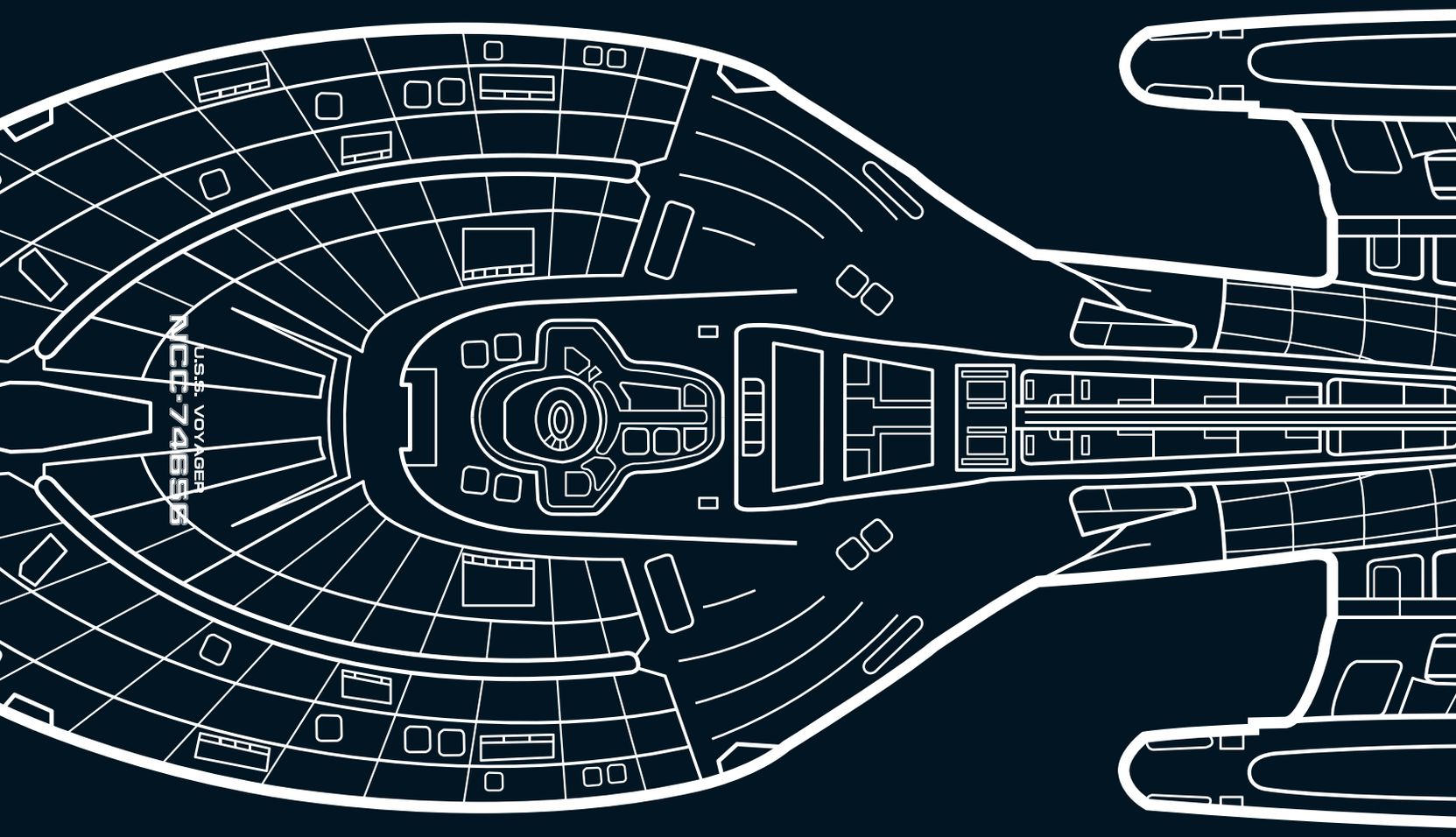
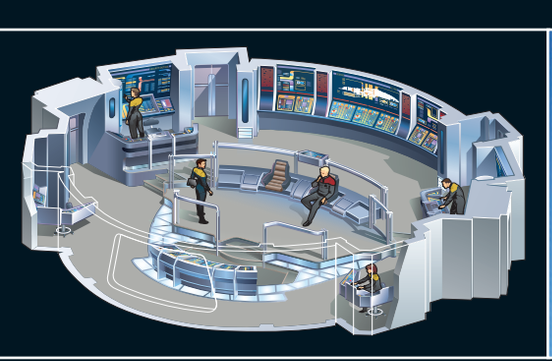
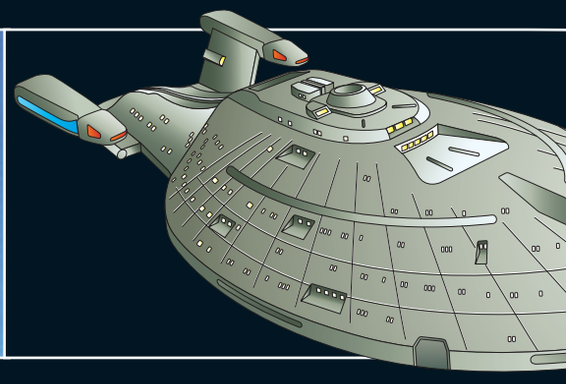


STAR TREK VOYAGER™

THE *U.S.S. VOYAGER* NCC–74656





ILLUSTRATED HANDBOOK

eaglemoss HERO COLLECTOR

CAPTAIN JANEWAY'S SHIP FROM ***STAR TREK: VOYAGER***™


VOYAGER
NCC-74656

Published by **Hero Collector Books**, a division of Eaglemoss Ltd. 2020
1st Floor, Beaumont House, Kensington Village, Avonmore Road,
W14 8TS, London, UK.

General Editor: **Ben Robinson**
Project Manager: **Jo Bourne**

Most of the contents of this book were originally published as part of *The Official STAR TREK Fact Files* 1997-2002

www.herocollector.com

ISBN 978-1-85875-612-7

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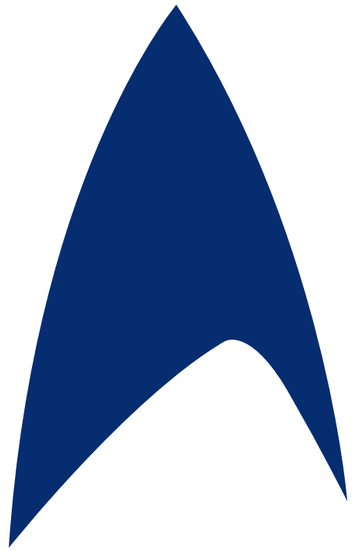
Printed in China

STAR TREK™

THE *U.S.S. VOYAGER*



ILLUSTRATED HANDBOOK

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ACKNOWLEDGMENTS

Most of the material in this book originally appeared in the *STAR TREK Fact Files,* an extraordinary, heavily-illustrated reference work that was delivered in weekly instalments before the internet was widespread. It covered every aspect of the *STAR TREK* universe, including the *U.S.S. Voyager*. We'd like to thank the talented team of artists who worked on it, Stuart Wagland, Ian Fulwood, Peter Harper and more than anyone Rob Garrard, who produced the illustrations you will find on the following pages. The CG renders in this book were produced by Rob Bonchune, Adam 'Mojo' Lebowitz, Daren Dochterman, Fabio Passaro and Ed Giddings.

Reconstructing the names of the people who wrote the text is beyond us, but the *Fact Files* would never have been possible without the hard work of Jenny Cole, Tim Gaskill, Tim Leng and Marcus Riley.

Among the new material in this book you will find Okudagrams for the shuttles that were created for us by Mike Okuda, Doug Drexler and Rick Sternbach.

No list of acknowledgments would be complete without mentioning Gene Roddenberry, who brought *STAR TREK* into being, and the talented production teams who brought the series to life in the decades that followed.

Finally, we'd like to thank our friends at CBS Consumer Products: Risa Kessler, who did the deals that made all this possible; Guy Vardaman, Paul Ruditis, and Tim Gaskill, who handled the original approvals, and Marian Cordry and John Van Citters, who run the show today.

FOREWORD

The *U.S.S. Voyager* has never had a technical manual of its own so we're delighted to be able to present the first in-depth guide to Captain Janeway's ship. The show was conceived when *STAR TREK* had been back on air for almost seven seasons and after the launch of *DEEP SPACE NINE*. As such, it built on the work that was done on *TNG,* looking for ways to take it further. The writers described *Voyager* as looking like a bullet – it was a much smaller ship than the *Enterprise*-D and since it was stranded in the Delta Quadrant it would face very different challenges. The design team worked tirelessly to make the ship and the show look more advanced than its predecessors, with Rick Sternbach and Mike Okuda paying particular attention to how everything worked. As a result nothing you see on *VOYAGER* was an accident. In an age when electronic tablets and video conferencing have become commonplace, some of the ship's technology, such as the bio-neural gel packs, still seems futuristic, and the upgraded warp drive and transporters are still belong to a dream of the future.

On the pages that follow you will find isometric drawings of all the key locations, with detailed artworks of the bridge stations, and illustrations showing uniforms, phasers, tricorders and Borg implants. You'll see areas of a ship such as astrometrics that had never been a regular part of a *STAR TREK* TV show before, a detailed account of a warp core ejection and you'll find CG renders of *Voyager* itself, and the *Delta Flyer*.

As with the other volumes in this series our hope is that the book will give you a sense of *Voyager* as a real place – somewhere that the crew and the viewers called home for seven years as they made their incredible journey from the Delta Quadrant to Earth.


U.S.S. VOYAGER
NCC-74656
NCC74656

OPERATIONAL HISTORY

Thrown 70,000 light years across space into the midst of the Delta Quadrant, the crew of the *U.S.S. Voyager* found themselves exploring a region of the galaxy where no Starfleet vessel had gone before.

Launched in 2371 on stardate 48038.5, the *U.S.S. Voyager* NCC-74656 went missing during its first mission under the command of Captain Kathryn Janeway, and was officially classified as lost by Starfleet in 2373. The ship's fate remained unknown until 2374, when *Voyager* was able to transmit a status report from the depths of uncharted space.

Investigating the disappearance of a Maquis ship in a region known as the Badlands, the *U.S.S. Voyager* had been intercepted by an immense tetryon beam and a polarized magnetic variation displacement wave that had propelled the ship 70,000 light years across the galaxy. An entity known as the Caretaker, who had been abducting ships from across the galaxy using a powerful array, was responsible for drawing both the Maquis vessel and *Voyager* to the Delta Quadrant. However, the Caretaker died before both ships could be returned home, and Janeway's decision to destroy the array rather than allow its technology to fall into the hands of a warlike species, the Kazon, resulted in *Voyager* being stranded in an unexplored region of the galaxy, some 75 years distant from the Alpha Quadrant if traveling at maximum warp.

The *Intrepid*-class *U.S.S. Voyager* NCC-74656 was constructed at the Utopia Planitia shipyards in orbit around Mars, before being launched from Earth Station McKinley on Stardate 48038.5. When it was commissioned in 2371 it represented the state-of-the-art and was one of the first Starfleet ships to adopt several new technologies.

LOST IN SPACE

With the Maquis ship destroyed and several casualties among the *Voyager* crew, including both the first officer and chief medical officer, the survivors of both crews agreed to operate as one, with medical care provided by *Voyager*'s EMH (Emergency Medical Hologram). A local Talaxian, Neelix, and his Ocampan partner, Kes, joined the crew as their guides through the Delta Quadrant.

The first few years of *Voyager*'s journey were dominated both by ongoing clashes with the Kazon and between the ship's Starfleet and Maquis crew members, with one member of the Maquis – a Cardassian spy named Seska – even defecting to join the Kazon. In deference to the Prime Directive, Janeway was insistent that Starfleet technology should not be traded with the Kazon, resulting in continued tension with the species. In 2372, Janeway attempted to form an alliance with the Trabe in order to ease *Voyager*'s passage through Kazon space, but her efforts ultimately proved unsuccessful.

Matters reached a head later that year when Seska aided the Kazon in taking over *Voyager*, stranding the crew on the Class-M planet Hanon IV. The ship was soon recovered thanks to the efforts of the EMH and helmsman Tom Paris, with the assistance of the Talaxians, and in 2373 *U.S.S. Voyager* finally left Kazon space for good.

Voyager's first mission was to track down a Maquis cell in the Badlands. While there it was hit by a distortion wave that transported it to the Delta Quadrant.

Voyager was brought to the Delta Quadrant by a being known as the Caretaker. After the Caretaker died, Janeway destroyed its array to protect the Ocampa.

ENCOUNTERING THE COLLECTIVE

Later in 2373, *Voyager* had its first encounter with a threat already well known to the crew from the Alpha Quadrant – the Borg collective. Having already discovered the remains of a Borg drone, the ship entered Borg space only to discover the Collective were locked in a bitter war with an extra-dimensional race identified by the Borg as Species 8472. Janeway made an unprecedented alliance with the Borg to combat Species 8472 in return for safe passage through Borg space. The Borg insisted that a representative of the Collective be assigned to *Voyager*, in the form of drone Seven of Nine. When Species 8472 were defeated, the Borg attempted to assimilate *Voyager* through Seven of Nine, but the crew were successful in disconnecting the drone from the Collective, confounding their plans. Seven subsequently join the crew, becoming a key contributor in *Voyager*'s ongoing mission to return to the Alpha Quadrant.

Despite the many trials and tribulations faced by the crew, there were happier events during the journey, such as the birth of Naomi Wildman on stardate 49548.7, and later Miral Paris, the daughter of Tom Paris and B'Elanna Torres, who married in 2377.

SHORTCUTS

The *U.S.S. Voyager* benefited from several opportunities to substantially shorten its estimated 75-year journey time back to Earth. The first came three years into the voyage, in 2374, following the end of the conflict between the Borg

When *Voyager* was stranded it gained two new crew members: the Ocampan Kes and the Talaxian Neelix, who acted as a guide to this region of space.

The Maquis rebels *Voyager* had been chasing were also stranded in the Delta Quadrant and joined Janeway's crew, with Chakotay becoming the first officer.

The first two years of *Voyager's* time in the Delta Quadrant were marked by conflict with the Kazon – a brutal group that had a culture that was based around violent gangs.

The journey home involved crossing Borg space, but as *Voyager* did so, the crew was caught up in the Borg's war with the extra-dimensional Species 8472.

and Species 8472. Kes, who was in the process of undergoing an advanced state of hyper-evolution, was able to transport *Voyager* 9,500 light years closer to home, slicing a decade from the crew's journey. Later that same year Seven of Nine, the former Borg drone who had joined the crew, plotted a revised course that would save a further five years. A quantum slipstream drive was temporarily installed by chief engineer Lieutenant B'Elanna Torres that cut ten further years from the projected journey time, and the use of a stolen Borg transwarp coil in 2375 helped *Voyager* leap 20,000 light years towards its destination, reducing the journey time by an incredible 15 years.

Even an encounter with the seemingly omnipotent being known as Q on stardate 54704.5 proved to have its advantages, after he rewarded Janeway for helping tame his errant son by giving her route information that would remove a few more years from the trip.

A YEAR OF HELL

Time was not always on the side of the *U.S.S. Voyager*, however, and in 2374 the ship found itself traveling along an alternate timeline following an attack by the Krenim.

Annorax, a military scientist obsessed with restoring the Krenim Imperium to its former glory, had developed a temporal weapon ship capable of wiping entire species from history. *Voyager* was caught in the weapon's temporal wave after it was used to erase the Zhal race from time, although the crew were unaware that reality had changed around them. The crew endured an entire year of relentless combat with the Krenim, leaving *Voyager* all but destroyed. The temporal tampering of Annorax was only resolved when his weapon ship was destroyed and engulfed in a temporal shockwave, erasing itself from history and setting time back on its proper course.

THE PATHFINDER PROJECT

The crew of the *U.S.S. Voyager* were at last able to establish temporary contact with Starfleet in 2374. Following the discovery of an abandoned subspace relay network capable of transmitting a signal to the outermost reaches of the Alpha Quadrant, the crew elected to send a holographic transmission in the form of the Emergency Medical Hologram. The Doctor was able to communicate directly with Starfleet Command, and explain *Voyager*'s predicament and status. This led directly to the setting

During the conflict with Species 8472, *Voyager*'s crew rescued Seven of Nine – a human who had been assimilated by the Borg. She went on to become a valued member of the crew.

One of the most extraordinary parts of the journey took place in a timeline that was erased from history. A Krenim ship was using temporal weapons to alter the past until *Voyager* destroyed it and restored the timeline.

Voyager established contact with the Alpha Quadrant when they discovered a network of subspace relays that allowed them to send the EMH home 'digitally.'

With Seven of Nine's help the crew built their own small vessel, the *Delta Flyer,* which incorporated advanced Borg technology.

up of the Pathfinder Project, tasked exclusively with discovering a way to bring *Voyager* home. Former *U.S.S. Enterprise*-D crew member Lieutenant Reginald Barclay was eventually able to re-establish regular contact with *Voyager* in 2376, raising morale aboard the ship and allowing it to actively engage in Starfleet missions.

