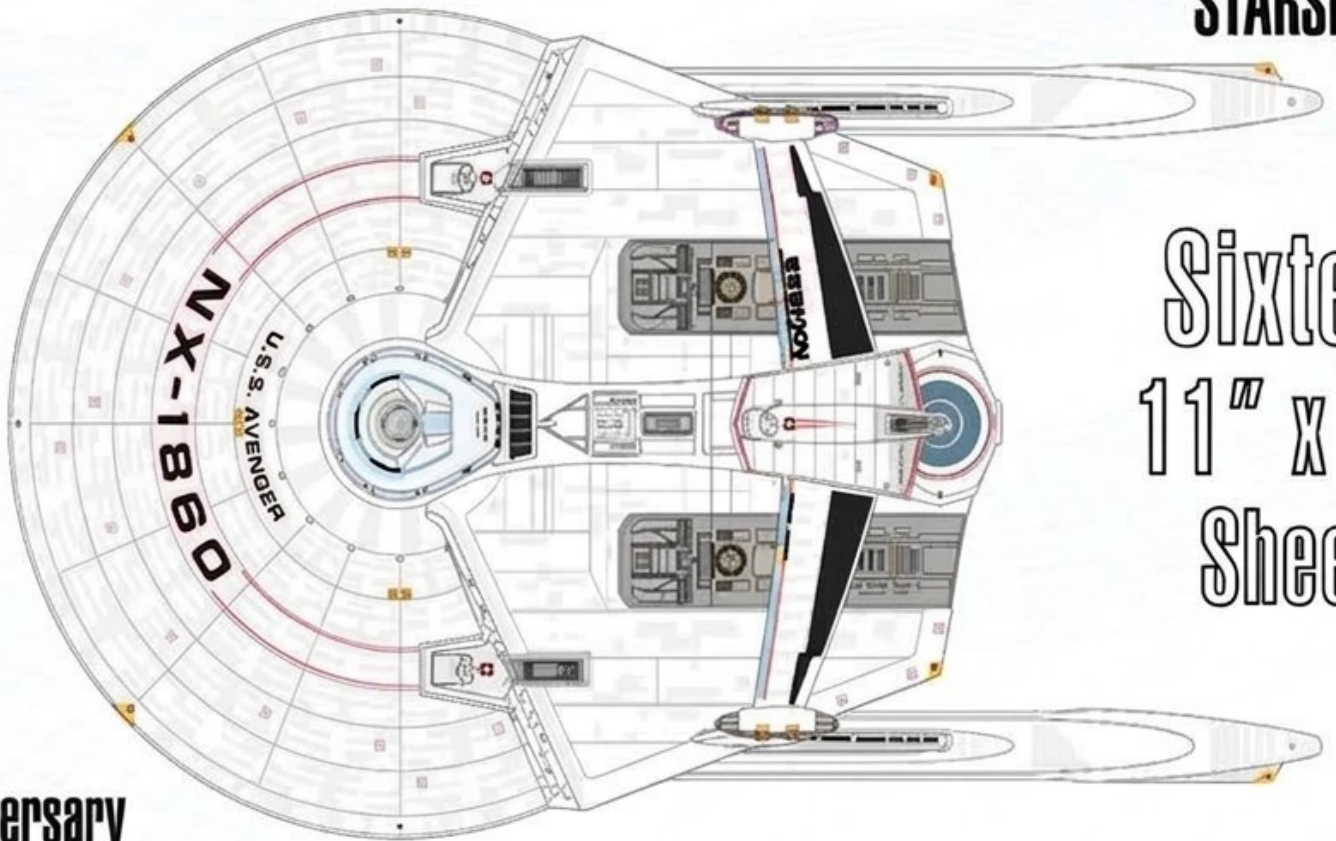
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AVENGER

CLASS NX-1860 STARSHIP PROTOTYPE



Sixteen 11" x 17" Sheets

40th Anniversary Collector's Edition

External Blueprints and Internal Deck Plans

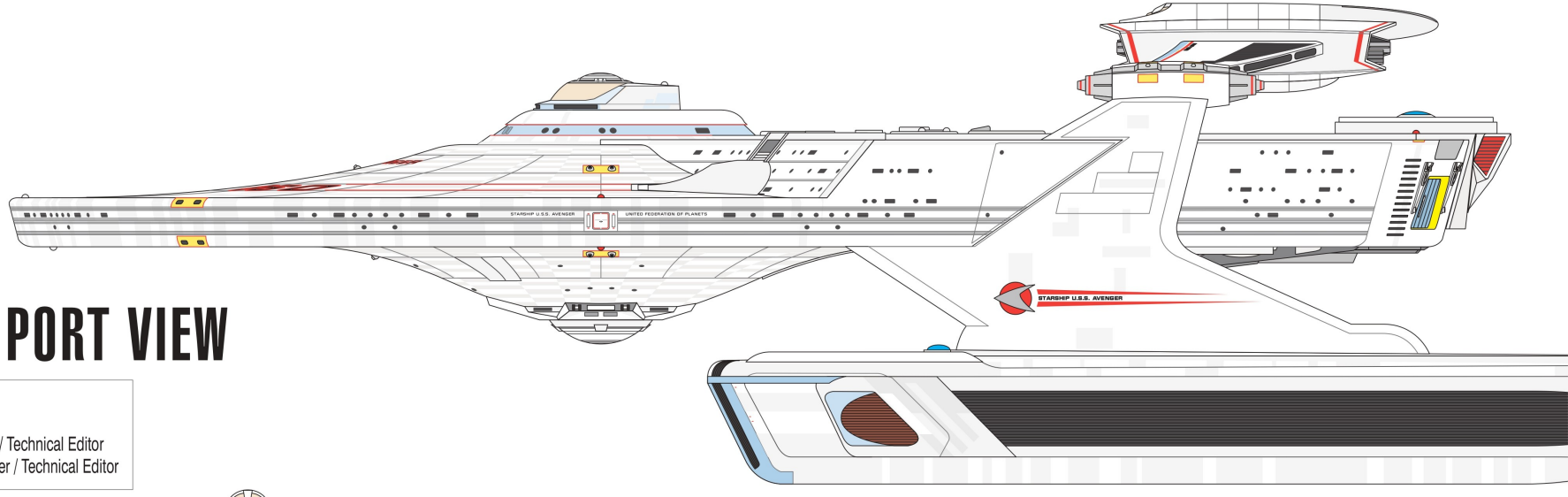
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AVENGER

PROTOTYPE NX-1860

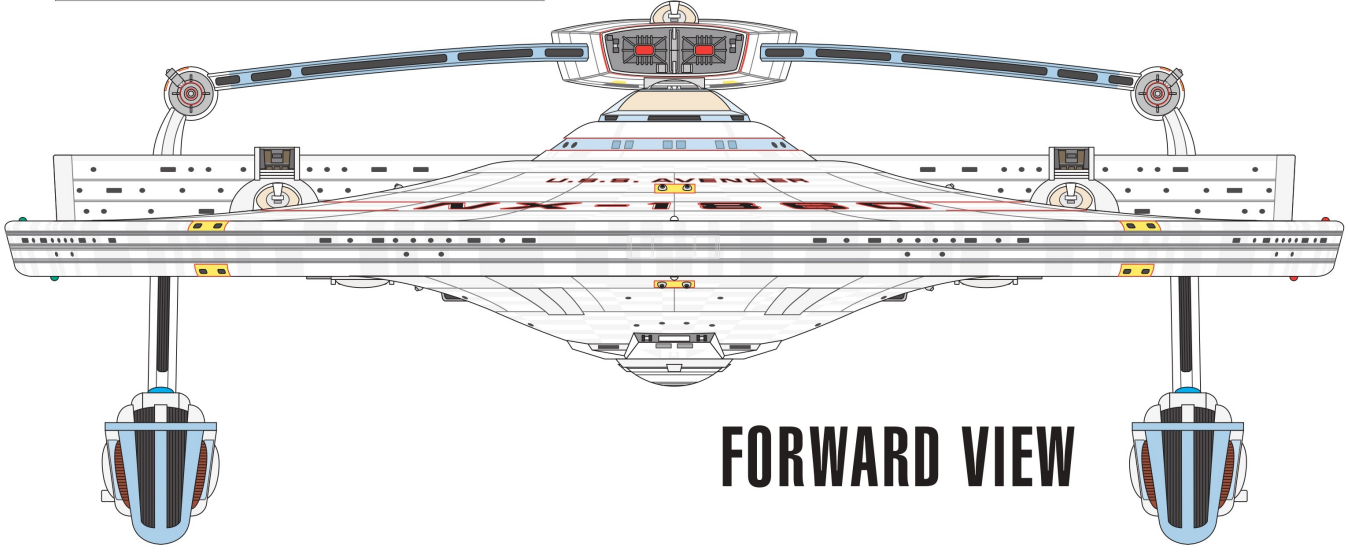
EXTERNAL VIEWS SHEET 1/16
SPECIFICATIONS
DESIGN HISTORY



PORT VIEW

DESIGN TEAM:

David Schmidt	Designer / Layout Designer / Technical Editor
Tim Palgut	Researcher / Layout Designer / Technical Editor



FORWARD VIEW

Scale
0 1 2 3 4 5 10 20

SPECIFICATIONS

PARTICULARS

Vessel Class	Avenger
Identification	NX-1860
Type	Heavy Frigate

SPACEFRAME

Overall Length	240 meters
Overall Beam	141.7 meters
Overall Draft	58 meters
Decks	10 + 3
Displacement	6.56×10^4 tons

WARP SYSTEMS

Power	Matter / Antimatter Reactor (2.7×10^8 terawatt)		
Cruising Speed	wf 6.0	392.30c	
Flank Speed	wf 6.9	625.07c	(Sustainable for 12 hours)
Burst Speed	wf 7.8	941.55c	(Sustainable for 1 hour)

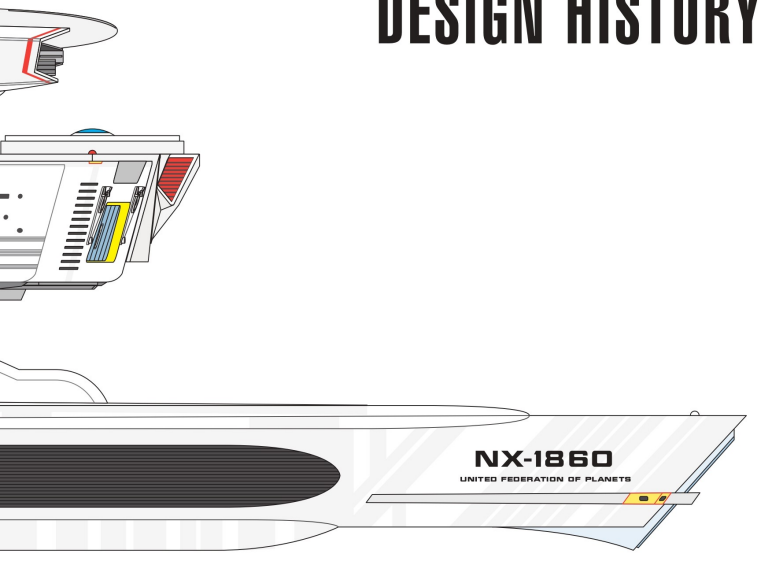
CREW & AUXILLARY SYSTEMS

Complement	48 Officers
	276 Enlisted
	72 Flight & Maintenance Crew
Transporters	4 6-personnel
	2 26-personnel Emergency
	1 8-personnel Inter-ship
	2 Cargo

INFORMATION SYSTEMS

Computer Core	1
	Duotronic
	Translator FTL Microprocessors

DESIGN HISTORY



Creating a Heavy Frigate

Starfleet is always searching for specialized designs to fit percieved - or anticipated - 'niches' in its FORB (Fleet Order of Battle) Table. Various concepts have been explored in search of a practical Heavy Frigate - whose definition would include the capability to carry four squadrons of Attack Bees in addition to double the complement of shuttles and other embarked craft when compared to such capital ships as a Constitution-class Heavy Cruiser. In 2273, Strategic Design was tasked to develop such a design. As the Jefferies-Marvick 'First-Flight' or TOS (Technology-Original-Standard) version Knox-class Frigates completed their currrent 5-year deployments, 65% were assigned to the San Francisco Orbital Yards for Rebuilding into the corresponding Knox-class updated Probert-Scott 'Rebuild-1' or TMP (Technology-Modified-Program) version. The remaining 35% were assigned to the Tokyo Orbital Yards for Conversion into Avenger-class updated Probert-Scott 'Rebuild-1' or TMP Heavy Frigates - the Avenger-class Heavy Frigate being essentially a Knox-class Frigate with the hull extended aft 34 meters.

