASE DATE: 9232.0
MODEL: MK 1
TYPE: HEAVY CRUISER
CLASS: OMEGA
CONSTRUCTED BY: STARFLEET COMMAND UTOPIA
PLANTIA, MARS SHIPYARDS
DRAWN BY: LTCDR MAX 'STARBUCK' HALL
STARDATE: 9100.0
APPROVED BY: COE, ROY J. FIRESTONE
STARDATE: 9173.0
CLASSIFIED, AVATAR STAFF ONLY
SHT: BOTTOM VIEW
SHT 5 OF 6





RELEASE DATE: 9232.0
MODEL: MK 1
TYPE: HEAVY CRUISER
CLASS: OMEGA
CONSTRUCTED BY: STARFLEET COMMAND UTOPIA
PLANTIA, MARS SHIPYARDS
DRAWN BY: LTCDR MAX 'STARBUCK' HALL
STARDATE: 9100.0
APPROVED BY: COE, ROY J. FIRESTONE
STARDATE: 9173.0
CLASSIFIED, AVATAR STAFF ONLY
SHT: INTERIOR VIEW
SHT 6 OF 6