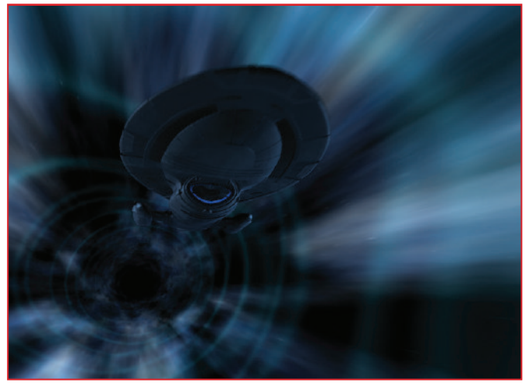
HOMEWARD BOUND

In 2378, the *Voyager* crew identified high levels of neutrino emissions emanating from a nearby nebula, suggesting the presence of wormholes. Glad to have discovered another possible shortcut home, the crew were disappointed to find that the nebula was overrun with Borg. Janeway opted to avoid a potentially disastrous confrontation with the Collective and continue along their previous course, but the arrival of a version of herself from 26 years in the future changed her mind.

Admiral Janeway had spent ten years working out how to get the *U.S.S. Voyager* crew home sooner than the 16 years it had taken in her timeline, which had taken a heavy toll on her crewmates. 22 crewmembers had lost their lives during the journey, including Seven of Nine, and her husband, Chakotay, had died shortly after they'd made it back to Earth. Tuvok was suffering from an untreatable neurological condition. The prospect of these tragedies played their part in convincing Captain Janeway to follow her alternate timeline-self's plan, and armed with advanced transphasic torpedoes and ablative shield generators courtesy of future Janeway, Voyager took on the Borg.

The mission was given greater imperative with the discovery of a transwarp hub being prepared by the Borg, linked to thousands of transwarp conduits with exits across the galaxy, including the Alpha Quadrant. The only way to destroy the hub without the Borg Queen adapting to their attack was for the admiral to infect the Collective with a neurological pathogen, carried in her bloodstream, by allowing herself to be assimilated. The Borg Queen became infected, leading to her death and the complete destruction of Unimatrix 01. Meanwhile, *Voyager* destroyed the hub from within, taking out the Borg's entire transwarp network in the process. Riding the shockwave of the explosion, *Voyager* emerged from the final transwarp conduit as it collapsed, now just a single light year away from Earth.

The *U.S.S. Voyager* had spent seven years traversing the Delta Quadrant, exploring the strangest of worlds and encountering numerous new civilizations, all the while upholding the core values of Starfleet and the United Federation of Planets.



Voyager was able to take several 'short cuts' on the way back to the Alpha Quadrant, often using advanced technology such as the quantum slipstream drive. The crew made the final leap by using a network of Borg transwarp corridors that brought the ship back to Earth. In the process, they inflcted serious losses on the Borg.

ANNOTATED EXTERIOR VIEWS

Only the second *Intrepid*-class starship ever built, the *U.S.S. Voyager* NCC-74656 was one of the most advanced deep space exploration and research vessels of its time, and faced extraordinary challenges.

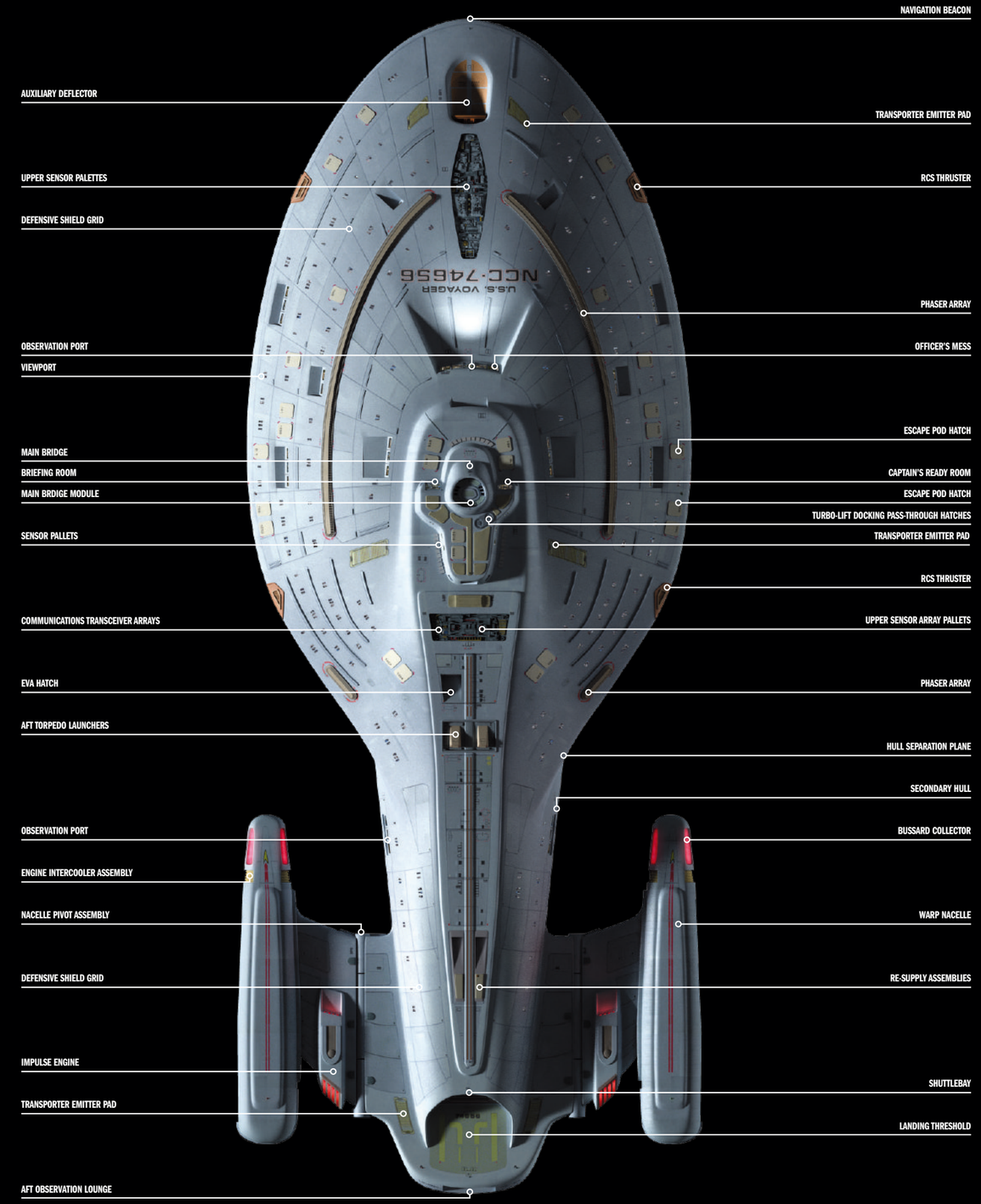
At 344 meters long, and with a crew complement of 150, the *U.S.S. Voyager* was far smaller than *Galaxy*-class starships like the *U.S.S. Enterprise*-D. However, the vessel was fitted with numerous new technologies that made it one of the most advanced ships in Starfleet.

Voyager was equipped with variable geometry warp nacelles, utilizing an innovative folding wing-and-nacelle configuration to ensure that the warp fields generated by the ship would not damage the fabric of space. When traveling at sublight speeds the nacelles were deployed in a horizontal orientation, parallel to the engineering hull, and reoriented to an angled profile when the warp drive was operational. The ship was among the fastest in Starfleet, designed to have a normal cruising speed of warp 6 with a sustainable cruise velocity of warp 9. If necessary, it could maintain a top speed of 9.975 for up to 12 hours.

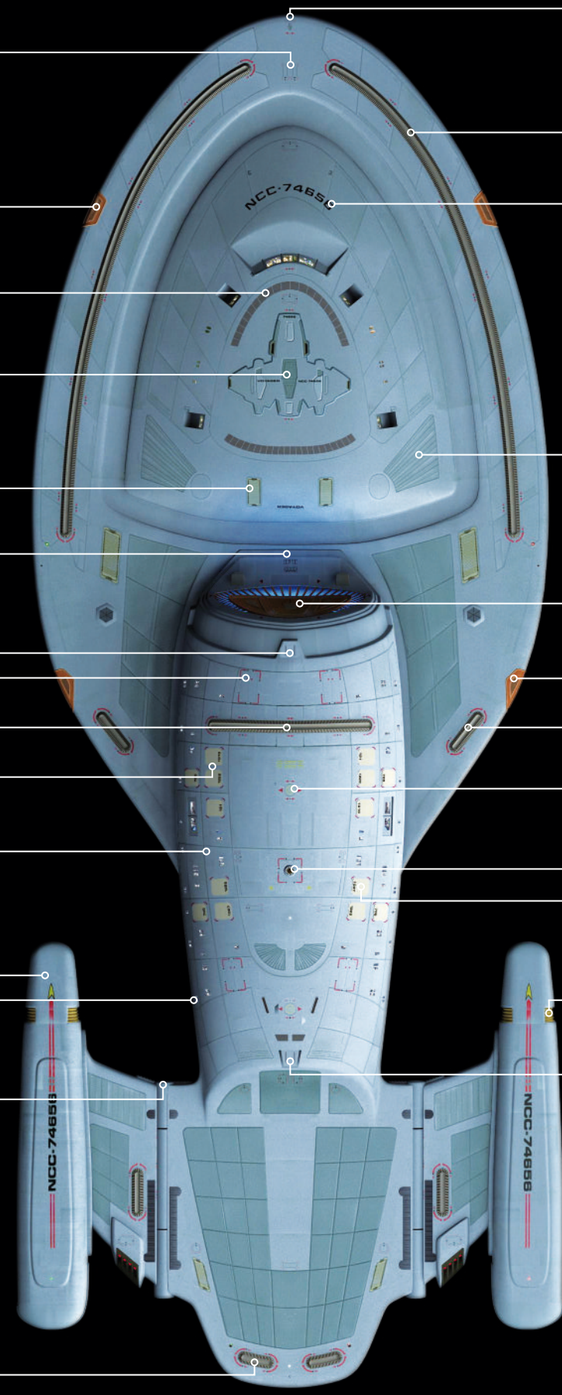
Another striking capability of the *Intrepid*-class *Voyager* was the ship's ability to land on the surface of a planet, the strain of which was absorbed by a structural integrity system, and a set of four stabilization pads that allowed the ship to hover above the ground, gently cushioning landing without damaging the hull.

The ship only had the capacity to carry enough fuel for three years of continuous space operation, and its small antimatter generator was incapable of providing enough antimatter for its extended mission. Preservation of resources therefore became of paramount concern.

DORSAL VIEW

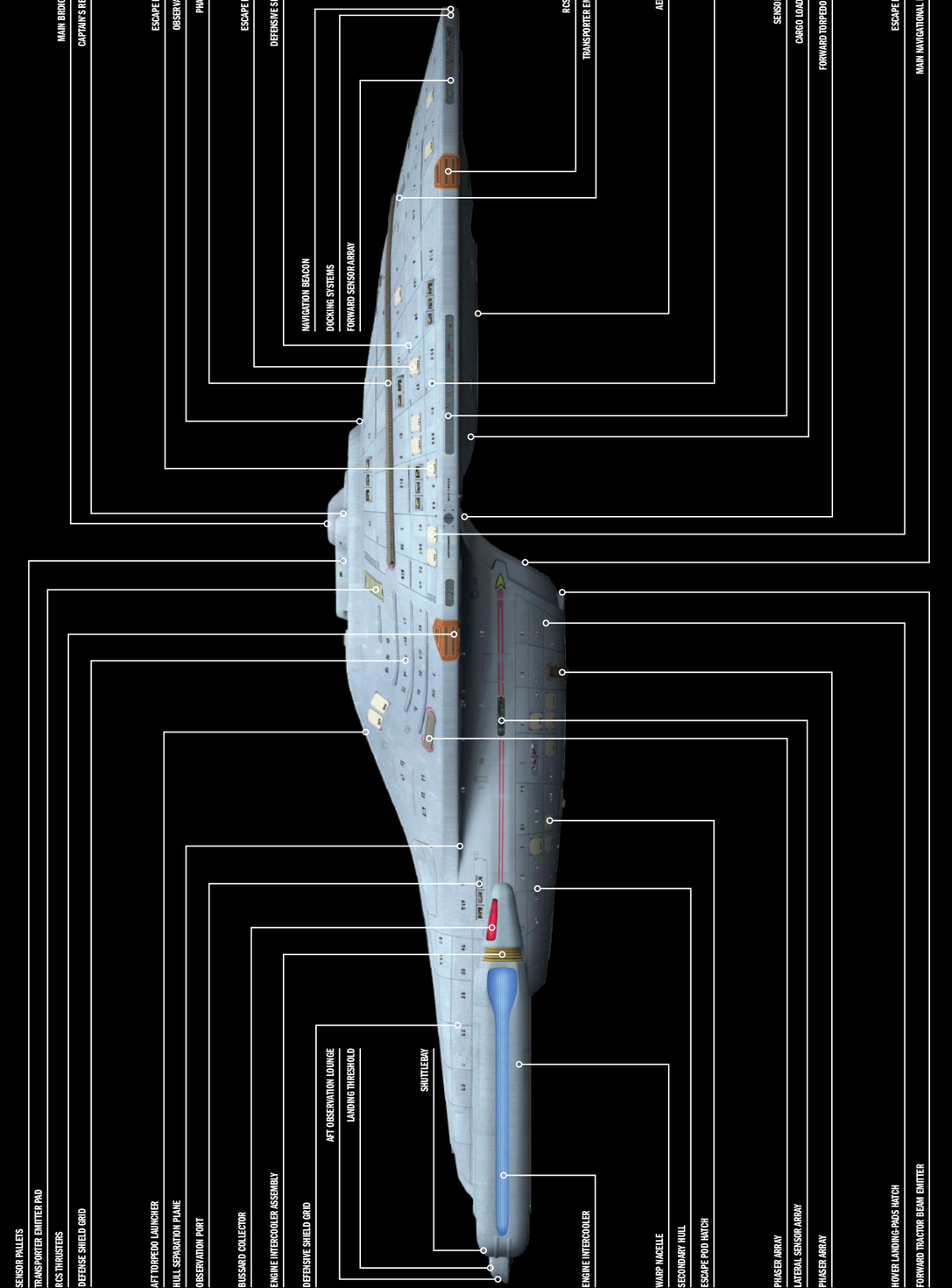


VENTRAL VIEW



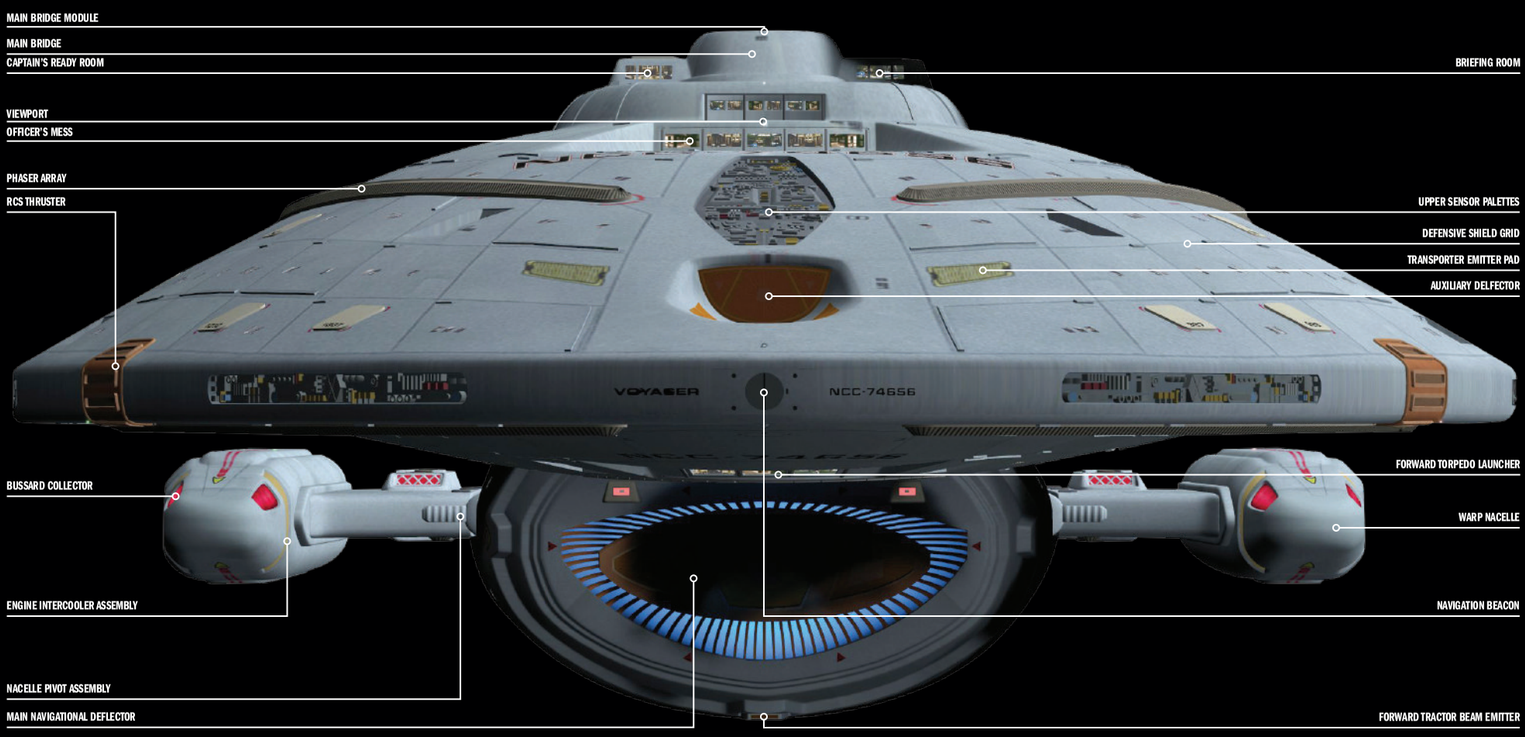
NAVIGATION BEACON
PRIMARY HULL
PHASER ARRAY
RCS THRUSTERS
SHIP'S REGISTRY NUMBER
LOWER SENSOR PALLET
AEROSHUTTLE
CARGO LOADING HATCH
TRANSPORTER EMITTER PAD
FORWARD TORPEDO LAUNCHER ASSEMBLY
MAIN NAVIGATIONAL DEFLECTOR
FORWARD TRACTOR BEAM EMITTER
HOVER LANDING-PADS HATCH
RCS THRUSTERS
PHASER ARRAY
PHASER ARRAY
LATERAL SENSOR ARRAY
WARP CORE EJECTION HATCH
SECONDARY ENGINEERING HULL
ANTI-MATTER RE-SUPPLY
ESCAPE POD HATCH
WARP NACELLE
OBSERVATION PORT
ENGINE INTERCOOLER ASSEMBLY
TRACTOR BEAM EMITTER
NACELLE PIVOT ASSEMBLY
PHASER ARRAY