The original Knox-class had its forward photon torpedo launcher located in the Superstructure, on Deck 3, When designing the Miranda-class, the designers added a unique 'rollbar'-mounted Weapons Module, which also holds the Mega-Phaser cannon common to Frigates of the TMP conversion.

The main task of a Frigate is to provide a launch/support platform for shuttles and fightercraft in the role of Fleet Support. Unlike carriers, Frigates are also capable of independant operation in a scientific and military capacity. The Knox-class Frigate has two side-by-side bays, each featuring a large, aft-facing space door. The port bay is dedicated to the Cargo Bay & Workbee Parking/Launch Bay. The starboard bay is the Landing Bay and Parking Bay, and carries a squadron of Killer Bee attack craft, as well as shuttles for the onboard Marine Attack Force and scientific research landing parties.

REBUILD 1.0 BREAKDOWN

Phase I Preparation:

- Maneuvered into orbital drydock
- Tractor web moorings activated
- Umbilical connections linked
- Power shunted to umbilical feed
- Decommissioning
- Warp core shutdown
- Fusion reactors safed
- Batteries purged
- Cargo bays off-loaded
- Shuttles offloaded
- Consumables purged from tankage and shunts
  - Cryogenic gas supplies
  - Deuterium
  - Water
  - Food synthesizer raw material
- Personnel and effects off-loaded
- Furniture off-loaded
- Life-support and grav-plating shutdown

REBUILD HISTORY

Phase II Stripping A:

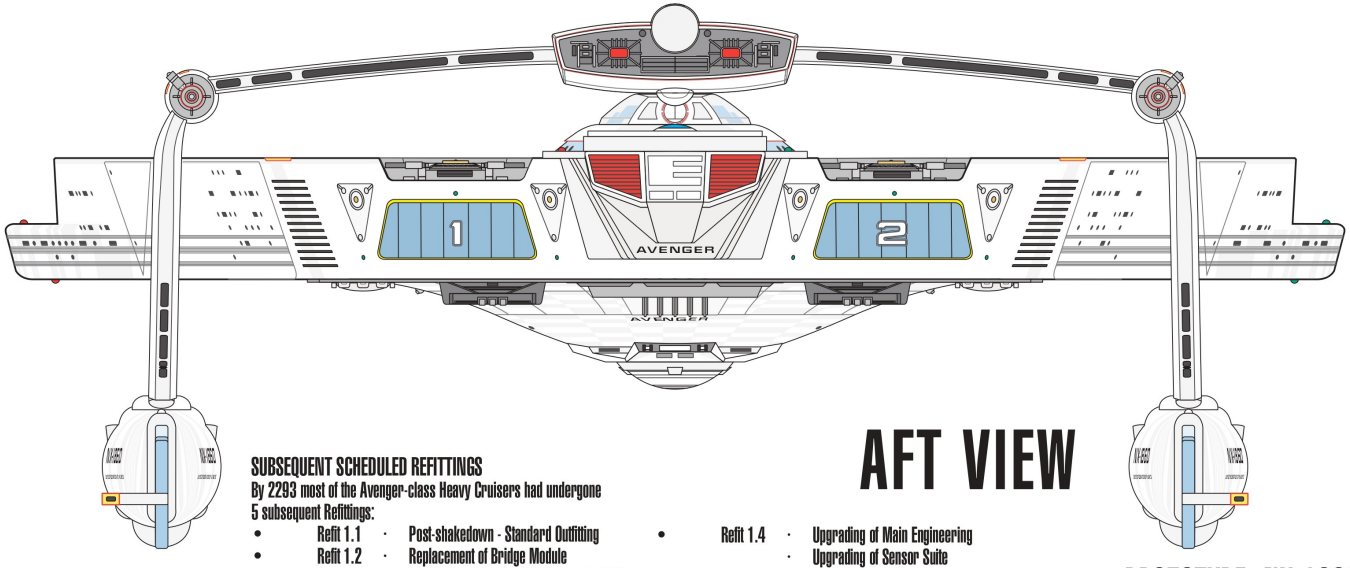
- Bridge module unlocked and removed from superstructure
- Superstructure removed from primary hull
- Warp nacelles and support pylons unlocked and removed
- Primary hull - interconnecting hull interlocks disconnected
- Secondary hull tractored aft (x-axis displacement -12.9 meters)
- Secondary hull re-moored via tractor web
- Interconnecting hull unlocked and removed from secondary hull
- Main sensor/deflector parabolic dish removed
- Hull plating unwelded, unlocked and removed to orbital smelters

IMPULSE SYSTEMS

Power	Primary - feed from warp core (1.0 X 10^{11} megawatt)
	Secondary - 4 deuterium fusion reactor (5.2 X 10^{10} megawatt)
Vector Nozzle	2 Fore - Type 3 / 2 Aft- Type 2
Cruising Speed	0.31 c
Flank Speed	0.93 c

TACTICAL SYSTEMS

Phaser	16 - Type VIII turret
Mega-Phaser	2 Fore - Type 5 / 2 Aft- Type 5
Torpedo Tube	2 Fore - Type 2 / 2 Aft- Type 2
Magazine	300 Mark V Photon Torpedoes
	20 Probes
Grid	5 Deflector Shield Generator
	(rated 1.15 X 10^{3} mw - standby / 2.69 X 10^{3} mw - alert / 4.73 X 10^{6} mw - 0.0017 Sec.)
	6 Primary Structural Integrity Field Generator (rated 1.15 X 10^{3} mw)
Deflector	1 - Primary- forward (1.38 X 10^{2} megawatt - 187 millicochrane)
Tractor Beam	Main - 1 Aft (8 megawatt - 225 millicochrane)
	4 Shuttlebay Doors
	2 Shuttlebay (internal - ceiling mounted)



SUBSEQUENT SCHEDULED REFITTINGS

By 2293 most of the Avenger-class Heavy Cruisers had undergone 5 subsequent Refittings:

- Refit 1.1 · Post-shakedown - Standard Outfitting
- Refit 1.2 · Replacement of Bridge Module
  · Installation of Landing Bay Doors/Turbolift
- Refit 1.3 · Upgrading of Sickbay
  · Upgrading of Sensor Suite
- Refit 1.4 · Upgrading of Main Engineering
  · Upgrading of Sensor Suite
  · Upgrading of Computer Core
  · Upgrading of Structural Integrity Field Generators
- Refit 1.5 · Replacement of Bridge Module

AFT VIEW

PROTOTYPE NX-1860

AVENGER

PROTOTYPE NX-1860

EXTERNAL VIEWS SHEET 3/16
REBUILD HISTORY
INTERNAL SYSTEMS

REBUILD HISTORY

Phase III Stripping B

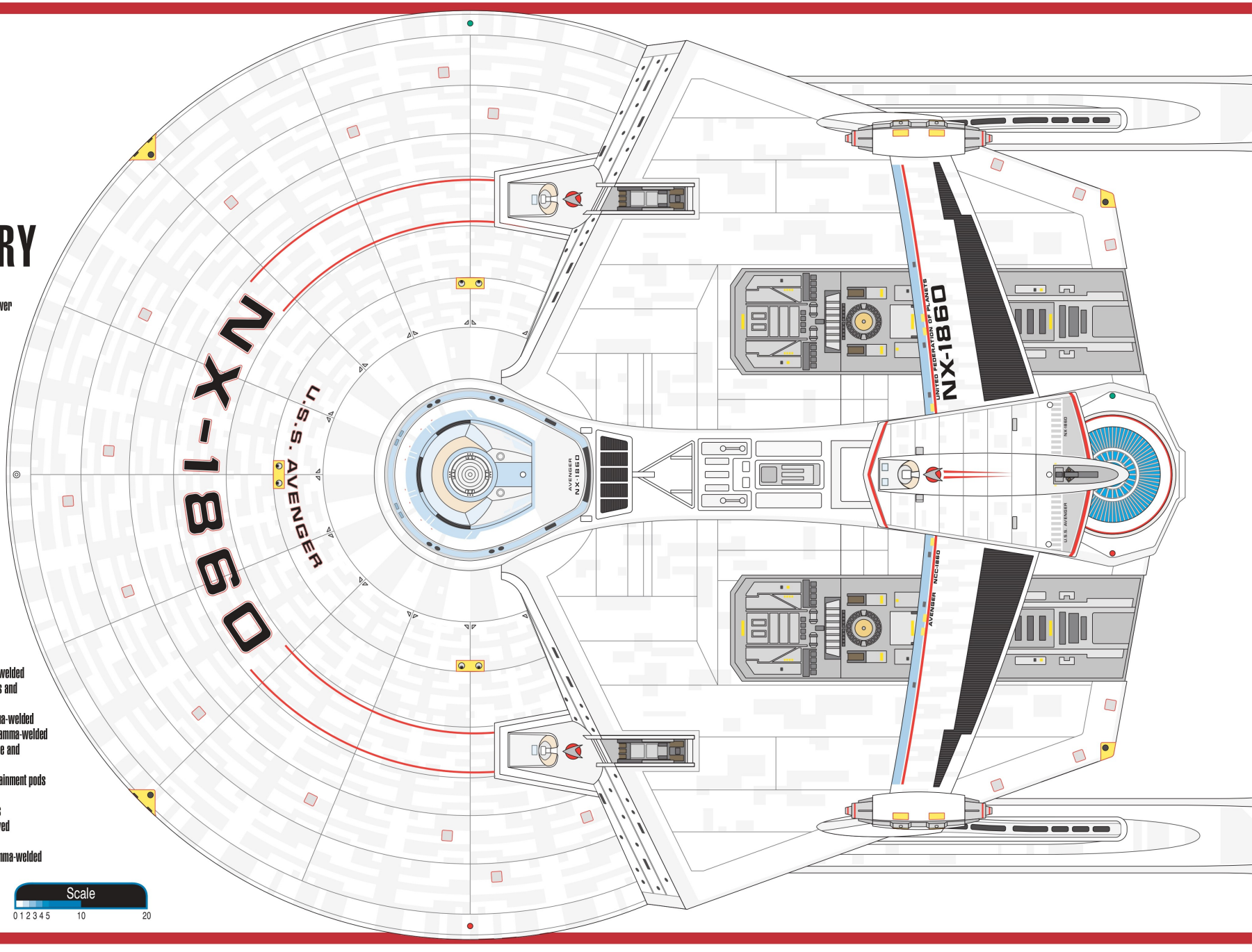
- Various systems removed for later replacement with newer equipment
  - Phaser turrets
  - Force-field/deflector screen generators
  - Food, organic and inorganic synthesizers
  - Control consoles
  - Furniture
- Various systems rebuilt/repaired/refurbished in place
  - Structural integrity generators
  - Life support facilities
  - Secondary computer core
  - Optical data network (ODN)
  - Electro-plasma system conduits (EPS)
- Various physical structures modified
  - Bulkheads
  - Decking
  - Corridors
- Warp core/antimatter processor/containment pods assembly removed
- Ventral sensor suite dome assembly unlocked and removed
- Main computer core removed