STARBOARD VIEW

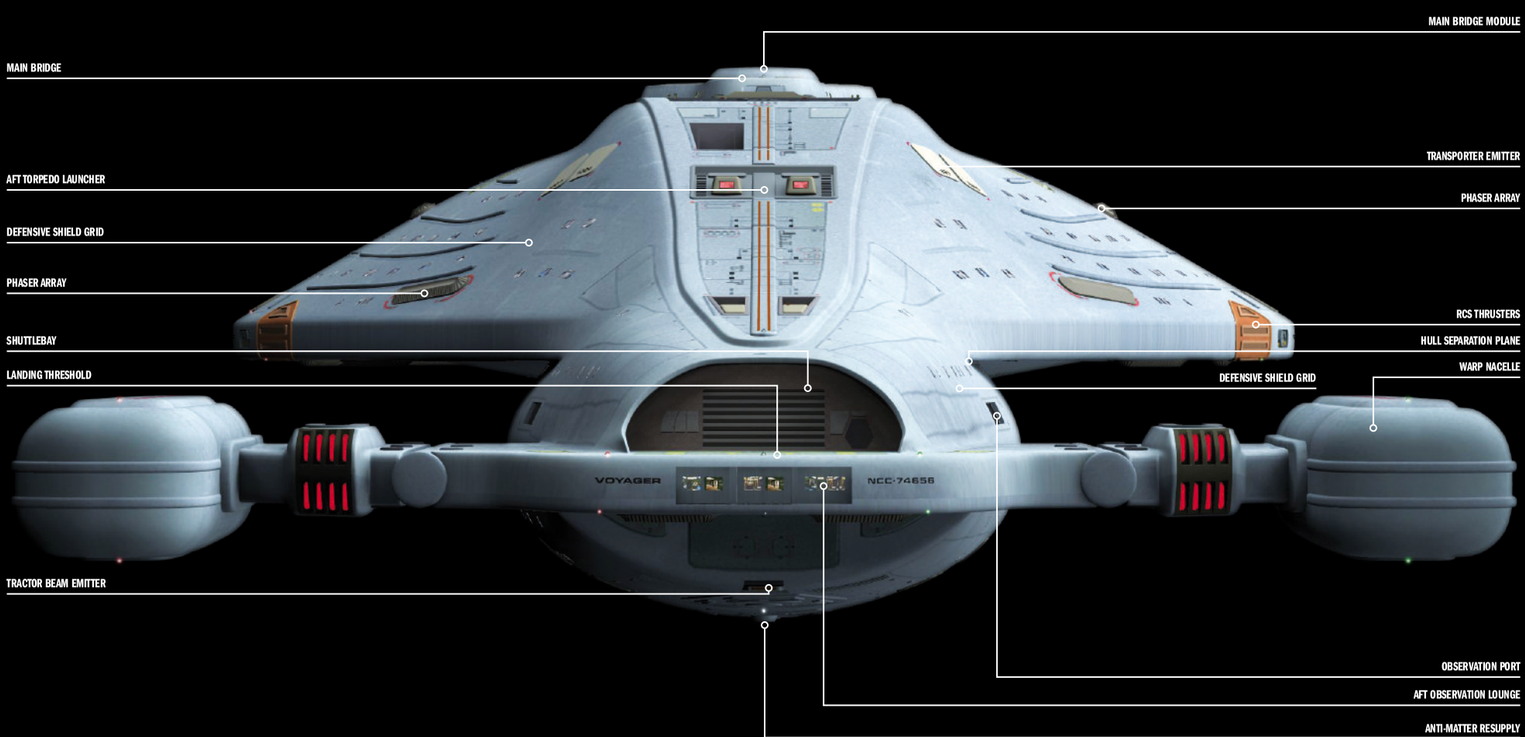


MAIN BRIDGE MODULE
CAPTAIN'S READY ROOM
ESCAPE POD HATCH
OBSERVATION PORT
PHASER ARRAY
ESCAPE POD HATCH
DEFENSIVE SHIELD GRID
NAVIGATION BEACON
DOCKING SYSTEMS
FORWARD SENSOR ARRAY
RCS THRUSTER
TRANSPORTER EMITTER PAD
AEROSHUTTLE
VIEWPORT
SENSOR PALETTES
CARGO LOADING HATCH
FORWARD TORPEDO LAUNCHER
ESCAPE POD HATCH
MAIN NAVIGATIONAL DEFLECTOR
SENSOR PALLETS
TRANSPORTER EMITTER PAD
RCS THRUSTERS
DEFENSE SHIELD GRID
AFT TORPEDO LAUNCHER
HULL SEPARATION PLANE
OBSERVATION PORT
BUSSARD COLLECTOR
ENGINE INTERCOOLER ASSEMBLY
DEFENSIVE SHIELD GRID
AFT OBSERVATION LOUNGE
LANDING THRESHOLD
SHUTTLEBAY
ENGINE INTERCOOLER
WARP NACELLE
SECONDARY HULL
ESCAPE POD HATCH
PHASER ARRAY
LATERAL SENSOR ARRAY
PHASER ARRAY
HOVER LANDING-PADS HATCH
FORWARD TRACTOR BEAM EMITTER

FRONT ELEVATION

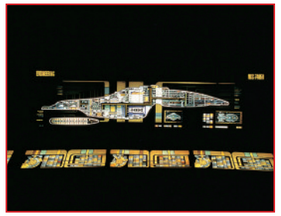


AFT ELEVATION



KEY LOCATIONS

At 344 meters long, the *U.S.S. Voyager* NCC-74656 was one of the most compact Starfleet vessels of its era, yet contained everything required for deep space exploration.



The condition of all *Voyager*'s systems could be monitored from the master systems display at the rear of the bridge.

The area immediately behind the main bridge contained two escape pods, spacesuit lockers, an airlock, a small office space, and a weapons locker.

Deck 1 contained the main bridge, the captain's ready room, and a briefing room.

The captain's ready room was at the top of the ship on deck 1, starboard of the main bridge. The briefing room occupied the identical position on the port side. The windows in both rooms looked out across the upper hull and into space.

The *U.S.S. Voyager NCC-74656* was an *Intrepid*-class starship with 15 decks. It had all the systems necessary for deep space exploration, including science labs and advanced sensor systems, but was far smaller than other starships such as the *Galaxy*-class *Enterprise*-D. It could not provide accommodation for families, or other less mission-sensitive facilities such as arboretums, that could be found on its larger siblings.

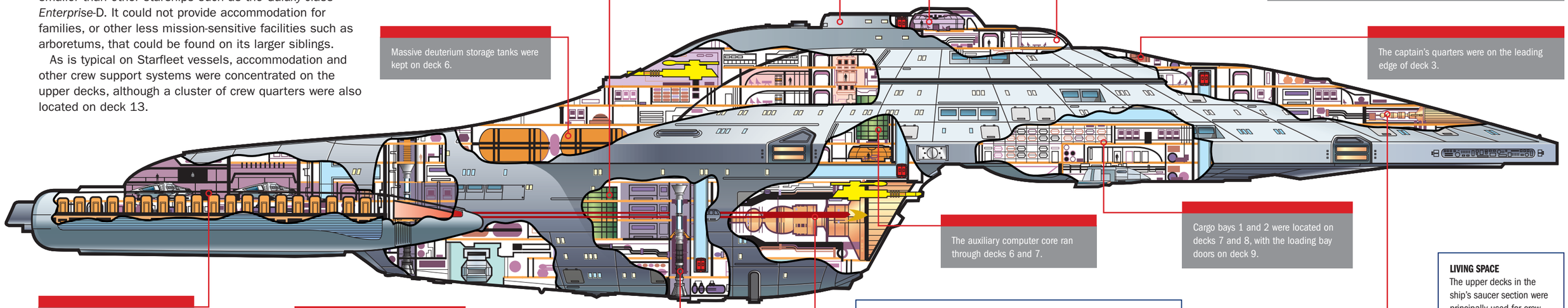
As is typical on Starfleet vessels, accommodation and other crew support systems were concentrated on the upper decks, although a cluster of crew quarters were also located on deck 13.

The main computer core was located on decks 10, 11, and 12.

Massive deuterium storage tanks were kept on deck 6.

The mess hall was located at the front of deck 2, with several large windows facing the front of the ship.

The captain's quarters were on the leading edge of deck 3.



The main shuttlebay was located at the rear of the ship on decks 9 and 10.

Main warp core, extended from deck 10 down to deck 15. *Voyager* also carried an auxiliary warp core. This was not a direct replacement for but a series of components that could be used to construct a new core in an emergency.

The main deflector was one of the ship's largest components and occupied a substantial area across decks 10, 11, and 12.

The auxiliary computer core ran through decks 6 and 7.

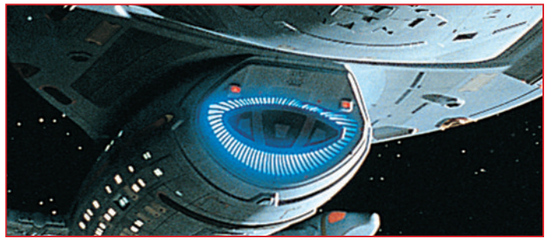
Cargo bays 1 and 2 were located on decks 7 and 8, with the loading bay doors on deck 9.

ENGINEERING SYSTEMS
The decks on the lower half of the ship accommodated the majority of the engineering and computing systems, including matter and antimatter storage tanks, main engineering, and the chief engineer's office. Some of the crew quarters were also located in the lower part of the ship, on deck 13.

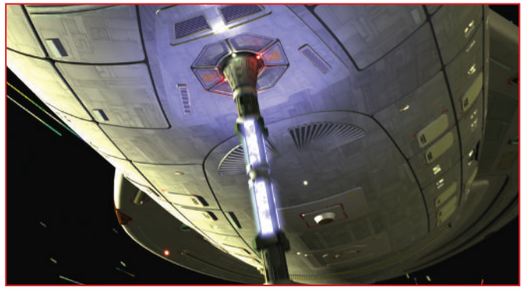
The auxiliary deflector was on the front edge of deck 6.

LIVING SPACE
The upper decks in the ship's saucer section were principally used for crew quarters, research labs, and crew support systems such as sickbay and the transporter rooms.

Voyager's shuttlebay was located at the rear of the ship. A pressurized section immediately forward of this provided an area where shuttles could be serviced or constructed.



The main deflector at the front of the engineering section projected a beam that cleared interstellar debris from the ship's path. This was essential since at high speeds a collision with anything as small as a stray hydrogen atom could puncture the ship's hull.



A series of hatches were located on the ship's underside, beneath deck 15. The main warp core could be ejected via the rearmost of these hatches. A set of cargo bay doors and a circular port used to load antimatter were set forward of this.

Voyager's mess hall at the front of deck 2 was the social center of the ship. Initially serviced by replicators, the crew came to rely on Neelix's cooking, prepared in a galley which had originally served as the captain's private dining room.

ANCILLARY SYSTEMS

The technological excellence of the systems aboard the *U.S.S. Voyager* were vital in helping the starship survive its perilous journey through the Delta Quadrant.

Structural integrity and inertial dampening fields protected *Voyager* from the physical stresses of the ship's landing procedure.

Designed for long-range scientific exploration, *Intrepid*-class starships represented the latest in Starfleet technological innovations. A range of backup and redundancy features were built into its ancillary systems, supporting their state-of-the-art warp drive technology and computer systems. These assisted greatly in guiding *Voyager* through its journey across the Delta Quadrant.

ACCESS ALL AREAS

Intrepid-class vessels incorporated an extensive network of Jefferies tubes – interconnecting crawlways and access tunnels – allowing personnel to access and maintain the ship's numerous systems, including electroplasma system power conduits, computer network connections, and environmental systems, all of which were routed along these vertical and horizontal shafts.

The electroplasma system, or EPS, was networked to all areas of *Voyager* directly from main engineering on deck 11, via a series of EPS conduits that fed power directly to the control systems. There were multiple back-up systems for both generation and transfer of power built into the EPS. In 2374, *Voyager*'s entire EPS system underwent extensive power conservation modification under the instruction of the Enarans, with the addition of Borg technology to enhance key power couplings.

Voyager's computer system incorporated optronic data cores and bioneural circuitry into the ship's Optical Data Network (ODN). Consisting of a number of gel packs containing bioneural cells, these units increased command response time and processing speeds. Fiber optic cables linking the ODN ran from primary and auxiliary computer

The network of Jefferies tubes aboard the *U.S.S. Voyager* provided ample room for crew members to access, monitor, or repair the ship's ancillary systems.

cores throughout the ship via the Jefferies tubes, as did the network supplying the replicators aboard *Voyager*.

STEADY AS SHE GOES

Specialized networks delivered specific kinds of energy to two of the most vital ancillary systems. The Structural Integrity Field (SIF) and Inertial Damping Field (IDF) systems were both integral to the *Intrepid*-class vessel's ability to land on a planet's surface, and protected the crew against some of the physical effects of space travel.

The Structural Integrity Field helped to protect *Voyager*'s hull when subjected to extreme stresses.

Many of the ancillary systems aboard *Voyager* were concealed behind panels and bulkheads.

The use of replicators aboard *Voyager* was restricted due to concerns over power consumption.

The Structural Integrity Field was an electromagnetic energy barrier which provided reinforcement to the physical hull of the vessel, absorbing the enormous additional strains generated on *Voyager*'s infrastructure when accelerating and decelerating in space, or during the landing procedure.

The Inertial Damping Field compensated for changes to the natural inertia of a ship as experienced by those onboard. The field was vital during the transition to and from warp speed, preventing the crew from being instantly crushed by the force of such sudden bursts of acceleration and deceleration. During *Voyager*'s landing procedure, the IDF would initially be increased to maximum level in order to cope with the huge gravitational stresses being encountered by the ship within a planetary atmosphere. If the ship came under attack, the IDF could be temporarily destabilized by the impact of weapons on the shields or hull, causing the crew to experience those impacts as the ship shook.

Intrepid-class vessels were also equipped with a Reaction Control System used for docking with other vessels or for station-keeping, as well as a series of low-powered tractor beams for delicate maneuvering. Along with its sophisticated sensors, deflector controls, and an environmental system (based on deck 12), *Voyager*'s ancillary systems continued to function effectively and efficiently throughout its journey.

REPAIR AND REFUEL

While the crew of *Voyager* were able to carry out regular maintenance of the ship's systems, they were still reliant on periodic replacement of the consumable materials necessary to keep the vessel operational. This became increasingly difficult during its long journey through the Delta Quadrant, and the Starfleet vessel often found little opportunity to dock at a friendly station in order to carry out more extensive work. When such opportunities arose, *Voyager* was equipped with a variety of external connect hard points, consumable ports, and air-locks. The ship's main port and starboard docking ports were located forward on deck 8, while the underside of deck 15 was designed to allow transfer of deuterium and antimatter into the storage tanks on decks 12 and 15.

REPLICATOR RATIONS

A replicator system was commonplace on Starfleet vessels during the 24th century, so much so that, as a resource, replicators were somewhat taken for granted. However, with power consumption on *Voyager* at a premium, the use of this otherwise standard ancillary system had to be rationed to ensure that enough replicated food was available to keep the crew alive. The introduction of a hydroponics bay in *Voyager*'s Cargo Bay 2 enabled the crew to grow fresh fruit and vegetables, placing less of a burden on the replicator system.

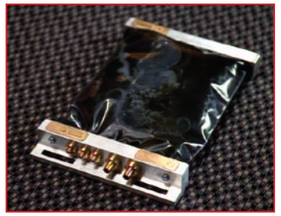
ON THE GROUND

***Voyager* was designed to land on the surface of a planet, where the demands placed on its systems were very different. The ship could open the hatches and allow the planet's atmosphere in. Once it had landed, the structural integrity fields could be switched to minimal status.**

Voyager was an extremely versatile ship that could function in a wide variety of environments. Its designers expected the ship to make regular maintenance stopovers, which weren't practical in the Delta Quadrant, meaning the crew had to find other ways of replenishing supplies and making repairs.

COMPUTER SYSTEMS

The *U.S.S. Voyager*'s computers utilized a unique combination of established isolinear systems with the latest in intelligent bio-neural technology.



Voyager's bio-neural gel packs were the most advanced computer technology known to the Federation at that time.

The *U.S.S. Voyager* launched with state-of-the-art computers, combining traditional isolinear circuitry with an advanced bio-neural system that organized information more efficiently and could perform incredibly complex procedures at high speed. *Voyager* was the first Starfleet vessel to be fitted with this technology; an advance comparable to the introduction of duotronic circuitry in the 23rd century.

A THINKING SYSTEM

Consisting of a series of gel packs containing synthetic neural fibers suspended in biomimetic gel – a gelatinous organic medium – the bio-neural system was designed to mimic the architecture of the human brain. The artificially created neural fibers in each gel pack resembled humanoid neurons, composed of several complex polymers with multiple interconnections. Each fiber supported hundreds of dendritic subfibers, which were also suspended within the gel matrix. They were capable of making billions of connections, thus generating an incredibly sophisticated and responsive computational architecture. *Voyager*'s computers could essentially think in ways analogous to living organisms; by using fuzzy logic, they could effectively guess answers to complex questions.

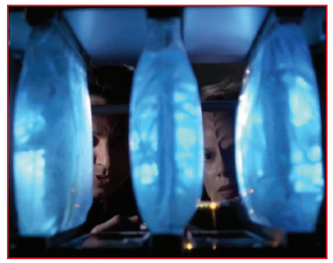
The self-contained nature of each gel pack meant that they could be replaced as easily as an isolinear chip. Although the gel packs operated independently of other systems, if necessary they could utilize the isolinear cores to perform number-crunching operations and for data reference. However, their principal function was to make instantaneous navigational computations. For example, they could calculate course corrections in real time to achieve optimal fuel consumption.

The evolution of *Voyager*'s Emergency Medical Hologram into a fully sentient being was one of the most impressive examples of the bio-neural system's capabilities. Previously, holograms created by isolinear computer systems alone had rarely been able to achieve anything approaching sentience, but the combination of bio-neural circuitry with a self-improving program allowed the Doctor to evolve into a being with genuine emotions and intellectual capabilities.

IN SICKNESS AND IN HEALTH

At the time of *Voyager*'s mission, bio-neural technology was in its infancy, and in many cases did not respond to a conventional engineering approach. Because they used organic components, bio-neural gel packs were vulnerable to viral infections, and could literally become sick. In the Alpha Quadrant, the crew could simply dock at a starbase, remove infected gel packs and replace them with fully functioning ones, but this was impossible in the Delta Quadrant; the gel packs could not be replicated or manufactured aboard *Voyager*, so any infection presented a serious risk to the ship. *Voyager* was equipped with 47 spare gel packs.

Fortunately, because of their organic nature, gel packs could be treated by conventional medicine. In 2371, *Voyager*'s gel packs became infected with a disease generated by bacteria from some schplict in Neelix's kitchen. The effects were serious, and the ship's entire bio-neural systems was put at risk. The Doctor suggested heating the gel packs, killing off the infection by effectively

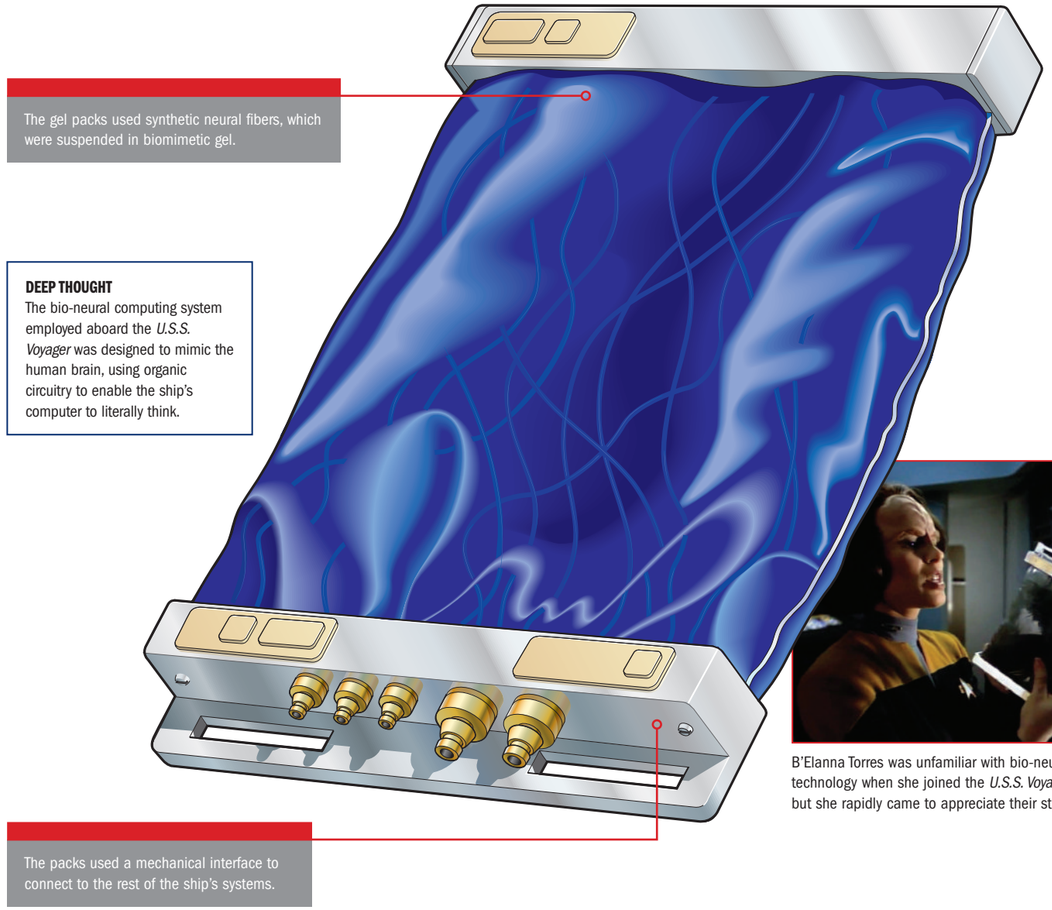


Bio-neural gel packs were located in compartments throughout the *U.S.S. Voyager*.

Gel packs could be affected by viral infections, which could lead to a terminal malfunction.

Medical staff could analyze and treat a gel pack in exactly the same way they would an organic patient.

BIO-NEURAL



DEEP THOUGHT
The bio-neural computing system employed aboard the *U.S.S. Voyager* was designed to mimic the human brain, using organic circuitry to enable the ship's computer to literally think.

B'Elanna Torres was unfamiliar with bio-neural technology when she joined the *U.S.S. Voyager* crew, but she rapidly came to appreciate their strengths.

giving them a temperature. The approach was successful, and the gel packs were returned to a healthy condition.

If necessary, the entire bio-neural computer network could be replaced with conventional, non-organic circuitry, but this would have necessitated a major operation that would take months to complete.

CONVENTIONAL COMPUTING

Many of *Voyager*'s computer functions were still performed by conventional isolinear systems. An extensive system of chips was located throughout the ship, and the cores, isolinear chips, and a series of independent subprocessors were all linked to the ship's Optical Data Network (ODN). This interfaced with the bio-neural systems to share computational capacity. The chips were often mounted together in large banks, and, unlike the gel packs, they were extremely portable. While the isolinear chips were not as powerful as the gel packs, they were capable of storing enormous amounts of information and had massive computational abilities of their own.

The ship's main computer core was located on decks 10 and 11, with an auxiliary core across decks 6 and 7. The cores used subspace fields that allowed data to be handled at faster than light speeds.

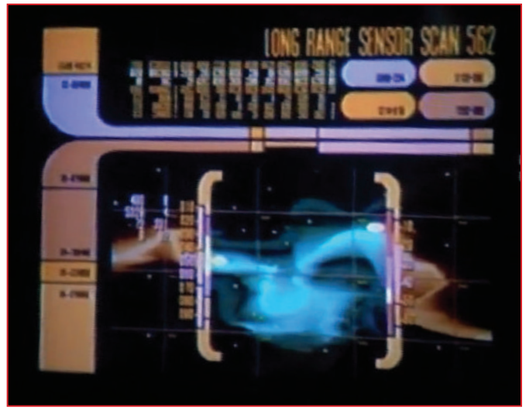
As with most Starfleet vessels of the period, *Voyager* was equipped with the Library Computer Access and Retrieval System (LCARS). The crew benefited greatly from this massive database of information, which included the literature of all Federation worlds, biological data on all known species, comprehensive files on medical procedures, a complete record of the ship's logs of all Starfleet vessels, and an extensive collection of stellar maps from across the Federation. The expandable database could comfortably accommodate gigaquads of new data gathered by the crew as they journeyed through the unexplored Delta Quadrant.

SENSOR SYSTEMS

The *U.S.S. Voyager* was equipped with a range of highly sensitive external and internal sensors, providing vital information on spatial phenomena and the ship's status.

The *U.S.S. Voyager*'s external sensor systems were similar to those found on many other Federation starships. Mission-critical data-collecting packages, referred to as sensor palettes, were embedded in the ship's hull along with additional specialized sensing equipment. Collectively, the ship's sensors produced three classifications of information: long-range, lateral, and navigational.

Primary hull sensors were located along the rim of the saucer section, as were three port and three starboard sensor clusters. Sensors for long-range scanning were installed directly behind the main navigational deflector, generating information that was shared with navigational systems to keep the ship on course and clear of celestial objects or other vessels. In addition to the internal and external sensors, *Voyager* was equipped with a number of instrumented probes that provided telemetry in areas that could not be penetrated by the sensors.



Information gathered by *Voyager*'s extensive array of sensors could be combined and channeled to display screens in most areas of the ship.

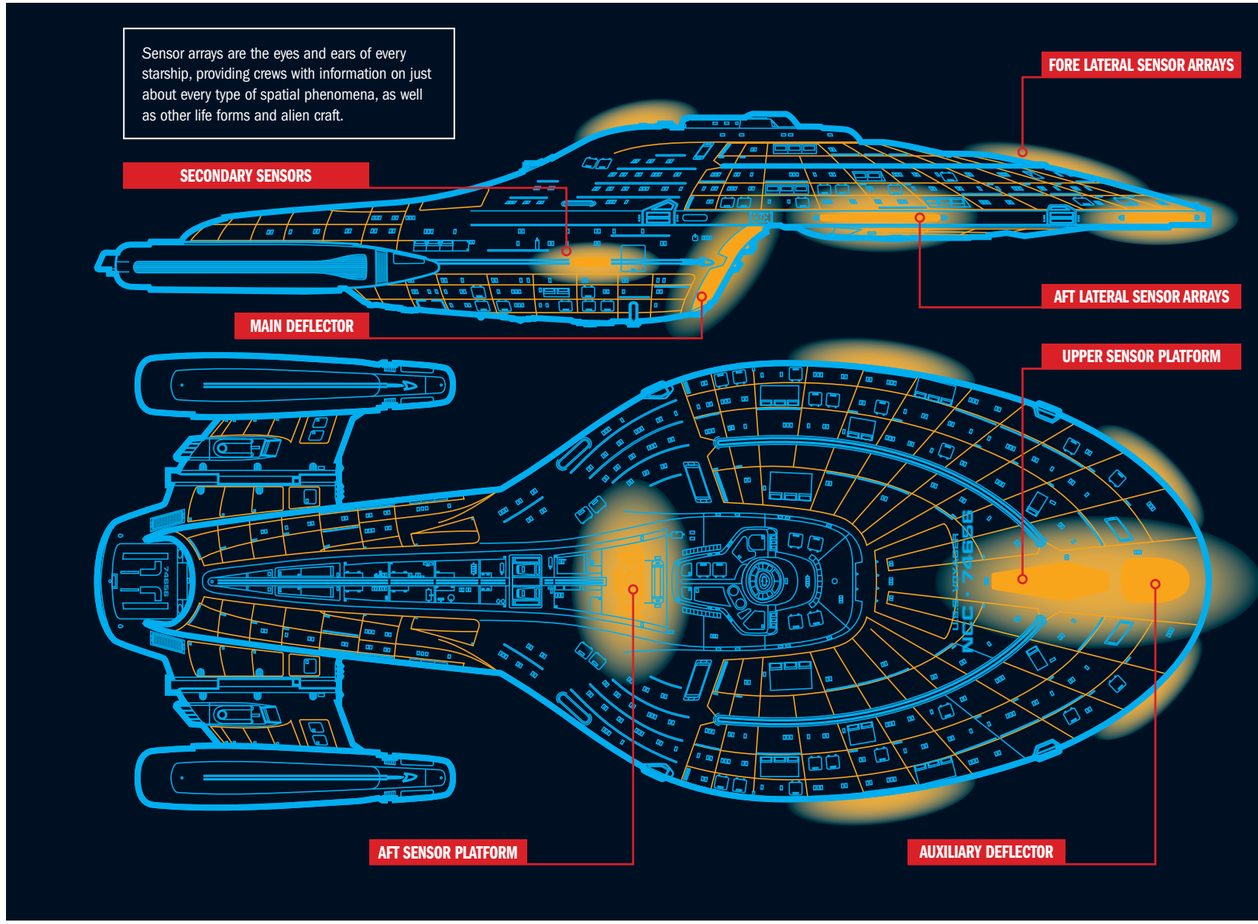
MAIN SENSOR PALETTES

Voyager's largest concentration of sensor equipment was located on the upper primary hull, within a diamond-shaped upper sensor palette positioned on the upper part of the saucer behind the auxiliary deflector. The aft sensor platform was located between the bridge and the aft photon torpedo launchers. Further aft, the port and starboard engineering hull sensor arrays focused on navigational and tactical information-gathering. These were the primary source for navigational readings, particularly important when traveling at warp speeds through uncharted areas. These sensors continually monitored the ship's onboard systems, including structural integrity, environmental controls, warp and impulse engine conditions, ODN processing, and transporter reliability.

The accuracy of sensors can be limited by any number of natural phenomena, including ionizing radiation, powerful electromagnetic pulses, and radiothermic interference. Such phenomena are common in space and can cause sensor static, leading to vague or misleading readings.

Many of the ship's sensors were located in large palettes on the outer rim of the saucer section, between the orange RCS thrusters.

One of the largest sensor arrays was in a diamond-shaped assembly on the top of the saucer section. Data from the sensors was routed to the ship's computers, where it was analysed before it was routed on to various consoles around the ship.



WEAPONS AND DEFENSES

The *Intrepid*-class starship *U.S.S. Voyager* was primarily designed for deep space exploration. In common with all Starfleet vessels, however, it carried the means to defend itself if attacked.

Although the *U.S.S. Voyager* was never intended or designed as a military vessel, the ship was more than capable of robustly defending itself against attack during the period when it was lost in the Delta Quadrant, with limited resources at its disposal. This was largely due to the skill and ingenuity of its crew, but also the result of the sophisticated design of the Starfleet ship's original weapons and defensive systems.

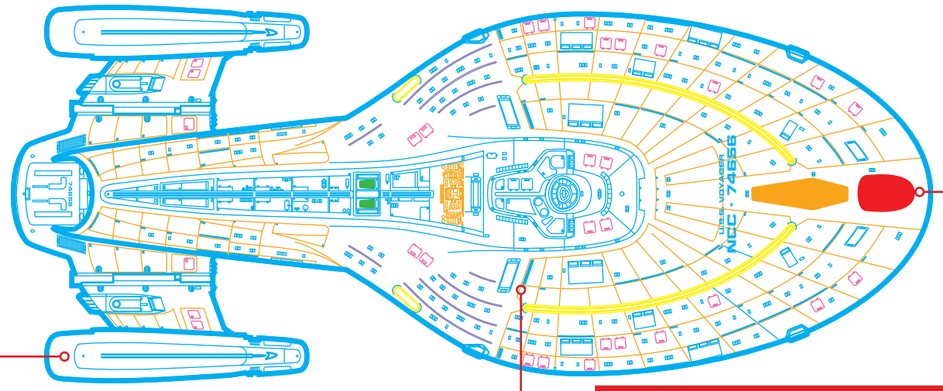
Voyager was fitted with a powerful and adaptable phaser array, which could be adjusted for use in a wide variety of situations. For example, the harmonics of the phaser beam could even be modified to heal subspace rifts in order to prevent polaric detonation. *Voyager* was also equipped with photon torpedoes, defensive shields, other systems such as the deflector dish, and devices that utilized explosive compounds such as thalmerite or tricobalt.