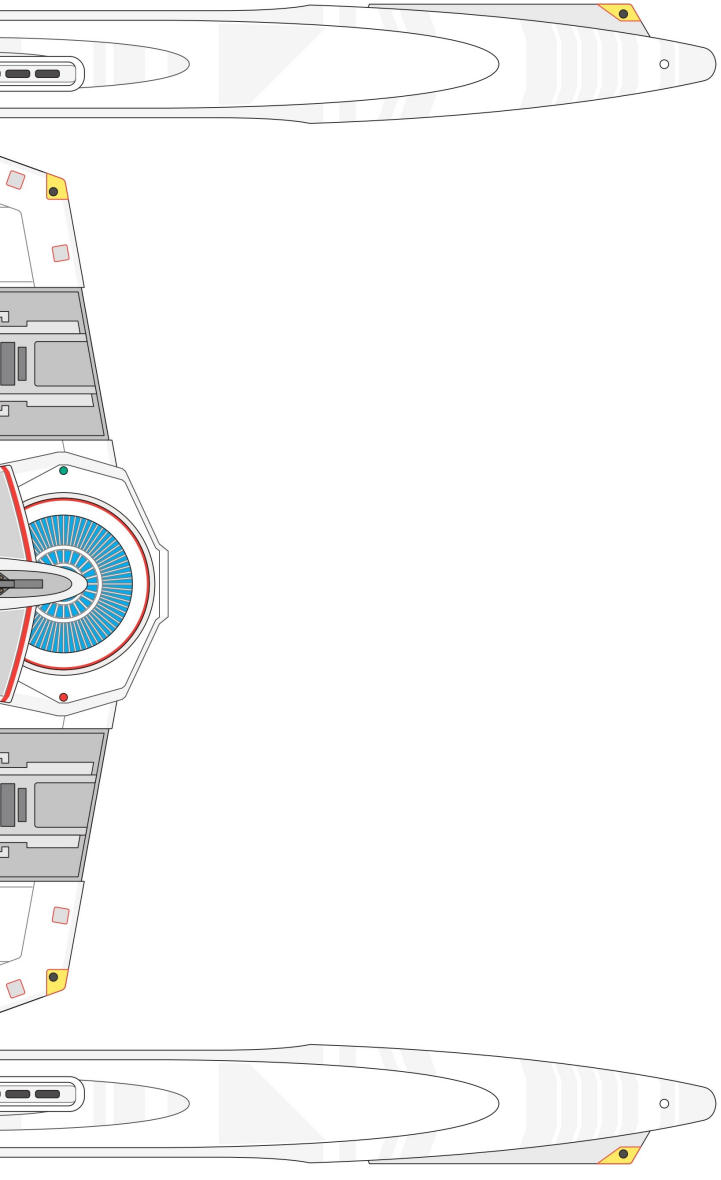
Phase IV Replacement

- Frame extensions locked to frame members and gamma-welded
- New frame members locked to enhanced frame members and gamma-welded
- New warp nacelles and support pylons locked and gamma-welded
- New superstructure locked to primary hull frames and gamma-welded
- New bridge module locked to primary hull superstructure and gamma-welded
- Placement of new warp core/antimatter processor/containment pods assembly
- New deck sections locked and welded to frame members
- Ventral sensor suite dome assembly unlocked and removed
- New main computer core inserted
- New ventral sensor suite dome assembly locked and gamma-welded

DORSAL VIEW

Scale
0 1 2 3 4 5 10 20





INTERNAL SYSTEMS

Section 1.0 Spacecraft Spaceframe & Hull - Unity Hull
The most notable feature of the Frigate series is the Unity Hull. Whereas a Constitution-class Primary Hull is comprised of 16 wedge-shaped segments, the Knox-class Unity Hull concept utilizes 10 of these wedge segments (forward-starboard-port), plus an aft raised segment joining them just aft of the vessels centerline, and extending to the stern. This raised segment, which bevels up three decks immediately aft of the superstructure, holds the Warp Core, Impulse Drive, Cargo Bay and Shuttle-Landing Bays. The most obvious of the Rebuild 1.0 modifications is the larger spaceframe. After hull plate removal (and subsequent frame inspection for buckling and shearing), all frame members of the Knox-class Unity Hull were augmented with extensions. While the ten forward-starboard-port extensions are moderate, the aft raised segment for the Avenger-class varient increases the vessel's length by 34 meters. Original hull plates were recycled via orbital smelter, and new hull plates matching the Rebuild 1.0 planeform were produced.

Section 1.1 Structural Integrity Field
Type SIF2300A during the Refit 1.4 of the Avenger-class.

Section 1.2 Inertial Damping Field & Synthetic Gravity Generators
Except for new installations under new deck areas of the Avenger-class Primary Hull, the original IDF/SG generator network was left untouched.

Section 1.3 Security & Containment Force Field Generators
Except for new installations (such as the new Engineering and Security complexes)of the Avenger-class Unity Hull, the original S/CFF generator network was left untouched.

Section 1.4 Main Deflector
A Type MD5869T split-generator feeds a Type MD3386B subsurface planar-array emitter.

Section 1.51 Ordnance: Phasers
The Type VII Phaser Turret was replaced with the Type VIII on the Avenger-class Primary Hull. Following improvements to shield dynamics and power, Starfleet design engineers chose to discontinue the practice of retracting the phaser cannon emitter heads within the hull when offline. Besides being mechanically simpler, the new turrets improved power through-put to 145% by tapping the warp core directly via dedicated EPS conduits.

Section 1.52 Ordnance: Mega-Phaser Cannon
The Avenger-class is equipped with two Type IX mega-phaser cannon, each mounted on a pylon extending above the vessel's Unity Hull dorsal surface. These cannon feature both latteral-firing 'broadside' Type VIII turrets, plus fore- and aft-firing cannon emitters. The latter are immensely-augmented phaser emitters, capable of 5 second bursts with intensities 625% that of the Type VIII. Due to their enormous power requirements, the fore- and aft-firing cannon emitters cannot be fired while the vessel is at warp.

Section 1.53 Ordnance: Photon Torpedo Launch/Magazine Pod
Arcing between the two Mega-Phaser Cannons is a 'Roll-Bar' Pylon. Mounted at the dorsal centerline is the Photon Torpedo Launch/Magazine Pod. This is a fully self-contained module, holding a single Launch Bay and four Launch Tubes (2 forward, 2 aft), plus magazine storage. The Avenger-class utilizes an adapted version of the P2DTA standard Rebuild Photon Torpedo Launch Bay System. The design features a single Launch Bay with a single centerline track running forward and aft from the staging area to the loading hatches. After entering the fore or aft loading subsystem, the torpedo is conveyed laterally port or starboard to the twin torpedo tubes - and then through the linear accelerator. Flexible in utility, the large Launch Bay can be used as a torpedo maintenance room as well, by placing removable gratings over the loading tracks. The magazines are positioned on the deck below, and torpedoes are raised to the staging area via telescoping elevator.

This innovative pod design has proven so efficient that slightly-modified versions have been created for Destroyer and Corvette varients. Crew complement traffic to and from the pod is normally via an internal transporter target pad, hard-wire connected to the vessel's 6-personnel transporter network. However, access can also be gained via the Roll-Bar's Jefferies Tubes.

Section 1.54 Ordnance: Force-field / Deflector Screen Generators
All FF/DS generators were removed and replaced with the Type FF/DS7764W, which features higher harmonic range, greater intensity, and much faster charging and response cycling time. Additionally, the force-field waveguide grid was augmented to reflect the larger spaceframe.

Section 2.0 Computer Systems
The Type MCC8745MT Main Computer Core integral unit replaces the original, externally-indistinguishable unit in the Knox-class Unity Hull. Within however, all 57,600 duotronic chips have been replaced with the new multitronic chips, doubling processing speed and quadrupling capacity.

Section 2.1 Information Gathering Systems
The DNSS6445 Dorsal Navigational Sensor Suite accompanies the new BM8994C Bridge Module in the Avenger-class Primary Hull. The VNSSS3347Q Ventral Navigational/Science Sensor Suite on the underside of the Primary Hull has 4 lateral bays containing directional science sensors. Two LRSS2245 Long Range Sensor Suites are located at the dorsal bevel of the raised segment. A third LRSS2245 Suite is located on the dorsal surface of the Photon Torpedo Launch/Magazine Pod

Section 3.01 Crew Facilities - Quarters
Enlisted and Petty Officer quarters remain virtually untouched from the TOS (Technology-Original-Standard) version. Officer quarters have been simplified, with the offices being removed from the quarters in favour of true offices located elsewhere.

Section 3.02 Crew Facilities - Recreation
The Recreation, Gymnasium, and Lounges have been expanded with the enlargement of the Unity Hull radius.

Section 3.03 Crew Facilities - Dining
Facilities have been largely left untouched, although systems have been overhauled, and menu programs greatly enhanced.

Section 3.04 Crew Facilities - Arboretum
The original enclosed biohabits and display windows have been replaced with a park-like setting with winding paths, a waterfall/stream, and false sky.

Section 3.05 Crew Facilities - Laundry
Facilities have been largely left untouched, although systems have been overhauled.

Section 3.1 Science Facilities
All lab equipment and consoles have been replaced with new equipment.

AVENGER

PROTOTYPE NX-1860

EXTERNAL VIEWS SHEET 5/16

SYMBOL CHART

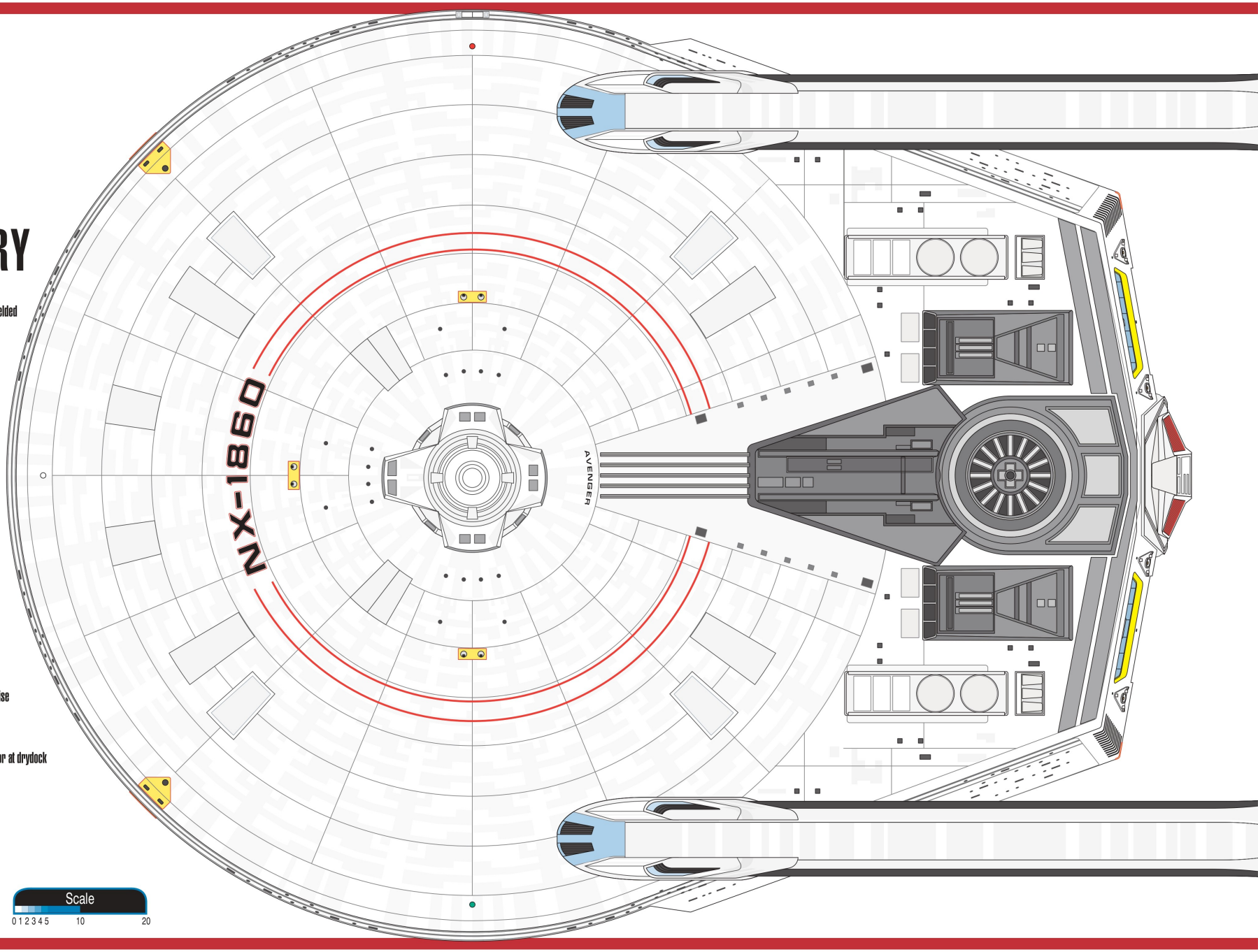
REBUILD HISTORY

Phase V Finishing

- New hull plating locked to frame members and gamma-welded
- Consumables reloadeded to tankage and shunts
  - Cryogenic gas supplies (Oxygen, Nitrogen, Hydrogen, Helium)
  - Deuterium
  - Water
  - Food synthesizer raw material
- Hull integrity/pressure test (nitrogen at 5 atmospheres)
- Life-support and grav-plating start-up - internal atmosphere circulated
- Decor changes
- Furniture reloaded
- Personnel and effects re-loaded
- Shuttles reloaded
- Cargo bays reloaded
- Batteries refilled
- Fusion reactors online and test
- Warp core online and test
- Power umbilical feed switched over to onboard power
- Umbilical connections disconnected
- Tractor web moorings deactivated
- Maneuvered out of orbital drydock

Phase VI Shakedown

- Step-by-step systems check during shakedown trials cruise
  - Power
  - Propulsion
  - Internal
- Repairs to unsatisfactory systems - either during cruise or at drydock
- Satisfactory performance
- Recommissioning

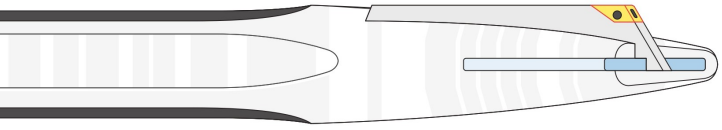


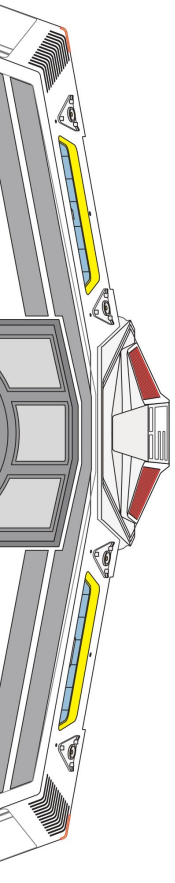
DORSAL VIEW

Scale

0 1 2 3 4 5 10 20

SYMBOL CHART

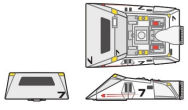




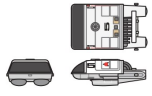
EMBARKED CRAFT



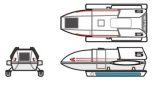
Work Bee



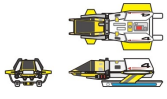
Type 3 Shuttle



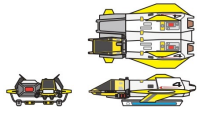
Type 4 Shuttle



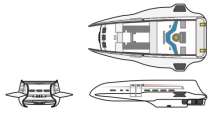
Type 5 Shuttle



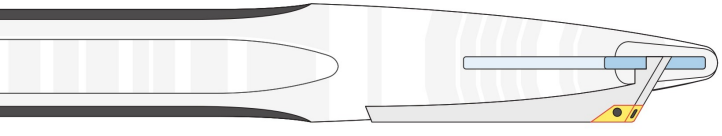
Hornet Killerbee



Wasp Killerbee



Type 7 Shuttle

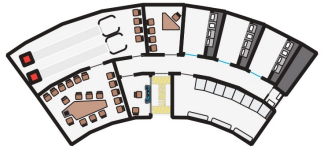


ESCAPE SYSTEMS



Escape Pod

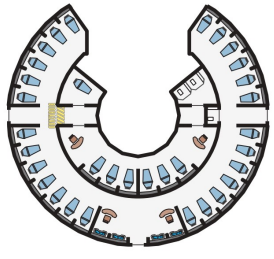
AUXILLIARY ENGINEERING - COMPARTMENTS



Security Complex
- Duty Officer's Post
- Senior Security Office
- Target Range
- Briefing Room
- Locker Room
- Cells (3)



Sickbay Complex
- Intensive Care (2)
- Surgery (1)
- Chief Surgeon's Office
- Storage (2)
- Pathology Lab
- Morgue



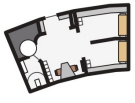
- Trauma / Burn Ward (4)
- Infectious Disease Ward (2)
- Isolation Room (1)
- Nurse Station
- Head



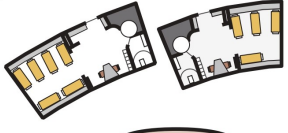
Senior Officer's Quarters:
- Sleeping Area
- Closet
- Lounge & Dining Area
- Head & Sonic Shower



Officer's Quarters:
- Sleeping Area
- Closet
- Head & Sonic Shower



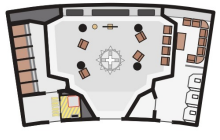
Junior Officer's Quarters:
- Sleeping Area
- Dining Area
- Head & Sonic Shower
- Lockers



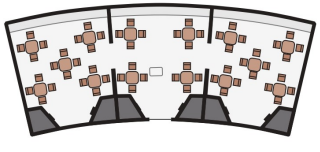
Enlisted Quarters:
- Sleeping Area (4 or 6 3-tiered bunks)
- Dining Area
- Head & Sonic Shower
- Lockers



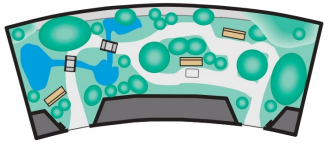
Officer's Lounge
- Conference Lounge
- Observation Lounge
- Heads (2)



Forward Observation Lounge
- Main Lounge
- Relaxation Lounge with Heads
- Storage Room
- Upper Hull Airlock/Elevator / EVA Suit Locker



Enlisted Mess
- 14 Tables (56 Personnel)
- 4 Food Delivery Slots



Arboretum



Briefing Room



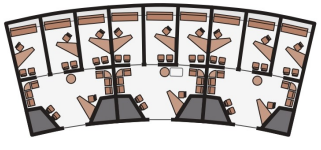
Officers' Dining Room



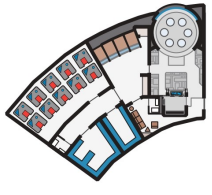
Diagnostics & Repair Workshop / Lab:
- Work Table
- Research Area
- Operators' Stations



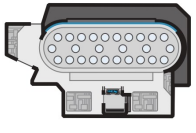
Science Lab
- Research Area
- Operators' Stations



Office Complex
- 9 Offices
- 3 Waiting Rooms / Yeoman's Desk Area

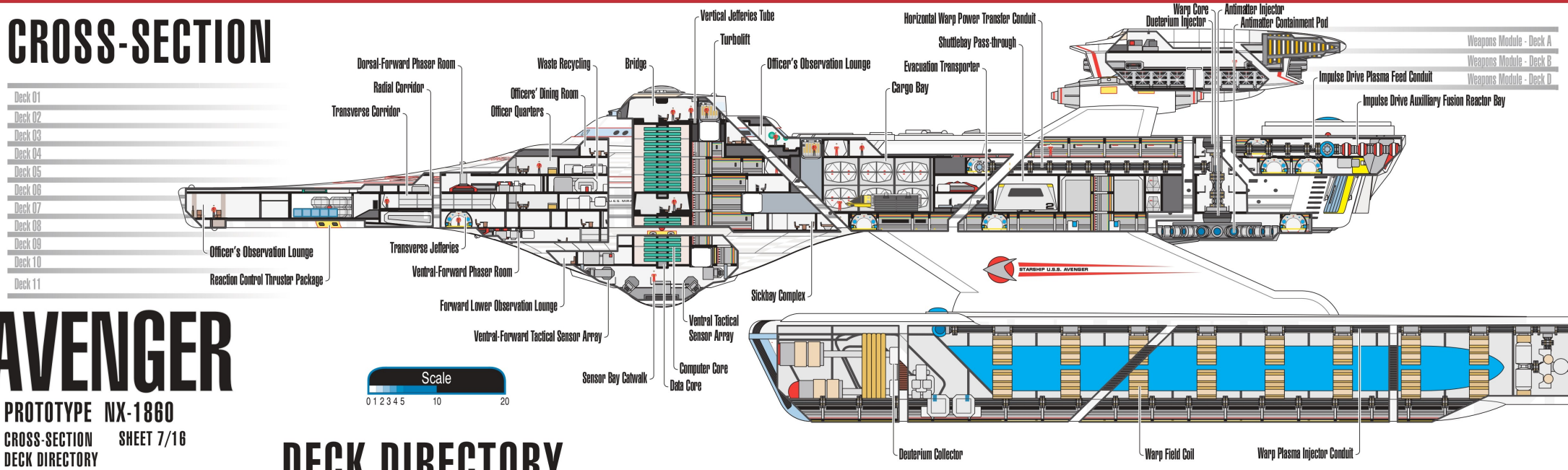


6-Personnel Transporter Room
- Stage
- Shielded Operator's Station
- EVA Suit Lockers
- Dedicated Battery Compartment
- Storage
- Armory
- Head



20-Personnel Emergency Transporter Room
- Stage
- Shielded Operator's Station

CROSS-SECTION



AVENGER

PROTOTYPE NX-1860

CROSS-SECTION SHEET 7/16

DECK DIRECTORY

DECK DIRECTORY

Weapons Pod - Level A

1	Targeting Sensor Bay
2	Vertical Jefferies Tube
1	Electromagnetic \ Tachyonic Warfare Systems Bay
1	Electromagnetic \ Tachyonic Warfare Antenna Bay