The largest phaser arrays were designed to maximize coverage of attack from all angles, and were situated on the upper and lower surfaces of the vessel's forward section. Protecting the upper aft section were two small arrays, which were mounted on the port and starboard sides of the mid-hull section.

Voyager's defensive shields could be extended around the vessel beyond normal limits.

Voyager had photon torpedo launchers located fore and aft, allowing it to mount an attack on a pursuing alien vessel as well as one directly in front.

The deflector dish was hugely adaptable. It could send out resonance pulses or bursts to block any damaging energy fields issued by alien ships, produce dampening fields to protect the ship, or direct a tachyon burst that could disperse a potentially dangerous temporal field.



Sirillium found in certain nebulae was used to increase the *U.S.S. Voyager*'s deflector shield efficiency.

The largest phaser arrays were located on the upper hull of the main saucer section.

PHASERS

A series of high-powered phaser banks were the primary offense and defense weapons of the *U.S.S. Voyager*, gathered together in a series of arrays which were located at key locations on the hull. Control of the integrated phaser system was coordinated from the security station on the main bridge, from where a phaser's power output, dispersion beam width, harmonics, and length of burst could be adjusted.

PHOTON TORPEDOES

Voyager's original complement of type-6 photon torpedoes was limited to 38, so their use was reserved for extremely hostile situations only. Their explosive potential could be modified by varying antimatter levels to increase or decrease the yield, measured in isotons. Typically set at a yield of 200 isotons, the weapons' destructive potential would be maximized by firing them in a pre-set spread pattern.

Photon torpedoes were much favored for their destructive capability.

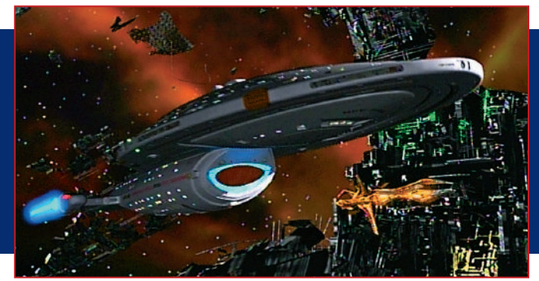
Under consistent attack on specific areas, shields may fail.

DEFENSIVE SHIELDS

Shields were the primary defensive system of the *U.S.S. Voyager*, generated through a grid that covered the upper port and starboard of the ship's engineering hull, consisting of a projected energy barrier whose frequency could be modified or rotated to maximize its effectiveness against attack. *Voyager*'s shields were highly susceptible to any chroniton-based weapon.

OTHER SYSTEMS

Voyager's crew often had to improvise weapons and defenses from systems not designed for such tasks. The deflector dish, for example, could be reconfigured to transmit a variety of directed energy beams or emissions. *Voyager* was also equipped with at least 40 tons of the explosive chemical compound thalmerite, and originally carried tricobalt devices that could destroy large constructions.



The deflector dish cleared the ship's path of any hazards or space debris.

BATTLE STATIONS

Originally destined for a more pedestrian tour of duty, the *U.S.S. Voyager*'s adaptability under fire was key to its survival in the face of aggressive forces in the Delta Quadrant.

The *Intrepid*-class *U.S.S. Voyager* was intended primarily for limited missions of exploration, therefore aspects of its design left it vulnerable to attack by hostile forces during its flight through the Delta Quadrant.

Voyager's integrated saucer and hull configuration harked back to earlier Starfleet ship designs, omitting the saucer-separation capability that afforded a tactical flexibility to ships like the *Galaxy*-class *Enterprise*-D. Another issue was the prominent location of the bridge on deck 1, which became a clear target for attack. If hostile forces were to board the ship, it was quite possible for various functions controlled by the bridge to be blocked or countermanded from other areas of the vessel.

A number of operating guidelines were developed by Starfleet as countermeasures against such threats, and many of these were adapted and modified by Captain Kathryn Janeway in response to the unique pressures posed by hostile races within the Delta Quadrant. On more than one occasion, these revised procedures effectively saved the ship from destruction or invasion.

The entire ship could operate satisfactorily with many of the minor stations out of action, but the absolute minimum crew needed to keep the ship running at an efficient level was five – one commander, personnel at ops, helm, and tactical, and one member monitoring the ship via a large master-systems monitor behind the captain's chair. Any reduction in this number could lead to vital systems being overlooked, with all the inherent dangers that accompany a lack of direct monitoring and control.

While *Voyager* did not possess a separate battle bridge, many of the ship's vital functions could be rerouted to different parts of the vessel in cases of extreme damage to the main bridge or enemy takeover. Which departments took on the role of emergency bridge stations depended on the individual circumstances of each situation.

RED ALERT

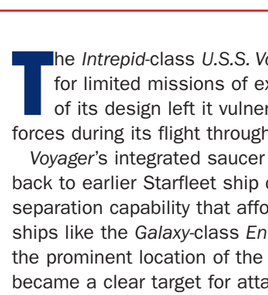
Under red alert conditions, at least eight personnel were stationed at consoles operating the ship's vital systems. All primary systems were controlled from the bridge during such periods. Damage reports and casualty information were automatically fed to either the security section or Operations, which was permanently crewed. Repairs to the vessel could also be coordinated from the bridge. In an extreme emergency situation, all vital functions could be routed to the shared central console between the captain and first officer, although this was only used as a last resort.

A 24-hour tactical alert could be initiated from the bridge, effectively modifying the duties of every member of the crew until the order to stand down from alert was issued.

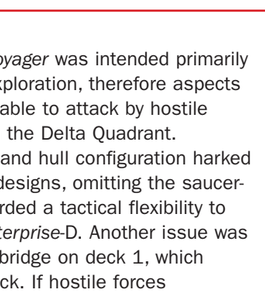
SELF DEFENSE

As the nerve center of the entire ship, *Voyager*'s bridge was a tempting target for aggressors, but the crew had options to move systems control away from the area in case of incursion or takeover. Transporter control could be rerouted by bypassing ops, and employing Emergency Medical Priority 114 could delete a crewmember's communicator badge signal from the sensors on the bridge, allowing them to move about the vessel undetected. The ship's sensors could also be disrupted or altered from other parts of the vessel, and in a coordinated attack the bridge could be temporarily knocked out by overloading the phaser power couplings, creating a surge which would disable the shields and all of the bridge's systems.

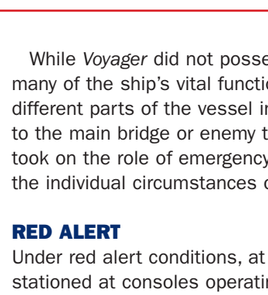
In scenarios where the captain was left with no other choice, they could order the ship to self-destruct, either by issuing a coded verbal command to the main computer or initiating the procedure manually from the central command console. If an enemy had managed to disable the secondary command processors, however, the self-destruct sequence could not be initiated.



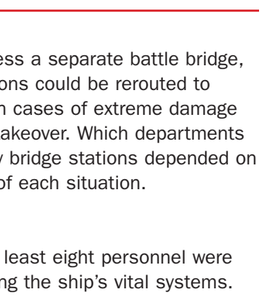
When under attack, *Voyager*'s captain and first officer accessed battle data via the console between their chairs.



In times of crisis, Captain Janeway could take sole charge of the ship's systems from her command station.



In emergencies, bridge functions could be rerouted to alternative consoles or different areas of the ship.



During battle, *Voyager*'s bridge could function with a minimum of five personnel at its key stations.

AVERTING DISASTER

Power overloads during combat were a major weakness of the *Intrepid*-class design, and had the potential to leave the ship completely defenseless. The power network feeding the bridge's vital systems could become vulnerable if, for example, all of the ship's shields were compromised at the same time. To combat this, bridge crews were able to automatically reroute the conduits of many systems without the need for an engineer to travel to the site of the problem.

The design and construction of the bridge module and its internal fittings was very strong, although sustained external attack could result in cosmetic sections of the infrastructure collapsing, particularly the ceiling support beam casings. Individual consoles were extremely resilient and could be quickly repaired even after severe electrical shorts or component explosions.

In the event of a hostile takeover, control of the *U.S.S. Voyager*'s key systems could be rerouted to different parts of the vessel, such as main engineering.

YEAR OF COMBAT

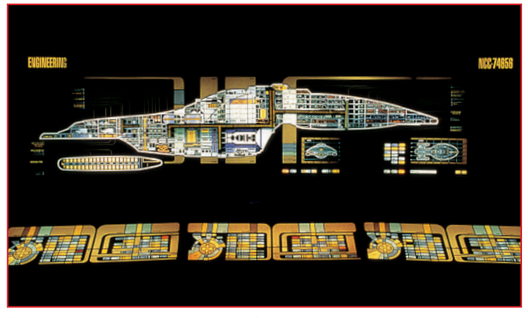
In a possible future witnessed by the time-displaced Ocampa Kes, the *U.S.S. Voyager* spent a year under attack from the Krenim, a race who used deadly chroniton torpedoes to alter the course of history. The ship continued to function despite sustaining massive damage.

Most of *Voyager*'s systems could still operate even after the ship had lost sections of the hull. Emergency forcefields sealed hull breaches and the structural integrity field kept the ship from tearing itself to pieces.

SELF-DESTRUCT SYSTEMS

All Federation starships were equipped with self-destruct systems to avoid capture by hostile forces. Despite the ship's predicament in the Delta Quadrant, this protocol still applied to the *U.S.S. Voyager*.

The United Federation of Planets encouraged the exchange of scientific, cultural, and technological information between its member states in order to benefit the entire community of races and species. Starfleet's policy of continual improvement led to its adoption of newly developed systems and transferral of technologies across the fleet, and while this often translated into significant advantages during times of conflict, the vessels themselves contained so much vital information that their capture by hostile forces posed an extremely serious tactical threat. With *Voyager* lost and without support in the Delta Quadrant, for the ship to be so compromised would have been fatal.



The master systems display at the rear of the bridge displayed how much time remained in the ship's self-destruct sequence.

CAPTURED STARSHIP

Close interrogation of the LCARS database and weapons interfaces could provide an enemy with information that might render strategies and equipment useless in future engagements. In order to prevent this, Starfleet vessels incorporated a self-destruct system that would completely destroy a vessel before it could fall into the possession of an adversary, although this was only ever employed as an absolute last resort.

The *U.S.S. Voyager* incorporated a self-destruct system that operated in two ways, with the preferred method being a deliberate release of warp engine reactants leading to the rapid and total vaporization of the ship's structure from thermal and mechanical shock. The energy released by this deliberate warp core breach would be many times larger than the explosive yield of *Voyager*'s entire photon torpedo complement, and required the early dispatch of escape pods in order for them to reach minimum safe distance from the ship when it explodes.

A secondary destruct system would be automatically selected and employed if a warp core overload could not be instigated. This backup consisted of a number of auto-destruct ordnance packages located at key locations around the starship, including the antimatter storage pods, although the detonation sequence was scheduled to begin with the destruction of the bridge on deck 1 in order to prevent any unauthorized access to tactical data from the main computer. Total explosive yield of the secondary autodestruct detonation was less significant than a warp core breach, but the resulting destruction of the vessel's infrastructure and components would be as effective.

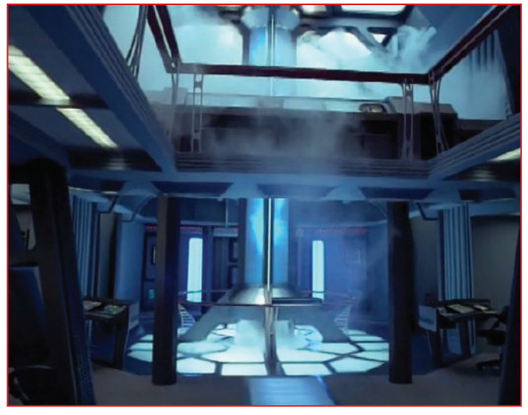
If *Voyager* was deemed unable to support its crew, or the order to self-destruct was given, the crew could abandon ship using escape pods and shuttlecraft.

The bridge was the first location aboard *Voyager* scheduled for destruction, thus ensuring severe disruption to any of the ship's systems that remained operational.

INITIATING DESTRUCTION

The primary difference between the self-destruct protocol of the *U.S.S. Voyager* and other Starfleet vessels was the command authorization level required to initiate the sequence. Generally, a minimum of two senior officers were required to instigate the procedure. In the event that higher ranked officers had been incapacitated, the main computer would work its way down through a list of command personnel until two suitable ranking officers were found. However, *Voyager*'s self-destruct procedure differed in that Captain Kathryn Janeway could initiate the self-destruct sequence, without the need for a second officer to confirm her request.

Initiation of *Voyager*'s autodestruct could be actioned either by a vocal command or by manual input via the captain's console, located between the command chair and the first officer's position. The captain would instruct the computer to initiate the self-destruct sequence, followed by her unique command code authorization.



The perilous depths of the uncharted Delta Quadrant meant that the crew of the *U.S.S. Voyager* had to contemplate destroying their vessel at any given time.

COUNTDOWN

With a timeframe for destruction set by the captain, the computer would issue an audible, ship-wide warning that the sequence had been initiated, and that warp core overload was imminent. A countdown timer was relayed to bridge monitors, detailing the progress of the sequence in minutes, seconds, and hundredths of a second. The autodestruct sequence could be halted verbally or by inputting a request into the captain's console.

CLOSE CALLS

Captain Janeway only initiated the self-destruct sequence twice during *Voyager*'s unscheduled journey through the Delta Quadrant. The first, in 2372, was in an attempt to prevent a rogue Cardassian Dreadnought missile from hitting the planet Rakosa V.

The Dreadnought missile posed a significant threat to the peaceful world of Rakosa V, and all attempts to stop it were thwarted. Captain Janeway concluded that the only possible way to halt the progress of the Cardassian missile was to sacrifice the *U.S.S. Voyager* by exploding the ship in the missile's path.

Later in 2372, during an attack by the Vidiians, a unique spatial phenomenon created two versions of *Voyager* in close proximity to one another. One of the Captain Janeways offered to destroy her starship in an effort to ensure the survival of her counterpart's *Voyager* and its crew.

ESCAPE PODS

In the event of a cataclysmic disaster threatening the ship and its crew, the *U.S.S. Voyager* was fully equipped with a complement of durable escape pods.

Starfleet prides itself in considering its personnel to be its most important resource, and while all attempts to preserve life through primary systems with multiple redundant back-ups usually prove successful, there are occasions when an entire vessel has to be abandoned to ensure the crew's survival. No Starfleet captain issues orders to leave their vessel lightly, and the use of lifeboats or escape pods is an absolute last resort, but these small, independently-powered vessels can prove to be crucial in the preservation of life.

LONG HISTORY OF SAFETY

Escape pods have been a regular design feature aboard Starfleet vessels since 2285 – they were first introduced on the refitted *Constitution*-class *U.S.S. Enterprise* – and while their overall configuration and size differs according to the classification of vessel on which they are fitted, their purpose remains exactly the same: to evacuate all members of a crew and transport them to a safe distance from a terminally damaged vessel. *Intrepid*-class ships, such as the *U.S.S. Voyager*, carried a large number of relatively small escape pods, of a design similar to those

Escape pods were only employed in dire emergencies, when the mother ship was damaged beyond all hope of repair. This fate befell *Voyager* in an alternate timeline.

Escape pods were distributed at strategic locations throughout *U.S.S. Voyager*, beneath yellow hatches in the outer hull that hinged open to release each pod.

fitted to the *Sovereign*-class *U.S.S. Enterprise* NCC-1701-E. These were located at key locations across the vessel, were easily accessible to the crew, and could be deployed extremely quickly.

The decision to utilize the escape pods and abandon ship was the responsibility of the captain, with senior officers being the last personnel to leave a vessel during an evacuation procedure in order to ensure the successful dispatch of the pods. Captain Janeway, who had vowed never to split her ship's 'family' apart, was compelled to issue the order to abandon ship on two occasions, although one of these was in an alternate timeline.

ROOM FOR EVERYONE

The *U.S.S. Voyager* was equipped with 42 escape pods, located through decks 2 to 7 on the upper forward hull, and decks 13 and 14 on the lower engineering hull, each with a capacity to carry at least four crew members. Heavy-duty rectangular hatches fitted on the outer hull of the ship protected the upper section of each escape pod, which sat in a shallow silo directly beneath, forming a seal against potential external damage.

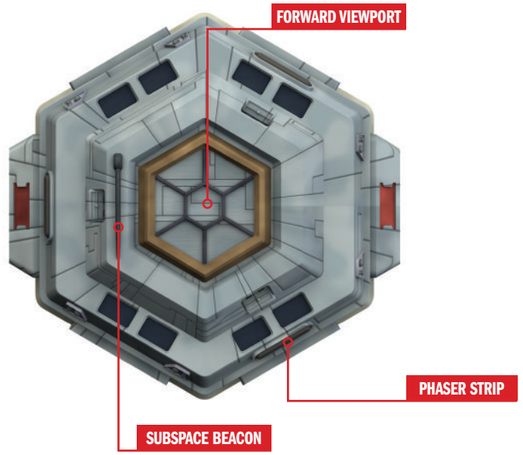
Evacuating crew members would enter their designated escape pod via an internal hatch which would seal once they were all aboard. Escape pods would then be released simultaneously or in carefully staggered waves, depending on the nature of the emergency. Their range was limited by their relatively small size and power supply, although in-built thrusters enabled them to accelerate quickly enough to ensure they reached minimum safe distance from a warp core breach within a few minutes of being launched. Each escape pod was fitted with its own life support systems, navigation, communication units, and was equipped with its own subspace beacon that could be tracked by Starfleet ships and other vessels, thereby maximizing the chances of rescue.

ABANDON SHIP

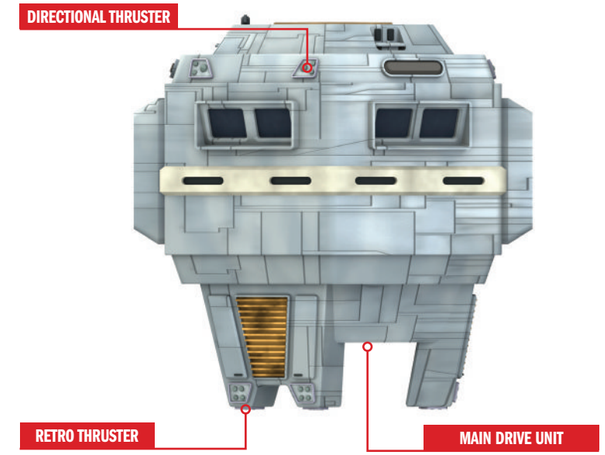
Upon the launch command, the protective outer hatches on *Voyager*'s hull opened to an angle of 90 degrees and locked into place, exposing the outer hull of the pod unit. With the hatch open, the pod would be jettisoned from its close-fitting silo, providing an initial burst of thrust to propel the escape craft away from the ship.

Voyager's escape pods were equipped with directional jets. These were located on the bottom edges of three support legs, providing thrust in space and acting as retro thrusters during touchdown on a planet. As soon as the escape pod reached a safe distance from the main ship, its jets reoriented the unit toward a pre-programmed set of navigational coordinates and it's main drive engaged.

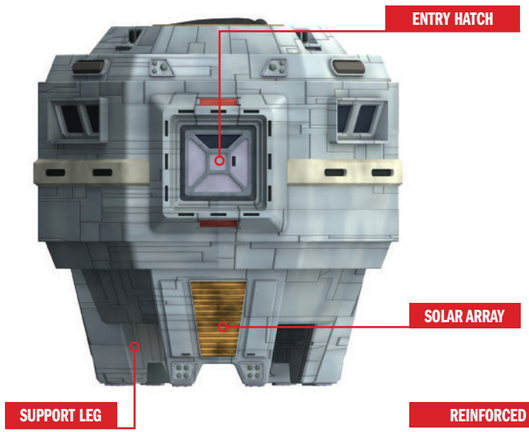
TOP VIEW



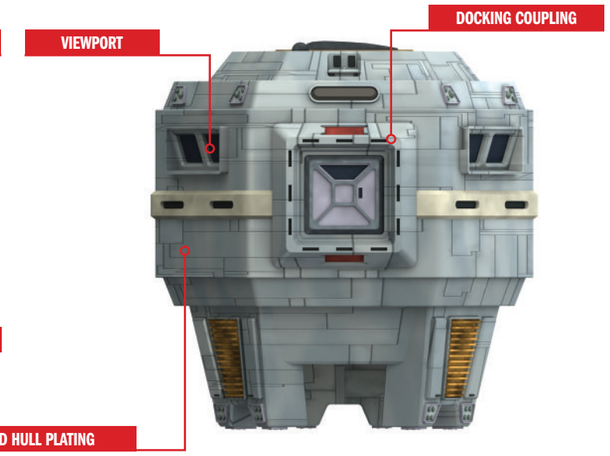
STARBOARD VIEW



FORE VIEW



AFT VIEW



TRACTOR BEAMS

Tractor beams served multiple functions, from guiding shuttlecraft to a safe landing, capturing free-floating objects in space, or preventing enemy vessels from fleeing during an attack.

In addition to innovations such as variable geometry warp nacelles and bio-neural gel packs, the *U.S.S. Voyager* also relied on more tried-and-tested technologies, such as the *Intrepid*-class ship's tractor beam. Even here, though, the vessel benefited from enhancements in both power output and overall efficiency.

Voyager's aft tractor beam was located at the rear of deck 14, beneath the shuttle approach ledge. The positioning of an emitter in this location permitted a wide sweep around the underside of the vessel, allowing the tractor beam to be used for a number of applications, including the towing of vessels, securing of objects, and use in emergencies involving an approaching shuttlecraft. A number of other tractor beam emitters were situated around the approach to the main shuttlebay, which were routinely used to aid the launch and landing of the *Intrepid*-class vessel's auxiliary craft.

The automatic shuttlebay systems could be handed over to manual control during emergency situations, proving vital in preventing potentially fatal accidents. Such an incident involved Chief Engineer B'Elanna Torres, whose shuttlecraft suffered severe damage to its deflectors and helm control, making the approach and landing of the shuttlecraft very dangerous. A tractor pulse was modified to slow the approaching vessel, in conjunction with a number of emergency arrestor fields. The rescue succeeded in not only guiding the out-of-control ship into the shuttlebay, but also landing it safely.

Another powerful tractor beam emitter was located towards the front of the engineering hull, beneath the ship's main deflector dish.

Despite being smaller than many other Federation starships, the *U.S.S. Voyager* was fitted with powerful tractor beam emitters at strategic locations across the hull.

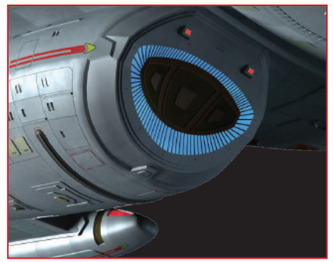
THE POWER OF ATTRACTION

Tractor beams are composed of focused graviton force beams, emanating from an emitter or series of emitters concentrated at key points on the exterior hull of a vessel. These generate an interference pattern on a target object's surface, enabling the operator of the beam to manipulate the movement of the object. The strength of this field is determined by the distance of the object from the tractor beam emitter, the amount of power available to the beam, and the nature of both the object's structure and local environmental conditions. Any imbalance in these variables can have considerable consequences in the deployment of tractor beams, and such systems often require a high degree of delicate manipulation and control. The reach and intensity of *Voyager*'s emitters was controlled from the ops console or security station on the vessel's main bridge.

A tractor beam was used to reduce the speed of B'Elanna Torres badly damaged shuttlecraft in 2376.

The beam's blue light engulfed the forward section of the shuttle, guiding it towards *Voyager* safely.

The shuttle came to rest in the shuttlebay, having suffered only minimal additional damage.



The *U.S.S. Voyager*'s forward tractor beam emitter was located beneath the starship's deflector dish.

The tractor beam's focal point could be adjusted to account for the size of the object being moved.

In 2371, *Voyager* rescued an unknown spacecraft from a quantum singularity using a tractor beam.

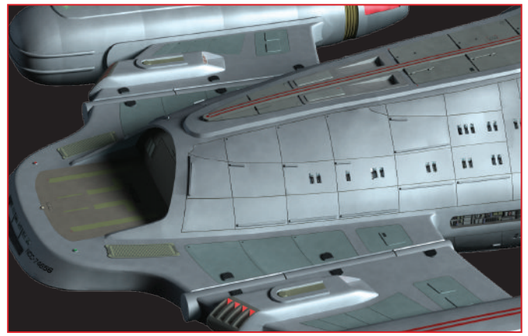
FOCAL POINT

The focal point of a tractor beam can be widened or concentrated depending on the size of the target object; by altering the interference pattern generated on part of the object's surface, it can either be attracted to, or repelled from, the ship.

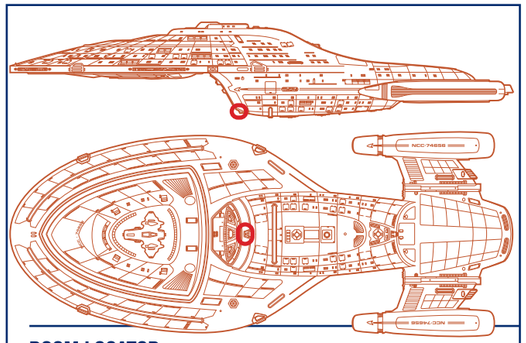
Tractor beams can generate significant amounts of stress, and in some cases these stresses may prove to be dangerous to the target object or the vessel emanating the beam. One of the main uses of a tractor beam is the towing of a disabled vessel for repair, or to enhance the shields and structural integrity field of a damaged ship through the generation of graviton field energies. The huge amount of power required to extend a tractor beam around another vessel in this way can put a great deal of strain on an *Intrepid*-class vessel like *Voyager*, despite its advanced engineering and safety protocols.

DISRUPTED OPERATION

In addition to the electromagnetic conditions that occur naturally within the atmosphere of a planet or emanate from spatial anomalies, there are deliberate ways to reduce the effectiveness of tractor beams. *Voyager*'s efforts to prevent the Malon from stealing the ship's multispatial probe in 2375 included sending a polaron burst through their tractor beam from the probe, illustrating the very similar technologies employed in the creation of tractor systems throughout the four quadrants. A polaron burst could also be used to disable *Voyager*'s tractor beams, a tactic that could allow a vessel being held against its will to break free from the craft attempting to secure it. Borg cubes encountered by *Voyager* had the capacity to remodulate their shield harmonics to prevent a tractor beam from locking onto them, making it extremely difficult to incapacitate their vessels.



Voyager also had a tractor beam emitter on the rear of the ship above the shuttlebay, which could be used to bring other vessels inside the ship.



ROOM LOCATOR

USE:	**Emitting a tractor beam that could manipulate the positions of objects floating in space.**
POSITION:	**The primary tractor beam was located at the rear of the secondary hull, underneath the shuttle approach ledge.**
LOCATION:	**Deck 14**

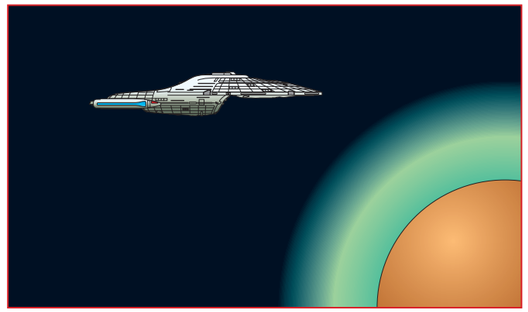
LANDING PROCEDURES

Despite being fully equipped with transporters and shuttlecraft, the *Intrepid*-class had the ability to land on a planet's surface.

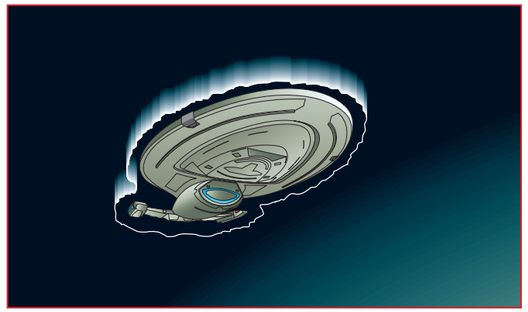
The *U.S.S. Voyager* made its maiden planetary landing while in the Delta Quadrant in 2371.

The *Intrepid*-class starship *U.S.S. Voyager* had planetary landing capability. The landing maneuver was only ever used in extreme circumstances, such as when interference prevented safe use of transporters, or if the crew were forced to leave the ship. For example, in 2372, *Voyager* was forced to land on Hanon IV, where the Kazon marooned the crew. Few pilots were ever required to perform the procedure, although emergency landings were taught at Starfleet Academy using holodeck simulations.

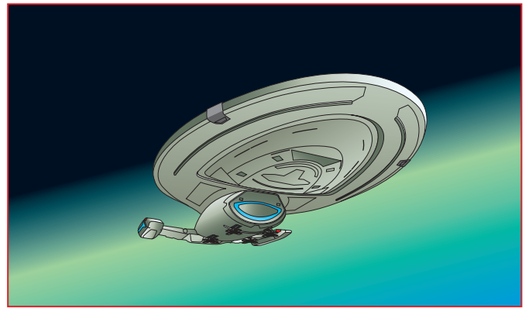
The landing procedure of the *Intrepid*-class *Voyager* was comparatively straightforward, given the ship's design and favorable atmospheric conditions. Prior to landing, the ship entered Condition Blue. The chief engineer then took the warp core offline and vented plasma from the nacelles for safety. They then stood by to engage the ship's atmospheric thrusters. Meanwhile, the pilot set atmospheric controls to standby, bringing the landing mechanisms online and setting the inertial dampers and structural integrity field to maximum. A standard glide trajectory was plotted to take the ship down to the planet's surface. Minor course corrections would be made during this stage, and the inertial dampers would be adjusted to match the planet's atmosphere. In atmospheric flight, the ops officer was responsible for maintaining atmospheric controls and monitoring electromagnetic discharges. During the final stages of the procedure, the landing struts were extended and the inertial dampers released, before the structural integrity field was adjusted to match the planet's gravity.



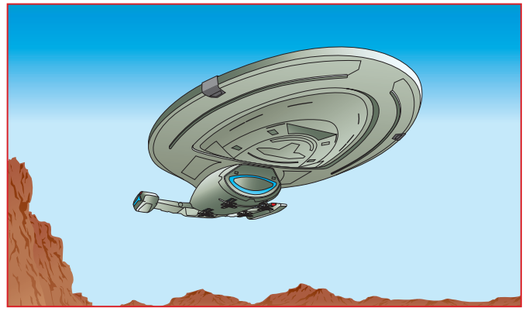
Poor atmospheric conditions sometimes prevented the safe use of transporters or shuttlecraft. In such situations, the decision could be taken to land the ship.



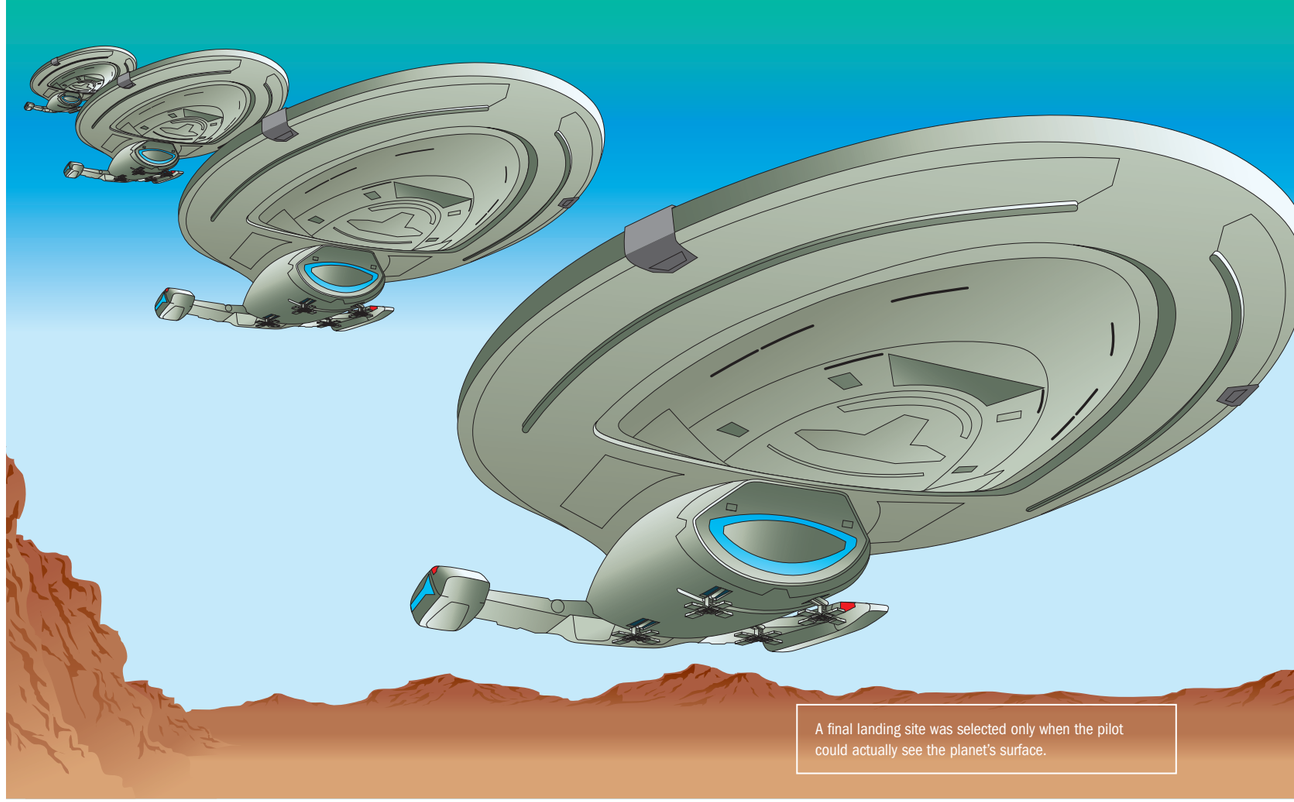
When ready to enter the planet's upper atmosphere, the ship's inertial dampers and structural integrity field were activated to prevent it from breaking up during entry.