Mega-Phaser Housing (2)

1	Forward Mega-Phaser Energy Chamber Bay
1	Outrigger Phaser Compartment
1	Aft Mega-Phaser Energy Chamber Bay

Weapons Pod - Level B

1	Structural Integrity Field Generator Compartment
2	Vertical Jefferies Tube
1	Photon Torpedo Launch Bay
1	Inter-ship Transport Target Compartment
1	Defense Force-field Generator Compartment

Weapons Pod - Level C

2	Vertical Jefferies Tube
1	Photon Torpedo Magazine Bay Compartment

Weapons Pylon (2)

1	Warp Drive Plasma Feed Conduit
1	Vertical Jefferies Tube

Deck 01

1	Bridge
1	Docking Port
1	Dorsal Tactical Scanner / Sensor Suite

Deck 02

1	Combat Information Center
	- Fightercraft Control
	- Communications Control & Cryptography
	- Fleet Movement Status Display
	- Data Management
	- Internal Systems Control
	- Ship's Systems Status Display
	- Damage Control
4	Head
1	Computer Core
1	Officers' Observation Lounge - High Bay

Deck 03

1	Officers' Dining Room
1	Officers' Galley
1	Reefer
1	Battery Compartment
1	Officers' Observation Lounge
1	Officers' Lounge
1	Computer Core
9	Head
2	Damage Control Locker
6	Flight Crew Bunkrooms (4 3-tier bunks each)
2	Squadron Office Complex
	- 3 Squadron Officer's Offices
	- 1 Pilot's Ready Room
	- 1 Flight Sargent's Office
1	Killerbee Flight Simulator Room
2	Shuttle Parking Bay - Upper Level
2	RCS Control Thruster Bay
2	Cryogenic Gas Tankage
1	Impulse Engineering Complex
1	Impulse Drive Manifold Compartment - Upper Level
1	Main Engineering - Deuterium Injector Bay

Deck 04

14	Officers' Quarters
3	Dorsal Phaser System Turret Tunnel
1	Life Support & Battery Compartment
1	Computer Core
1	Main Engineering Complex
	- Main Engineering - Propulsion & Warp Core
	- Dilithium Chamber
	- 1 Isolation Suit Locker
	- 2 Major Systems Diagnostics & Workshop
	- 3 Subsystems Diagnostics & Workshop
	- 1 Unassigned Compartment
	- 2 Battery Compartment
	- 1 Damage Control & Emergency Supplies Locker
2	Inorganic Synthesizer Compartment
2	Long Range Sensor bay - Upper Level
1	Recreation Lounge - Upper Level
1	Gymnasium - Upper Level
2	Cargo Bay Control Booth
1	Main Cargo May - Upper Level
2	Shuttle parking Bay - Main Level
2	Shuttlebay Environmental Systems Bay
2	Shuttlebay Pressure Curtain Force-field Generator Compartment
1	Impulse Drive Manifold Compartment - Lower Level
4	Shuttlecraft Tractor Beam Bay - Upper Level

Deck 05

4	Officer's Quarters
10	Junior Officer's Quarters
3	Dorsal Phaser System Turret Compartment - Main Level
4	Organic Synthesis Compartment
2	Defense Field Generator Compartment
3	Structural Integrity Field Generator Compartment
28	Escape Pod
1	Computer Core
2	Long Range Sensor Bay - Main Level
2	Escape Shuttle Parking Bay - Upper Level
1	Recreation Lounge - Main Level
1	Gymnasium - Main Level
1	Main Cargo May - Mid Level
1	Transporter Buffer Bay
1	Main Engineering - Warp Core
1	Waste Recycling Compartment
1	Deuterium Tankage - Upper Level
2	Shuttlebay - Upper Level
1	Shuttlebay Pass-through - Upper Level
2	Shuttlebay Control Booth
4	Killerbee Parking Bay - Main Level
2	Ambulance Shuttle Parking Bay - Upper Level
4	Shuttlecraft Tractor Beam Bay - Upper Level
1	Main Tractor Beam

Deck 06

10	Officer's Quarters
6	Enlisted Bunkrooms (18 bunks each)
14	Enlisted Bunkrooms (12 bunks each)
10	Science Lab
1	General Cargo Bay - High Bay
4	Crew Mess/Lounge
1	Office Complex
2	Foodstuff Stasis Compartment
1	Arboretum
2	Briefing Room
1	Chapel / Theatre
1	Forward Observation Lounge
1	Main Gangway & Retractable Sleeve
2	Escape Shuttle Parking Bay - Main Level
1	Main Cargo Bay - Main Level
2	Cargo Transporter Bay
1	Emergency Transporter Room
2	Airlock (Cargo Bay - Shuttlebay)
1	Main Engineering - Antimatter Injector
1	Deuterium Tankage - Mid Level
2	Shuttlebay - Main Level
1	Shuttlebay Pass-through - Main Level
2	Workbee Parking Bay
4	Killerbee Parking Bay - Main Level
2	Ambulance Shuttle Parking Bay - Main Level
1	Aft Tactical Sensor
1	Computer Core
1	EPS Relay / Battery Compartment

Deck 07

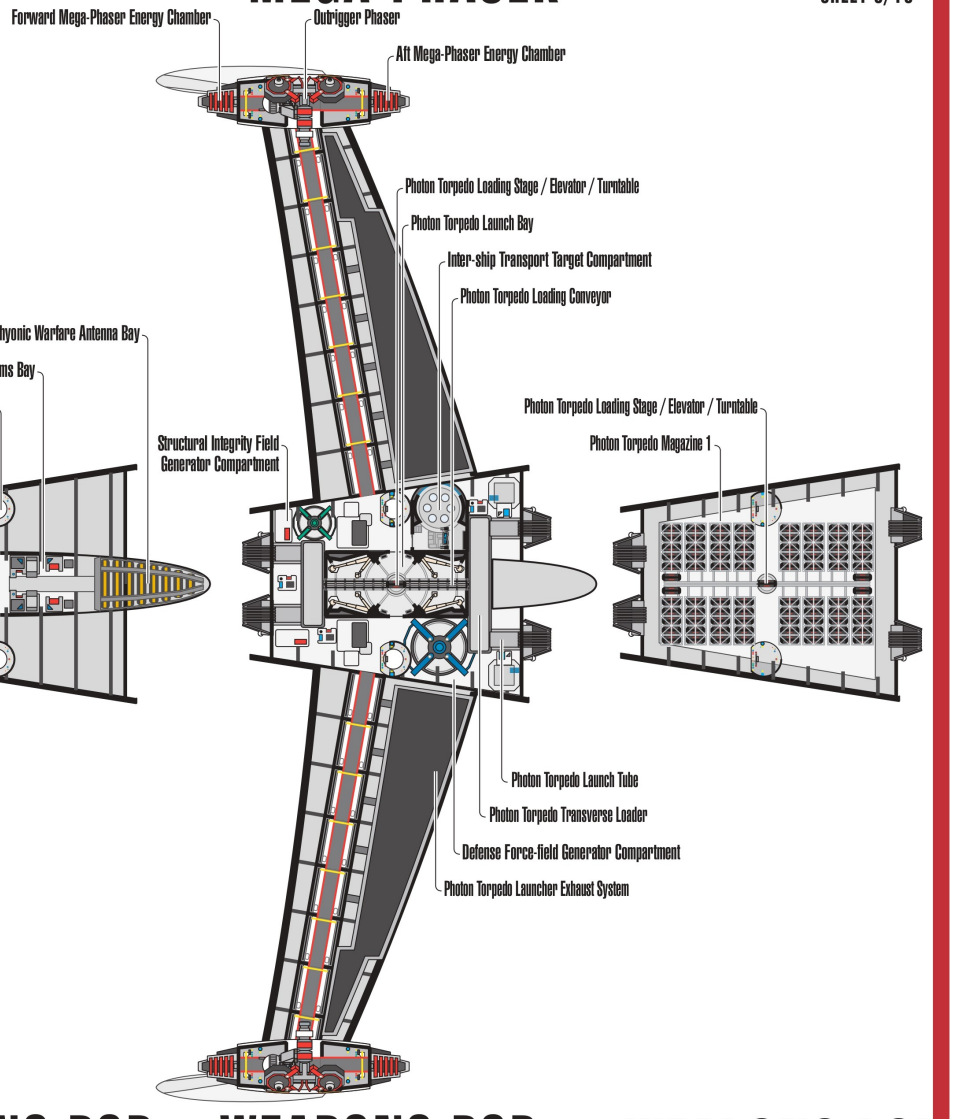
1	Forward Observation Lounge - Sub-Level / Battery Compartment
1	Security Complex
1	Sickbay Complex:
86	Escape Pod
4	Cryogenic Fluid Tankage Bay

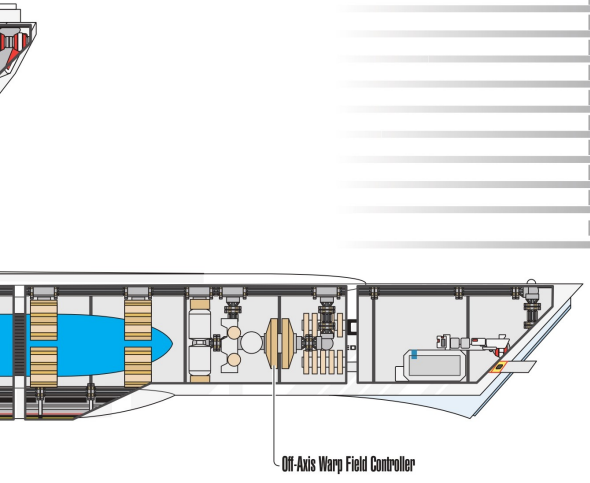
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MEGA-PHASER

PROTOTYPE NX-1860





WEAPONS POD LEVEL A

Chapel / Theatre
Forward Observation Lounge
Main Gangway & Retractable Sleeve
Escape Shuttle Parking Bay - Main Level
Main Cargo Bay - Main Level
Cargo Transporter Bay
Emergency Transporter Room
Airlock (Cargo Bay - Shuttlebay)
Main Engineering - Antimatter Injector
Deuterium Tankage - Mid Level
Shuttlebay - Main Level
Shuttlebay Pass-through - Main Level
Workbee Parking Bay
Killerbee Parking Bay - Main Level
Ambulance Shuttle Parking Bay - Main Level
Aft Tactical Sensor
Computer Core
EPS Relay / Battery Compartment

Forward Observation Lounge - Sub-Level / Battery Compartment
Security Complex
Sickbay Complex:
Escape Pod
Cryogenic Fluid Tankage Bay

WEAPONS POD LEVEL B

4	Water Tankage Bay
4	Transporter Room
4	Landing Pad Bay
2	RCS Control Thruster Bay - Main Level
2	Reverse Thrust Impulse Manifold Bay
2	Shuttle Elevator Machinery Bay
2	Defense Force-field Generator Bay
1	Deuterium Processing Compartment
1	Main Engineering - Antimatter Containment Bay
1	Deuterium Tankage - Main Level
1	Computer Core
2	Battery Compartment
2	Emergency Life-Support Compartment
2	Plasma Relay Compartment

Deck 08

3	Ventral Phaser System Turret Compartment
2	Airlock / Docking Port & EVA Suit Locker Bay
1	Emergency Transporter Room
2	Transporter Transceiver Bay
1	Transporter Buffer / Plasma Relay / Battery Compartment
1	Computer Core

Upper Nacelle Pylon (2)

1	Warp Drive Plasma Feed Conduit
	Vertical Jefferies Tube

Deck 09

1	Ventral Observation Deck
1	Ship's Laundry Compartment
1	Computer Core

Lower Nacelle Pylon (2)

1	Warp Drive Plasma Feed Conduit
	Vertical Jefferies Tube

Deck 10

1	Tactical Scanner Bay
	1 - Ventral Tactical Scanner / Sensor Suite
	4 - Lateral Tactical Scanner / Sensor Suite

Nacelles (2)

1	Vertical Jefferies Tube
1	Bussard Ionizing Beam Emitter Bay
1	Bussard Magnetic Field Generator / Collector Bay
1	Continuous Cycle Fractionator & Deuterium Chiller Bay
1	Warp Coil & Plasma Injector Bay
1	Off-Axis Field Coil Bay
1	RCS Control Thruster Bay

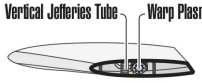
WEAPONS POD LEVEL C

AVENGER

PROTOTYPE NX-1860

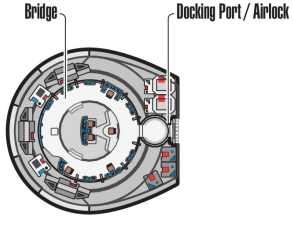
INTERNAL VIEWS SHEET 9/16

INTERNAL SYSTEMS

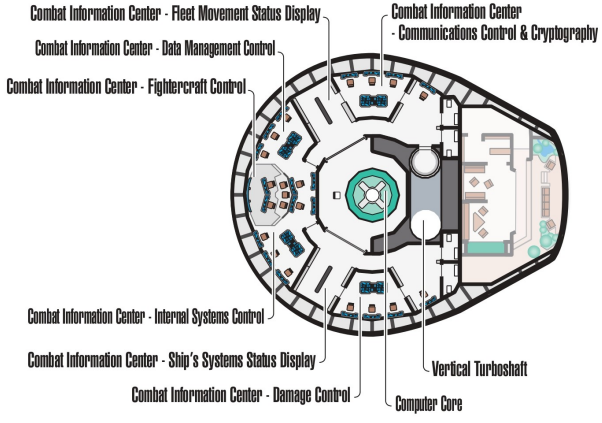




DECK 1 & UPPER WEAPONS PYLON



DECK 2 & LOWER WEAPONS PYLON

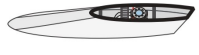


INTERNAL SYSTEMS

Section 3.2 Life Support
Life-Support systems were replaced with the uprated Type LS9988 during the Refit 1.3. As such, except for minor repositioning, they were left untouched.

Section 4.0 Shuttle & Cargo Facilities
The Knox-class Frigate has two side-by-side bays, each featuring a large, aft-facing space door. The port bay is dedicated to the Cargo Bay & Workbee Parking/Launch Bay. The starboard bay is the Landing Bay and Parking Bay, and carries a squadron of Killer Bee attack craft, as well as shuttles for the onboard Marine Attack Force and scientific research landing parties.

The Avenger-class Heavy Frigate has two elongated Landing Bays, plus an enormous Cargo Bay just forward. The Cargo Bay is connected to the Landing Bays via two roll-up doors - backed-up by force-field pressure curtains. This allows work bee cargo trains to fly directly from the Hangar Bay to the Cargo Bay. The Cargo Bay possesses turboshafts running through it near the aft bulkhead. Cargo pods are moved from their storage niches to the deck and back via tractor/pressor beam 'crane' emitters, which run along tracks on the overhead. These are operated from the Quartmaster's Control Galleries on the upper forward bulkhead.

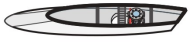


The Parking Bays are large enough to hold four squadrons of Killer Bees attack craft, plus a compliment of standard, assault, medical and orbital shuttles. As well, two more Parking bays are located outboard and upwards from the Landing Bays, and can be accessed via Shuttle Elevators.

Section 5.01 Engineering - Warp Core
The Type WC7462 Segmented Linear Warp Core replaced the original Tandem Warp Core in the Avenger Rebuild. This new design is capable of 150% more output at nominal levels than the Knox First Flight design. The Antimatter Processor/Containment Pods Assembly was replaced with a near-identical suite - utilizing better materials.

Section 5.0 Engineering - Warp Drive Nacelles and Support Pylons
The Type WDN7675E Warp Drive Nacelles were redesigned for the Knox and Avenger Rebuild. Visibly different on the exterior (reflecting changes in radiation shielding and component safeguarding), the interior does not represent a radical departure from previous designs - except insofar as better components (superior manufacturing specifications and materials) to make use of the higher speeds expected to be made available from the new Warp Core's output. The WDS4456C Support Pylons are new installations created specifically for the Avenger-class.

Section 5.0 Engineering - Impulse Drive
The Impulse Drive Assembly was removed to make room for the redesigned integral Type IDA2213F in the Avenger-class Unity Hull. The new design has increased thrust, more dependable standby fusion reactors, and improved reverse thrust.



Scale
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AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 10/16

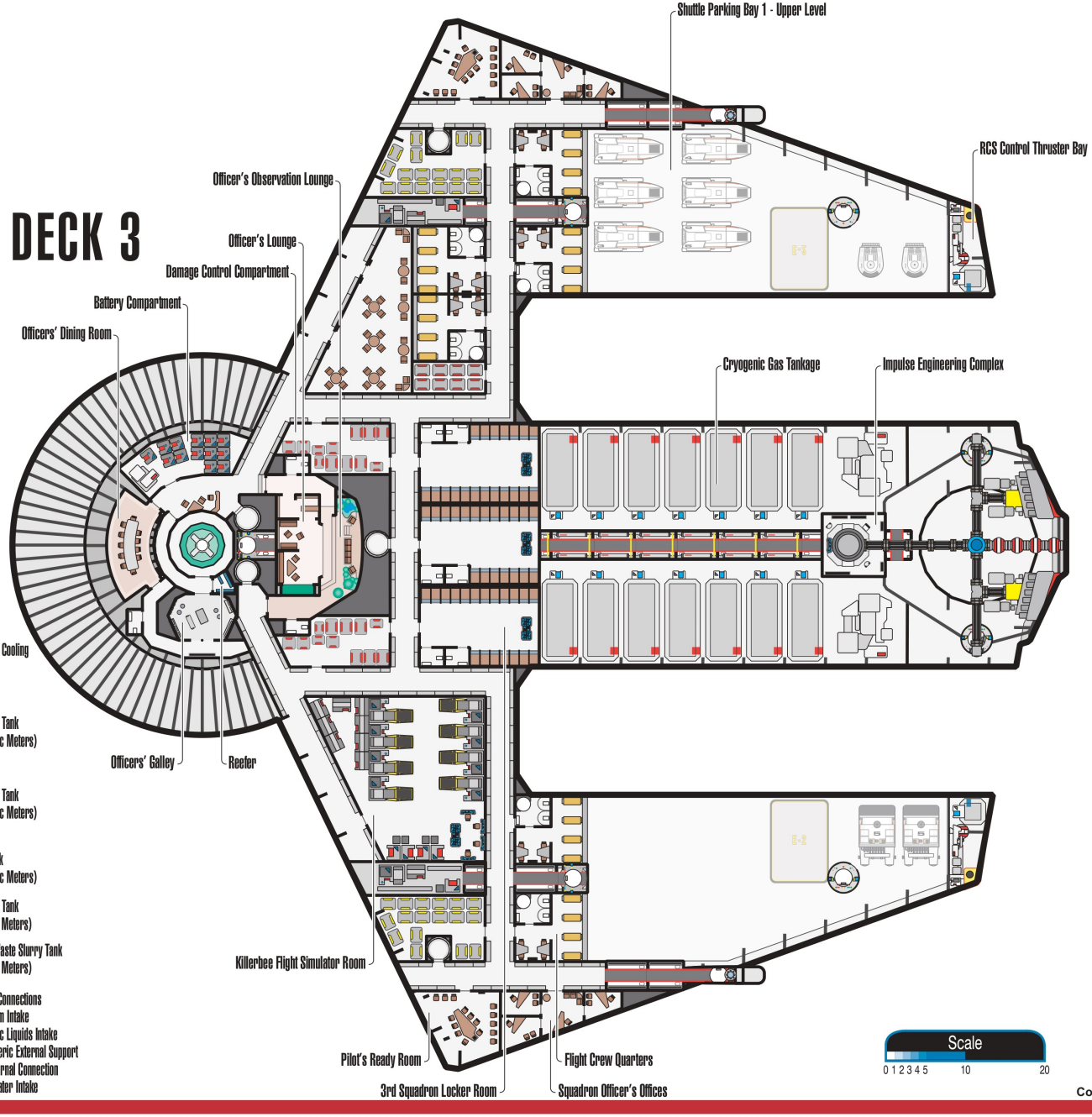
SYMBOL CHART

SYMBOL CHART

LIFE SUPPORT & FLUID/GAS TANKAGE

- Food Synthesizer
- Food Synthesizer Raw Material Storage Tank (Organic)
- Inorganic Synthesizer
- Synthesizer Raw Material Storage Tank (Inorganic)
- Organic Stasis Containment
- Organic Waste Recycler
- Atmospheric Recycler
- Airlock / Docking Port & EVA Suit Lockers
- Airlock / Docking Port & EVA Suit Lockers
- Cryogenic Cooling System
- Cryogenic Tank (900 Cubic Meters)
- Cryogenic Tank (250 Cubic Meters)
- Water Tank (100 Cubic Meters)
- Cryogenic Tank (20 Cubic Meters)
- Organic Waste Slurry Tank (20 Cubic Meters)
- Umbilical Connections
  - Deuterium Intake
  - Cryogenic Liquids Intake
  - Atmospheric External Support
  - ODN External Connection
  - Fresh Water Intake

DECK 3



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AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 11/16

SYMBOL CHART

DECK 4

SYMBOL CHART

COMMUNICATIONS & TRANSPORTER SYSTEMS

- Subspace Radio Transceiver
- EM Radio Transceiver
- Transporter Transceiver
- Transporter Buffer
- Transporter Pad (6-personnel)
- Transporter Pad (Emergency 26-personnel)
- Transporter Pad (Cargo)

INFORMATION SYSTEMS

- Computer Core
- Navigation Sensor Array
- Lateral Tactical Sensor Array
- Ventral Tactical Sensor Array
- Long Range Sensor Array