Atmospheric conditions often meant that the conn officer had to make some minor course adjustments during approach to maintain the standard glide trajectory.

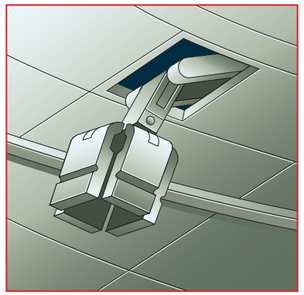


When the planet's surface was in visual range, a landing site was chosen and the course adjusted accordingly. Landing gear was deployed during the final approach.

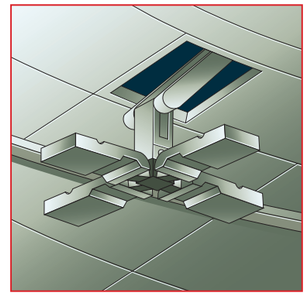


A final landing site was selected only when the pilot could actually see the planet's surface.

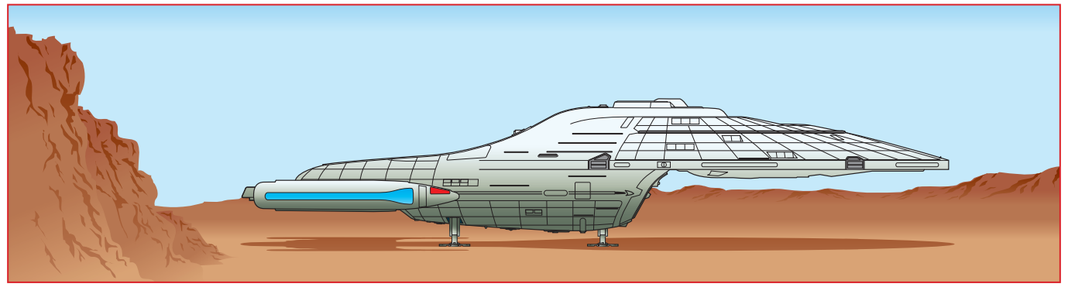
The *U.S.S. Voyager* had four landing struts, located on the underside of the engineering hull. Protective doors slid open as the conn officer deployed the landing gear.



The landing struts were folded when inside the ship, to take up the minimum amount of space. They were unfurled as *Voyager* approached its designated landing site.



Once fully extended, the landing gear was locked into place. Even though ship's systems absorbed most of the impact, the crew still experienced a jolt upon touchdown.



Immediately before landing, the vessel's structural integrity field was adjusted to match the planet's gravity. When the ship came to rest, the engines were disengaged and the thruster exhaust secured. Once this was done, the landing procedure was completed and the crew were able to disembark.

MAIN ENGINEERING

Main engineering, located at the very heart of the *U.S.S. Voyager* on deck 11, was where power distribution throughout the ship was regulated.

The most important area on any starship, *Voyager*'s main engineering supplied power to the rest of the ship. Communications, transporters, turbolifts, replicators, and life support could also be regulated from consoles within the facility. Unlike engineering layouts common to other starships, the central area was kept clear to accommodate any special projects that Chief Engineer B'Elanna Torres instigated, such as when a special bench was constructed in 2372 to examine a malfunctioning Pralor robot.

A number of enclosed areas with duty consoles allowed members of the engineering detail to carry out specialized projects.

Detailed information presented on wall screens and on consoles ensured engineers were up to date with the current status of all ship's systems.

The chief engineer's console was positioned close to the warp core, giving the user a commanding view over all areas of main engineering.

IMPROVISATION
The unique predicament faced by the *Voyager* crew meant that repairs within engineering often had to be completed using improvised components as no standard issue replacements or upgrades were readily available.

SPARE WARP CORE
Voyager carried a backup warp core that could be called into action if the original had malfunctioned or been ejected in an emergency situation. The spare was located forward of the main warp core, and extended from deck 10 to the bottom of the vessel.

The warp core was one of the largest single components on the ship, spanning several decks before it passed through main engineering.

Chief engineer B'Elanna Torres earned a reputation for technical vigilance.

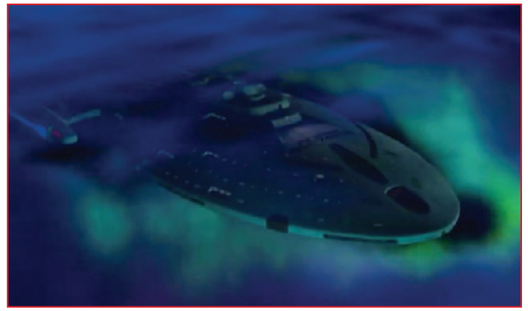
WARP AND IMPULSE ENGINES

***Intrepid*-class starships were designed for long-term, deep space exploration, far from Starfleet repair facilities for most of their service lives. A reliable propulsion system was therefore a necessity.**

To fulfill the *Intrepid*-class's mission of deep space exploration, Starfleet's Theoretical Propulsion Group developed new warp engines that utilized innovative technology and emphasized sustainable high warp speeds.

This untried propulsion system was put on trial shortly after the *U.S.S. Voyager* left the Utopia Planitia Fleet Yards in 2371, but the basic warp process remained – a supply of matter and antimatter (in the form of deuterium) was carefully injected into a matter/antimatter reaction chamber, and the resulting energy was allocated between the ship's EPS conduits and the plasma injectors. The latter energized the port and starboard warp field generator coils, which created the subspace fields necessary for warp travel.

Voyager's warp engines were not required to share power with other, less essential systems. The holodeck system, for example, had its own power matrix.



The *U.S.S. Voyager* is propelled by warp and impulse drive systems. The basic components aboard the vessel have been in use for more than 100 years.

SAFE AND EFFICIENT

Voyager still relied on dilithium crystals – the only known element that remained unaltered when struck by antimatter under high-frequency electromagnetic conditions – to operate the matter/antimatter reaction chamber. The ship had facilities to recrystallize dilithium and could also refine raw supplies of the mineral, though it could take up to three days to get this facility online. In 2372, the *Voyager* crew discovered a new variety of dilithium crystal that seemed to offer the chance to develop a transwarp drive. The experiment was mechanically successful, but the refinement process was deemed unsafe for living beings.

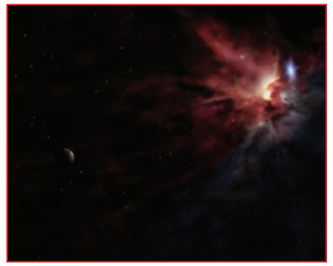
Voyager's systems included a modification that ensured speeds of beyond warp 5 would not weaken the fabric of spacetime, a factor that had previously limited sustained high speeds. In addition, some portions of the *Intrepid*-class computer system were enhanced with bio-neural circuitry, which processed data much faster than isolinear optical circuits could. This resulted in far greater efficiency when monitoring, calculating, and making minute real-time adjustments to the warp engine systems, including the injectors and magnetic constrictors.

UNIQUE DIFFERENCES

A striking difference between *Intrepid*-class vessels and previous Starfleet designs was their use of vari-geometry outboard nacelles.

The new propulsion systems installed on *Voyager* were put to the test after the ship was propelled 70,000 light years into the Delta Quadrant.

To initiate warp, deuterium was injected into the matter/antimatter reaction chamber, energizing the ship's EPS conduits and plasma injectors.



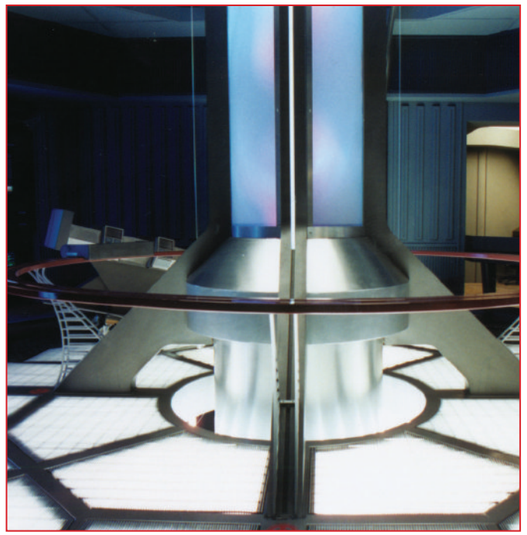
Energy channelled into *Voyager*'s EPS conduits fed the port and starboard warp field generator coils, creating the subspace field required for warp speed.

The most efficient nacelle profile for warp travel varied depending on environmental conditions, and on *Voyager* the nacelle support pylons could be reorientated depending on spatial conditions and velocities, creating the most efficient subspace bubble for that environment. The vari-geometry system was computer-controlled and made a quantifiable improvement during long-term, high-speed journeys at warp speed.

Intrepid-class ships were also equipped with a standard impulse drive, the slower-than-light propulsion system that used deuterium fuel in a fusion reactor to create helium plasma. This plasma was then released via an impulse flow regulator through vents to the aft of the ship's saucer section.

ALIEN IMPROVEMENTS

During *Voyager*'s long journey, several alien technologies were discovered that promised to enhance the performance of the ship's warp and impulse engines. A spatial trajector developed by the Sikari could fold space and send objects 40,000 light years in the blink of an eye. However, when installed in *Voyager*, the trajector device's antineutrino field nearly caused a catastrophic warp core breach.

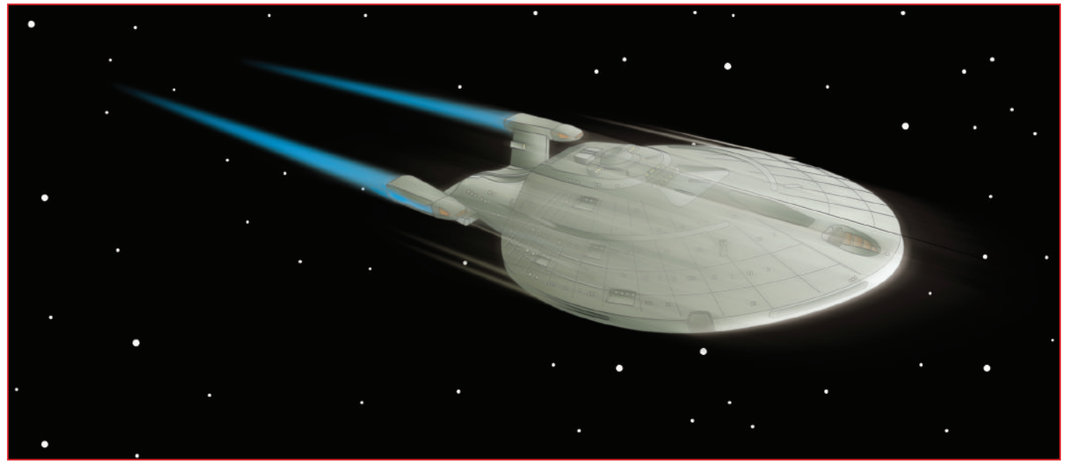


The systems providing high-warp speeds were greatly improved for the *Intrepid*-class thanks to data processing efficiencies made possible through bio-neural computing.

Intrepid-class starships were designed with a streamlined, warp-friendly hull shape.

Vari-geometry outboard nacelles allowed the ship to alter its profile to differing external conditions.

Optimum warp bubble efficiency could be achieved by adjusting the orientation of the nacelles.



In space, the *U.S.S. Voyager* was a graceful and impressive sight as it broke the warp barrier. Its streamlined shape cruised through the stars at warp speeds reaching 9.975. Propulsion systems aboard *Intrepid*-class ships were also equipped with an advanced design feature that protected the fabric of space/time from being disrupted by warp speeds exceeding factor 5.

WARP CORE EJECTION

A warp core breach can seriously endanger a ship and the lives of its crew. *Voyager* had a number of safety protocols in place to deal with such an eventuality, including the drastic measure of ejecting the core altogether.

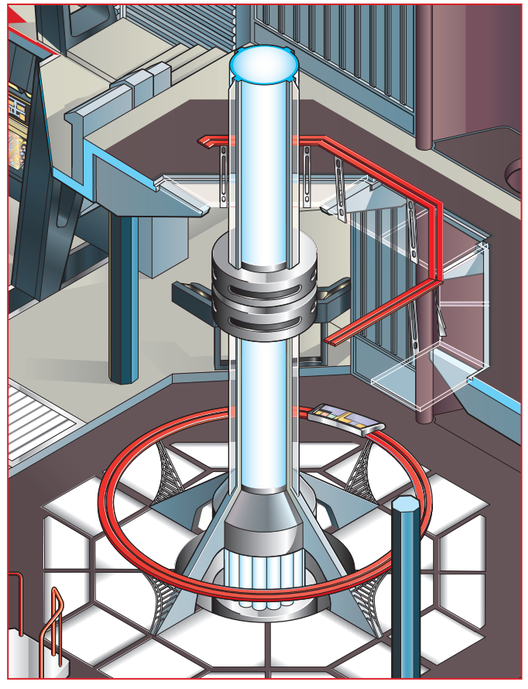
The warp engines aboard the *U.S.S. Voyager* functioned by annihilating matter and antimatter, generating an enormous amount of energy. If the warp containment field collapsed or the warp core became unstable, it could result in a massive explosion that could easily destroy the ship. Like all Starfleet vessels, *Voyager* was designed so that the warp core could be safely ejected in case of such an emergency.

EMERGENCY PROCEDURE

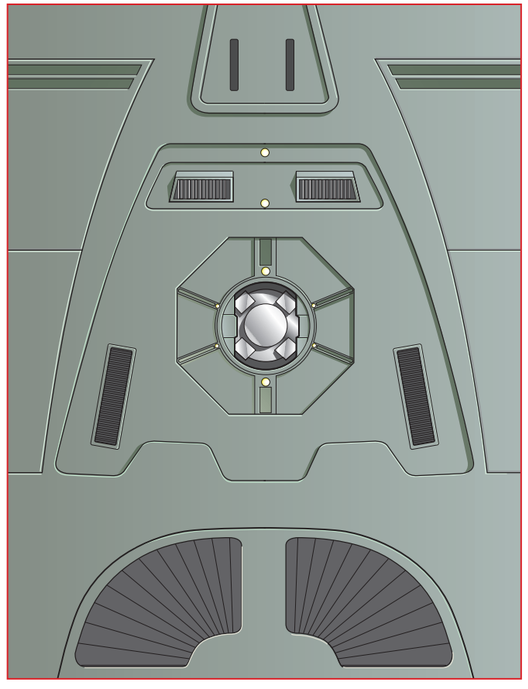
In the case of a serious warp core malfunction, power and fuel supplies were automatically sealed off at points upstream from the damaged device to best protect them. A multi-layered forcefield was then deployed in an effort to contain the unstable core. If these measures failed, the safety of the crew and the ship became paramount, leaving ejection of the warp core as the only option.

The procedure for warp core ejection involved initiating a manual or computer-controlled sequence, which first detached the magnetic valves and transfer pipes connected to the warp core. Upon the order to eject the core, the ship's computer blasted open an exterior hull hatch located on the underside of the secondary hull using explosive latches, and the warp core was then forcibly ejected through this hatch.

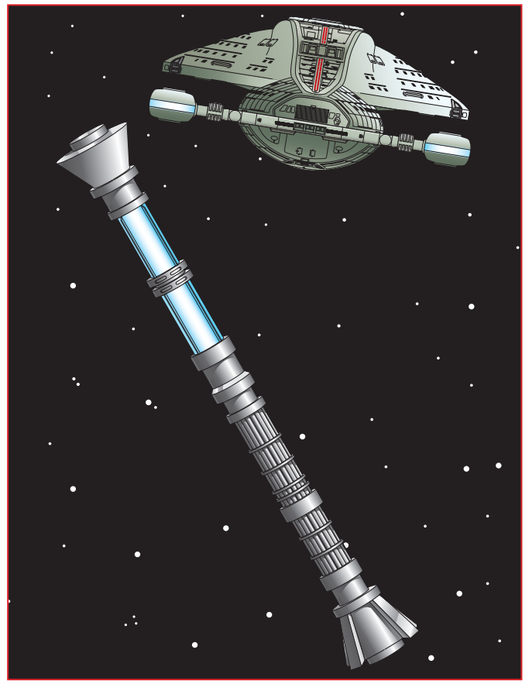
If the core did not breach and survived intact, it was allowed to cool naturally in space. If viable, repairs were carried out prior to its retrieval via tractor beam.