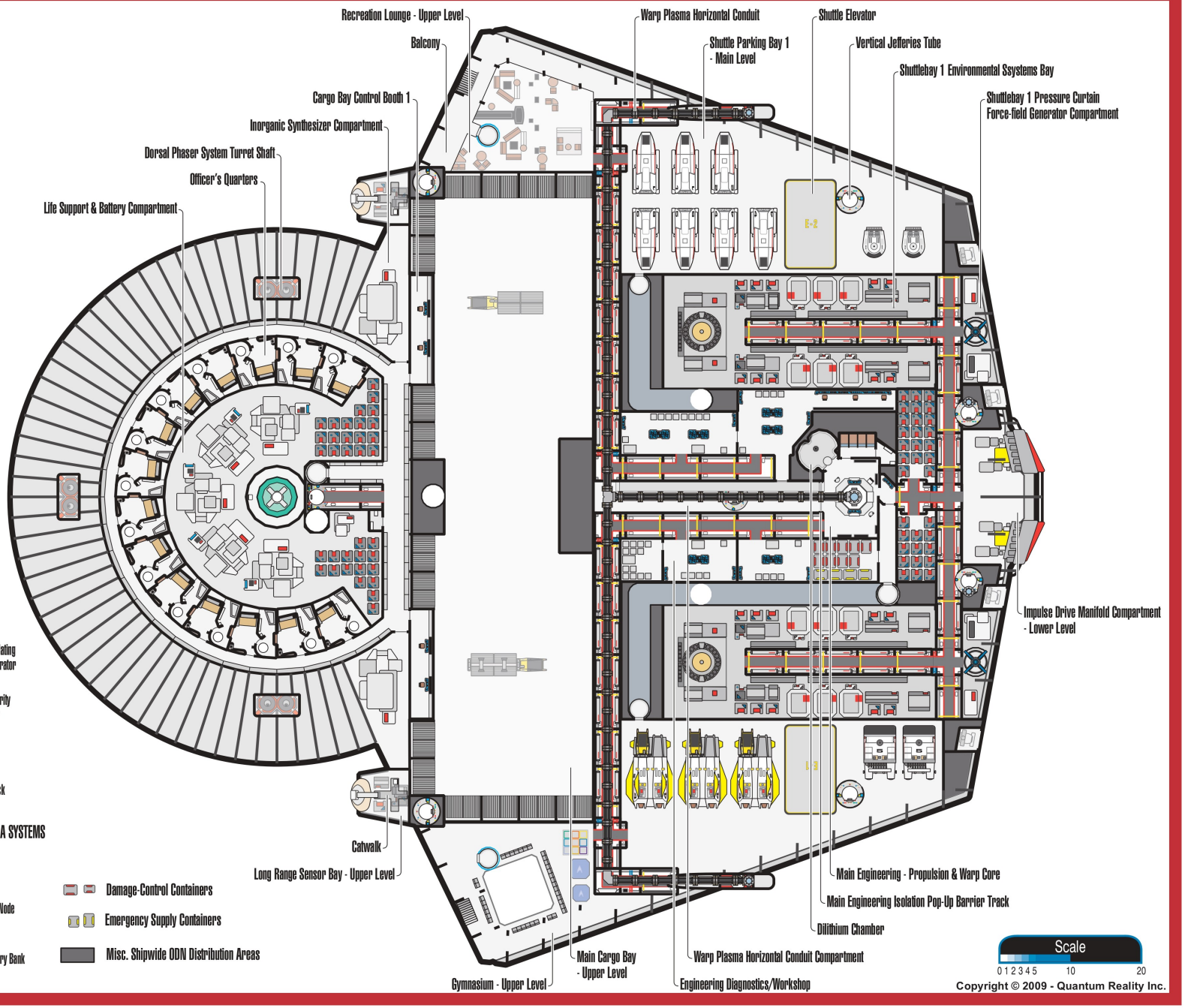
GRAVITONIC SYSTEMS

- Engineering Insulating Force Field Generator
- Structural Integrity Field Generator
- Tractor Beam
  - Emitter
  - Extension Track

MAIN ENGINEERING - ELECTRO-PLASMA SYSTEMS

- EPS Relay
- EPS Distribution Node
- Cold Fusion Battery Bank

- Damage-Control Containers
- Emergency Supply Containers
- Misc. Shipwide ODN Distribution Areas



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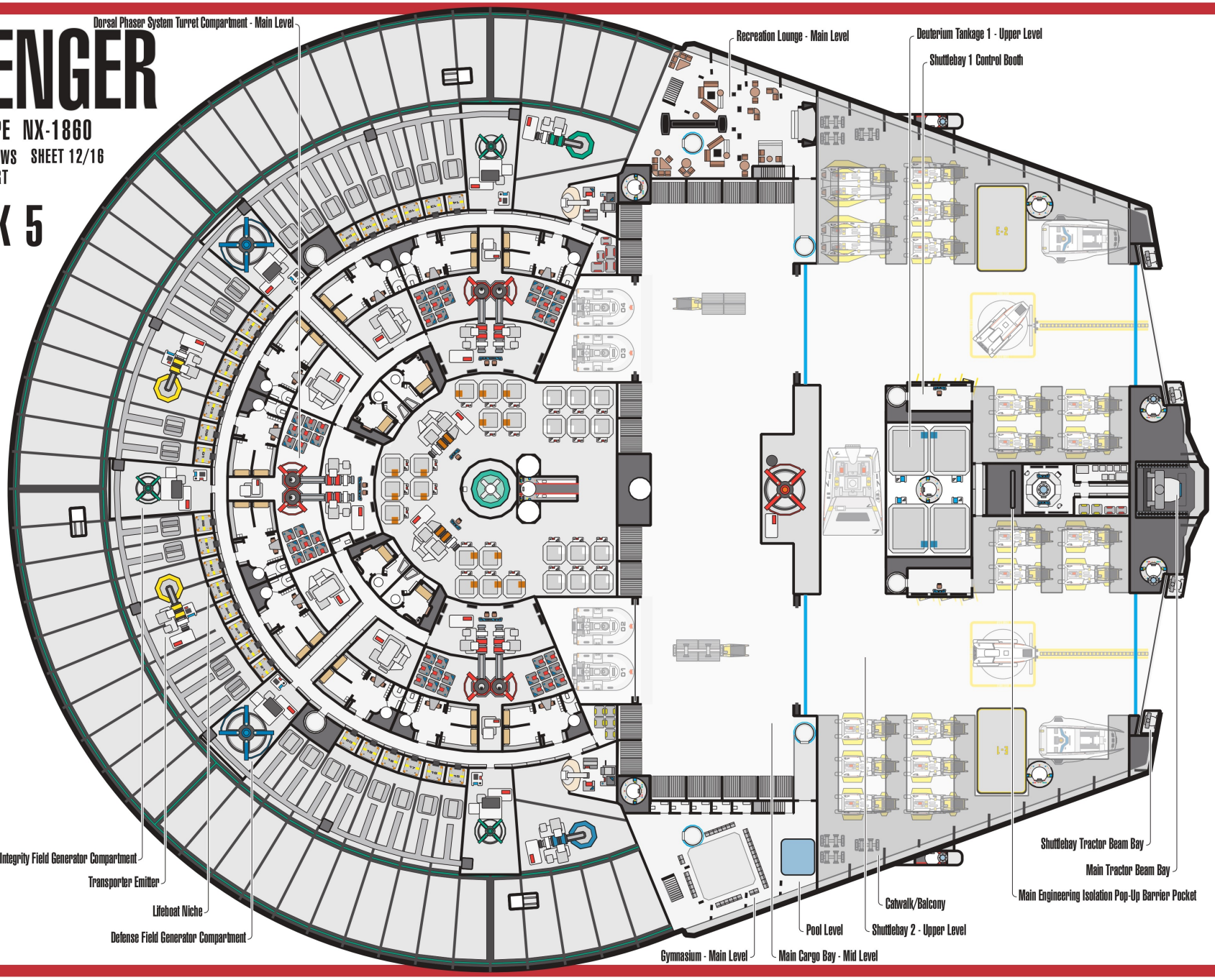
AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 12/16

SYMBOL CHART

DECK 5



Scale

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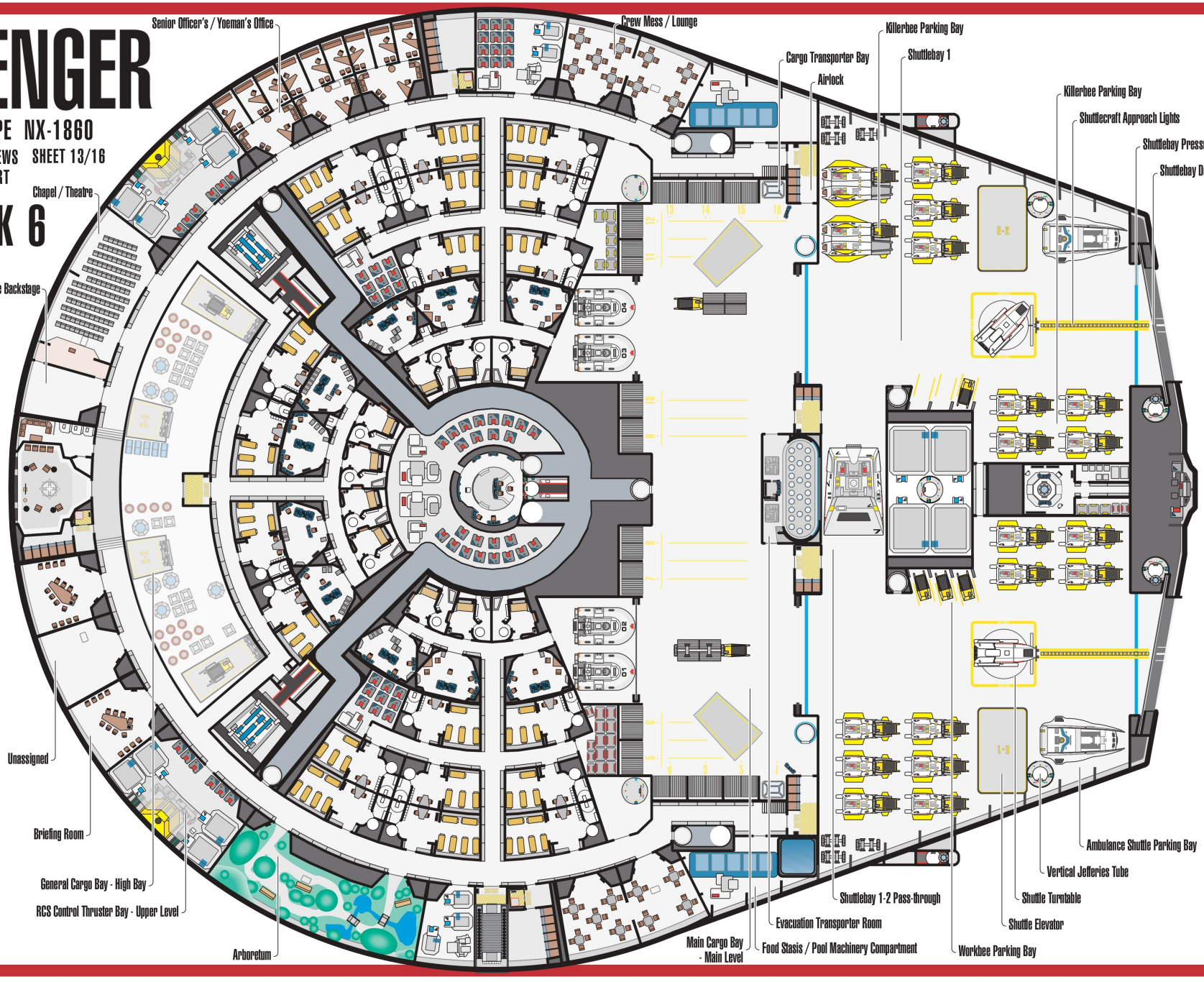
AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 13/16

SYMBOL CHART

DECK 6



Scale

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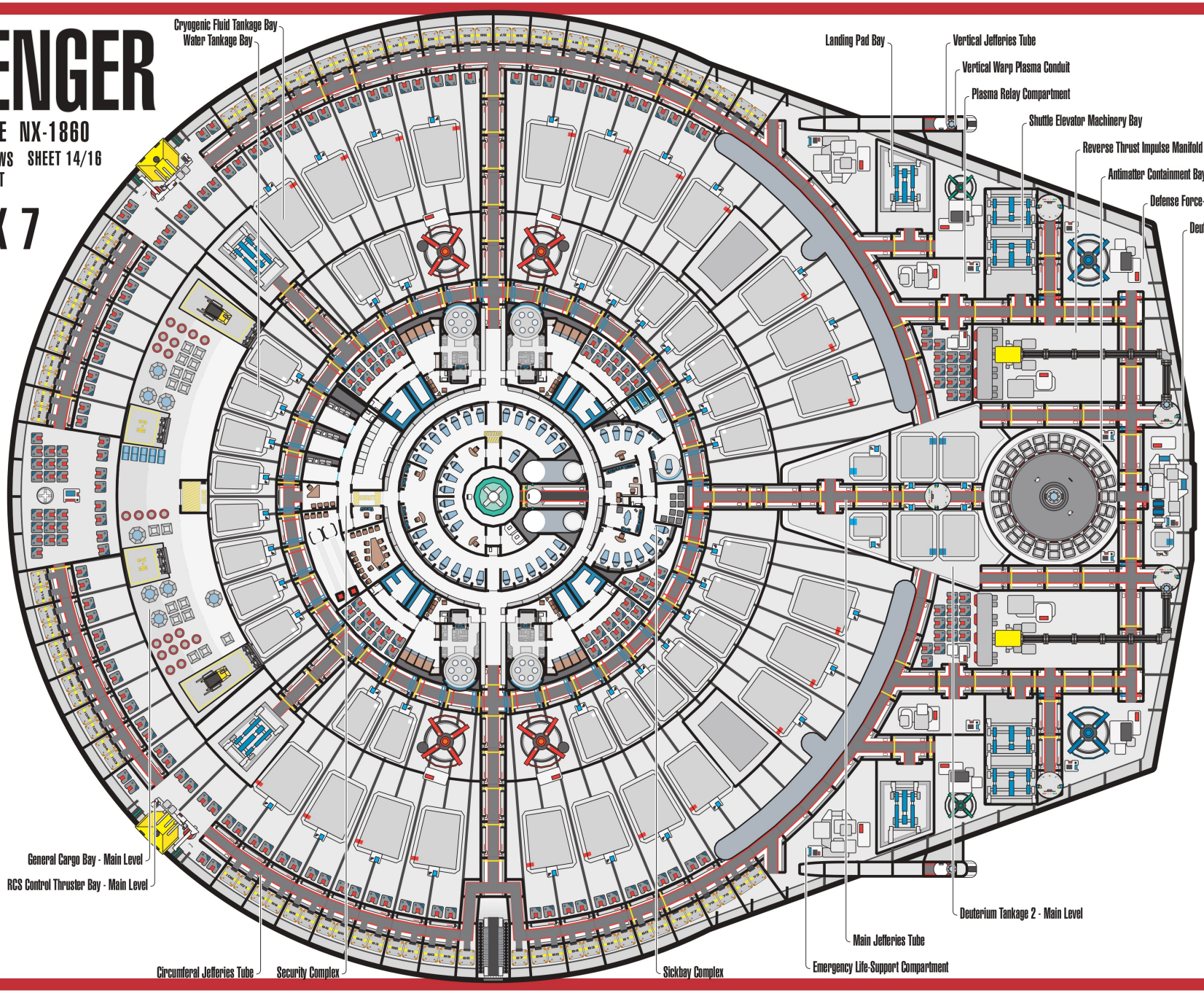
AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 14/16

SYMBOL CHART

DECK 7



Scale

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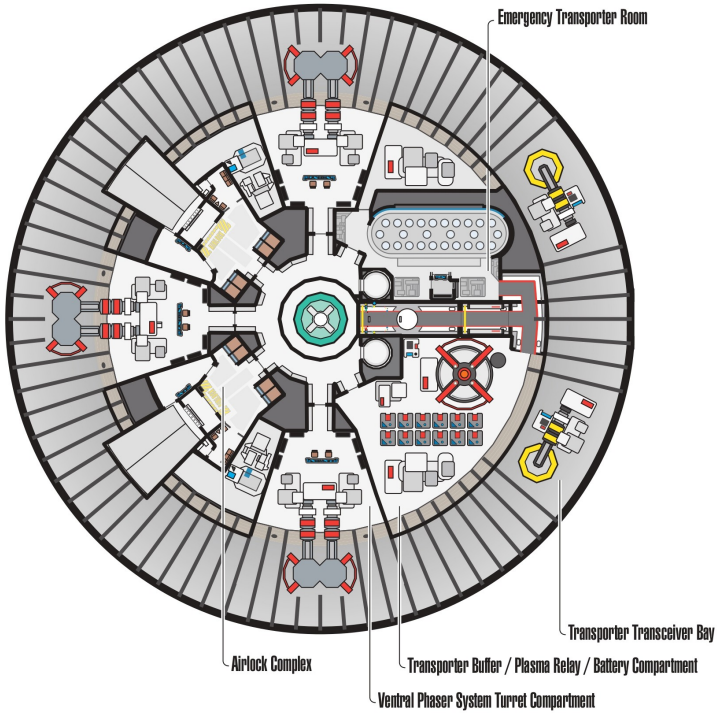
AVENGER

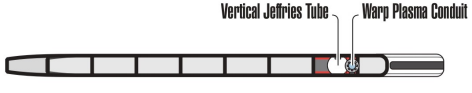
PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 15/16

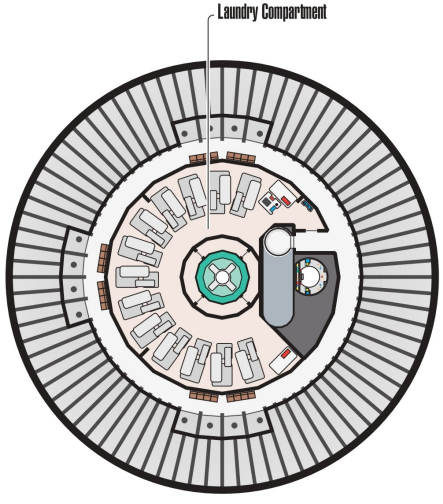
SYMBOL CHART

DECK 8 & UPPER NACELLE PYLON





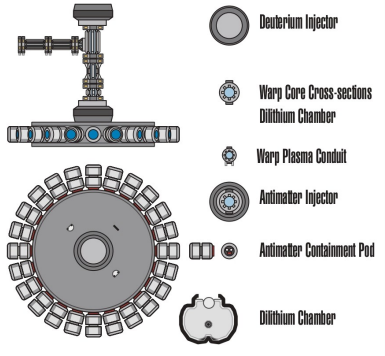
DECK 9 & LOWER NACELLE PYLON



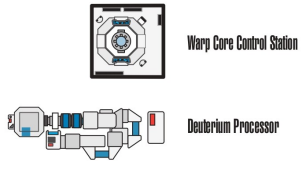


SYMBOL CHART

MAIN ENGINEERING - WARP CORE SYSTEMS



MAIN ENGINEERING - WARP CORE SYSTEMS



Scale

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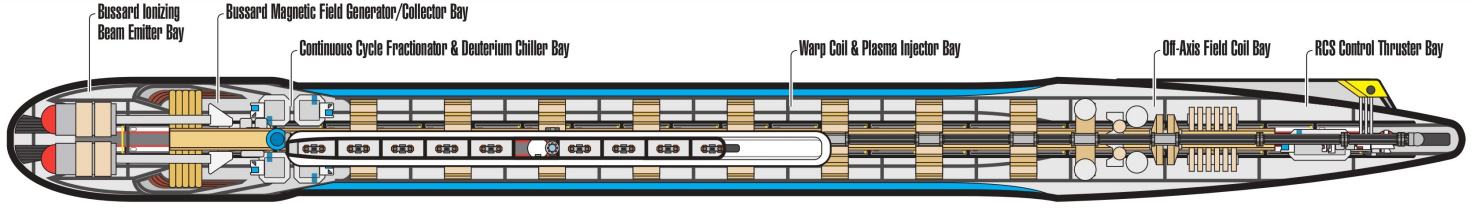
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AVENGER

PROTOTYPE NX-1860

INTERNAL VIEWS SHEET 16/16

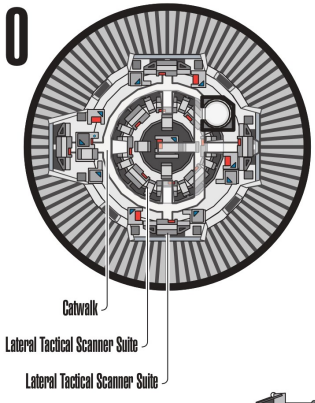
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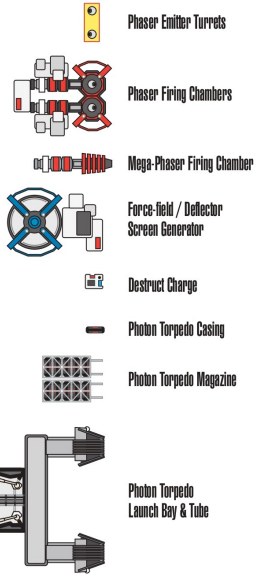
LOWER NACELLE PYLON & NACELLE

SYMBOL CHART

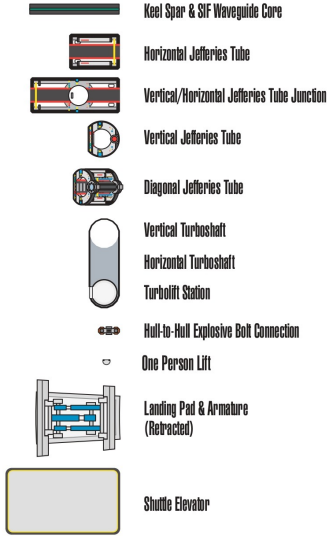
DECK 10



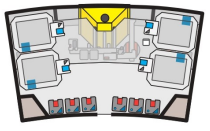
DEFENSE SYSTEMS



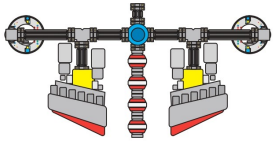
AUXILLIARY ENGINEERING - MISC. SYSTEMS



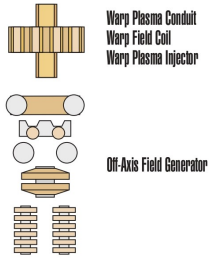
MAIN ENGINEERING - REACTION CONTROL THRUSTER SYSTEMS



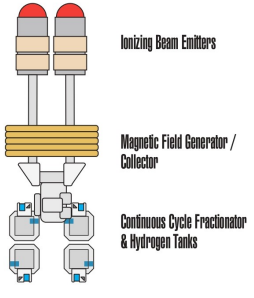
MAIN ENGINEERING - IMPULSE DRIVE SYSTEMS

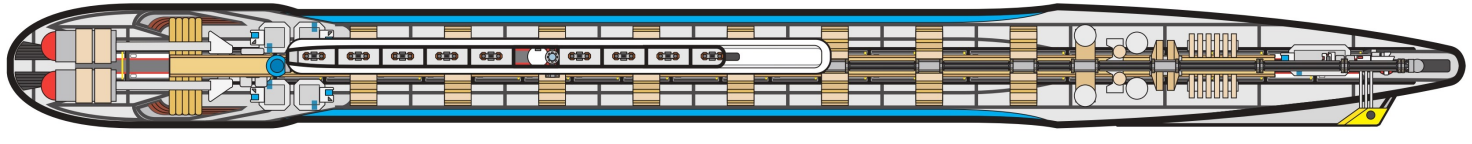


MAIN ENGINEERING - WARP DRIVE SYSTEMS



MAIN ENGINEERING - BUSSARD COLLECTION SYSTEMS





Scale

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