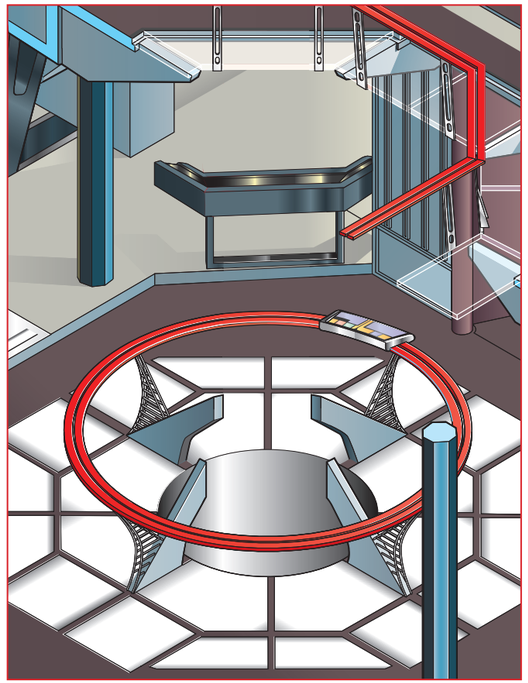
If the warp core became dangerously unstable, staff would abandon the main engineering area, which would be sealed. The order to eject the core was then given.



The warp core was the full height of the *Intrepid*-class *U.S.S. Voyager*'s secondary hull. It was ejected vertically through a hatch on the underside of the ship.



Once free of the ship, the warp core would either explode or be allowed to cool down to a point where it could be safely retrieved and reinstalled in the ship.



If the warp core was salvageable, it was a relatively simple process to recover it using a shuttlecraft or a tractor beam to return it to its original position.

MAIN BRIDGE

The *U.S.S. Voyager*'s bridge followed the same basic layout that had been in use by Starfleet for more than a century, although the ship's first officer now sat level with the captain.

As with all Starfleet ships, the bridge of the *U.S.S. Voyager* NCC-74656 was located on deck 1, at the top of the saucer section, incorporating all the instrumentation that controlled the command functions of the ship.

The bridge was a large, circular chamber, with the main duty stations set in the middle. At the very center were two chairs, separated by a tactical readout console, which were occupied by Captain Janeway and Commander Chakotay.

DUTY STATION LAYOUT

The conn – the duty station from which the ship was piloted – was located directly in front of the command area. On *Voyager*, the conn was a single station arranged in a crescent shape, normally crewed by Tom Paris, who was responsible for both helm and navigation. His chair was not fixed, but could slide from one end of the console to the other, allowing him to easily reach each panel. Dedicated engineering and science stations, which were not always crewed, flanked the outer circle of the bridge's lower level.

Behind the command area, to the captain's left, was the operations station, usually crewed by Ensign Harry Kim. From here the activities of each of the ship's departments was coordinated, and data provided by the ship's sensors was analyzed. Commander Tuvok was usually in charge of the tactical duty station to the captain's right, where the ship's security and weapons systems were monitored and operated. An engineering schematic of the entire ship and two mission ops consoles took up the rear bulkhead of the bridge. Doors on opposite sides of the bridge provided access to the captain's ready room and the briefing room.

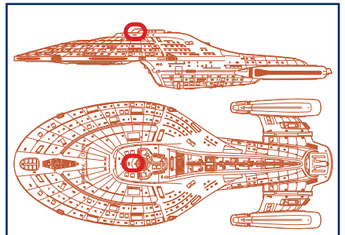
On previous ships, the captain's chair often stood alone in the center of the command area, but on the *U.S.S. Voyager* the captain and first officer sat side by side, separated only by a flip-up display console.

READY ROOM
The doors between the tactical and engineering stations led to the captain's ready room.

DETAILED INFORMATION
A large schematic of the ship dominated the rear duty station of the bridge, providing detailed data on all decks. This console also served as a secondary engineering station. Mission operation stations were located on either side.

The *U.S.S. Voyager*'s viewscreen was clearly visible from every duty station.

Every department of the ship was coordinated via the operations station (ops), where data from the ship's internal sensors was also monitored.



ROOM LOCATOR

The conn station was located at the front of the bridge, in its own dedicated area. Unlike on other Federation ships, the conn station stood alone, with ops located at the rear of the bridge.

This duty station was one of two that could be used by the chief engineer. All functions in main engineering could be controlled from this position.

The science station mirrored the engineering station opposite. It was used to provide support to the ops position when needed, but was often uncrewed.

COMMAND SEATING

The captain and first officer on *Intrepid*-class starships sat side-by-side at the center of the bridge, engendering a more collaborative command relationship.

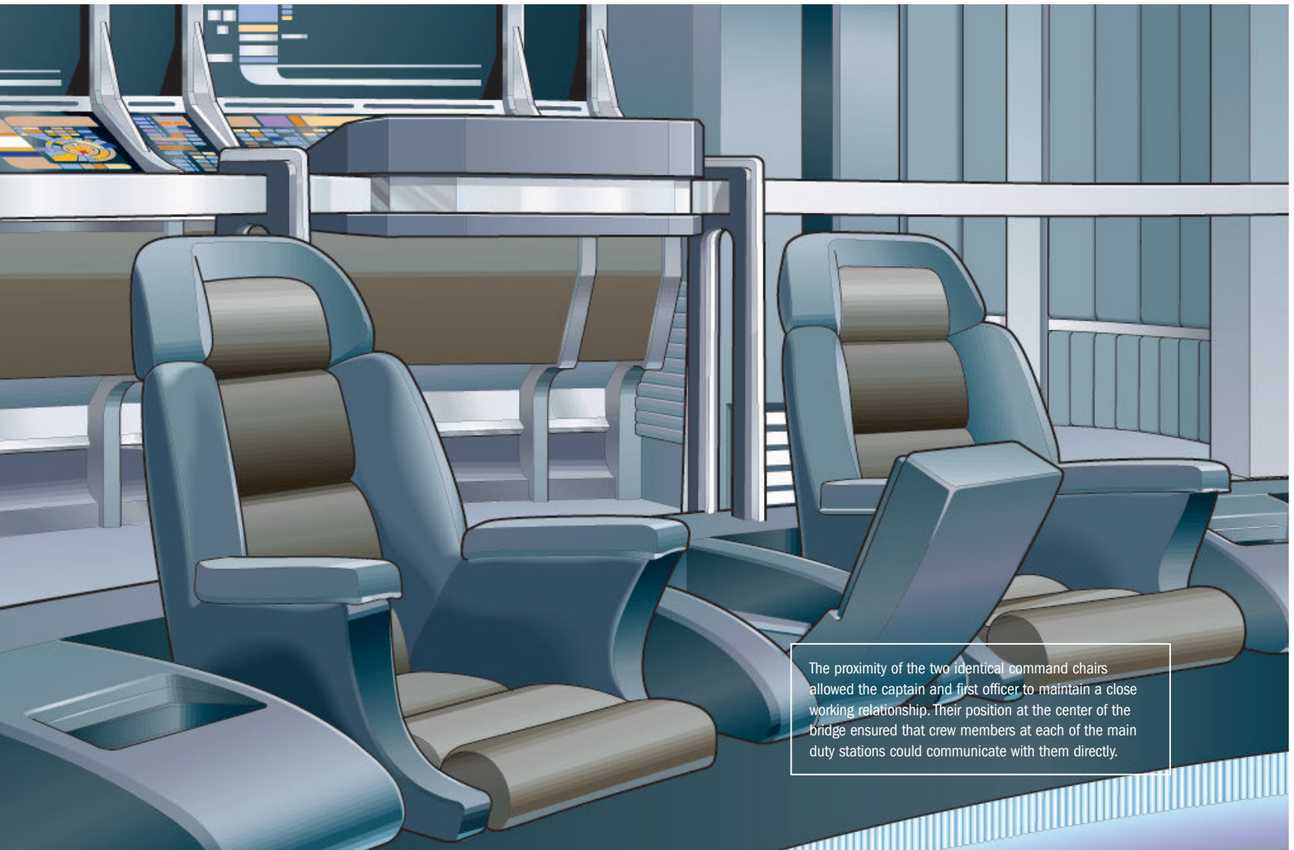
The twin command chairs on the *U.S.S. Voyager* bridge were positioned at its center, immediately behind the conn. Identical in every way, the chairs could be used by either officer, although Captain Janeway favored the starboard chair. These chairs were flanked by bench-like seats which were available to other officers.

The central position of the command chairs ensured that both Janeway and Commander Chakotay had a clear line of communication to the other bridge stations. The ops console sat directly above and behind the first officer's chair, on the port side of the bridge, while the main tactical station was behind the captain to her right. Both shared an uninterrupted line of sight to the main viewscreen.

COMMAND TERMINAL

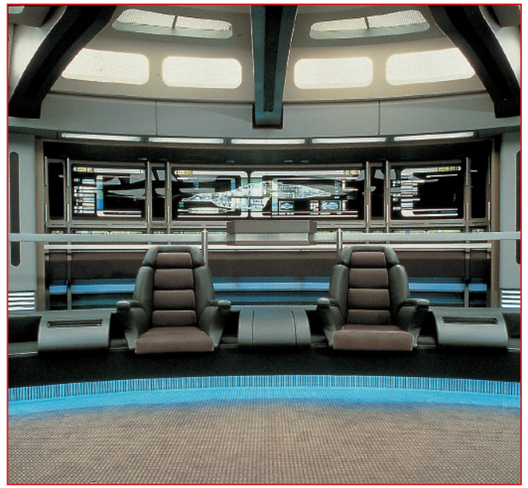
A single computer terminal between the two command chairs was built into its central armrest. Easily accessible from either position, this console was routinely used to access information from the ship's sensors, to view sensitive information, or take a private message without having to leave the bridge. In order to utilize some of the terminal's functions, the user was required to enter his or her personal command codes.

The multi-purpose console gave the captain or first officer instant access to relevant data during encounters with unknown races, planetary bodies, or unusual stellar phenomena, and to initiate and monitor alerts.



The proximity of the two identical command chairs allowed the captain and first officer to maintain a close working relationship. Their position at the center of the bridge ensured that crew members at each of the main duty stations could communicate with them directly.

The captain and first officer of *Voyager* shared a pop-up display console that could be configured to provide information on any of the ship's systems, as well as providing access to the LCARS.



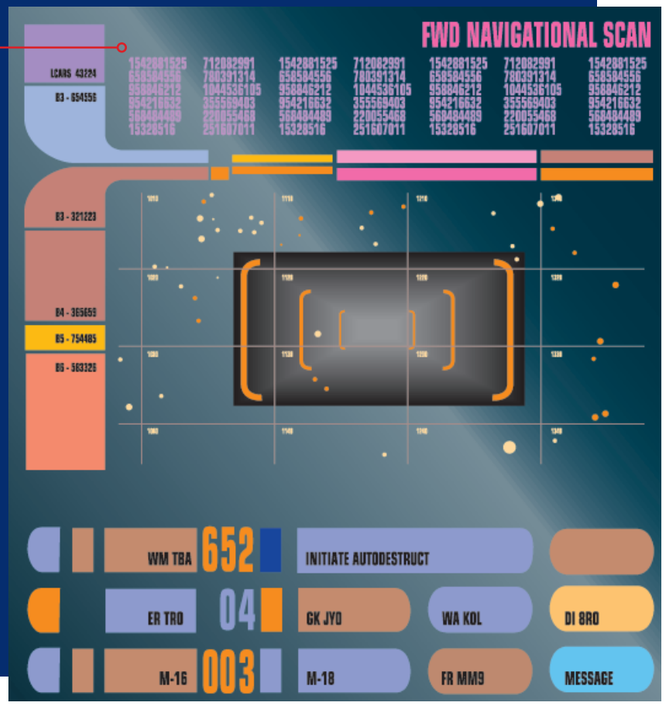
The commanding officers' chairs were mounted on a curved bench that divided the forward area of the bridge from the rear. The upper rear level of the bridge was accessed via steps at either end of the bench.

TYPICAL DISPLAYS

The flip-up display console between the two command chairs was used to access a wide variety of *Voyager*'s systems. It was often employed to view navigational scans, sensor data, and crew information. It provided access to the LCARS, and could be configured for internal communications.

The flip-up console, allowing commanding officers to assess any given situation at a glance, was a typical feature on Starfleet vessels.

The only station in front of the command seats was the conn, located in a shallow well. This gave the commanding officers a clear line of sight to the main viewscreen.



CONN STATION

The conn officer, sometimes known as the flight control officer, is responsible for navigating and piloting a Starfleet vessel. Their position on the bridge is one of a starship's most important stations.

The conn position on the *U.S.S. Voyager* was located at the front of the bridge, and although many flight operations were fully automated, the conn was always manned. In emergencies, the conn had a dedicated flight control backup processor that allowed the conn officer to take manual control of the ship.

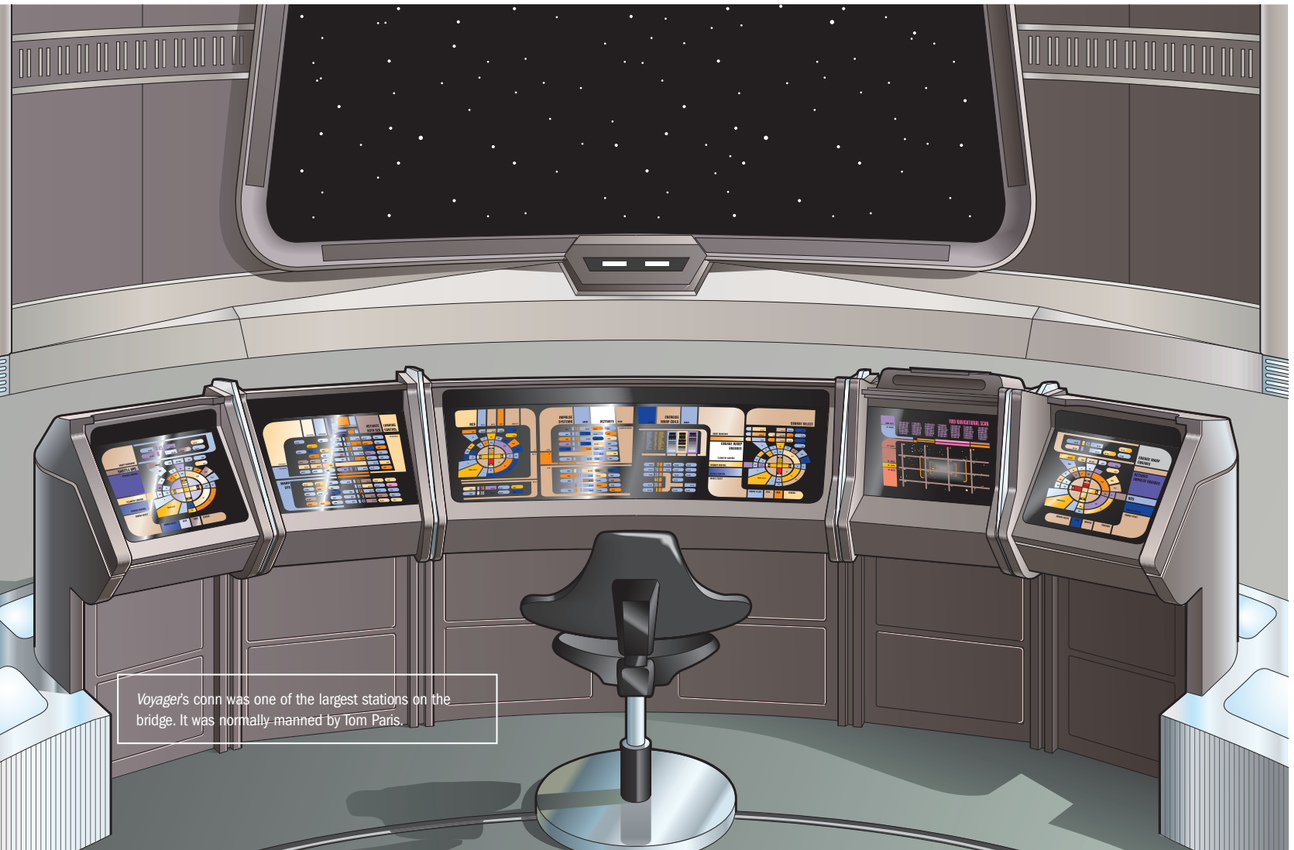
From this console, the conn officer would input the ship's heading, make course corrections, and monitor the ship's flight path. *Voyager*'s warp and impulse engines, reaction control thrusters, inertial dampers, and landing struts were also controlled via this station. If necessary, the console could be reconfigured to take on some of the functions of another station, such as ops.

INFORMATION IN ORBIT

During planetary orbit, information on atmospheric conditions was relayed from sensors to the conn, enabling the conn officer to make recommendations about the use of shuttlecraft to the commanding officer.

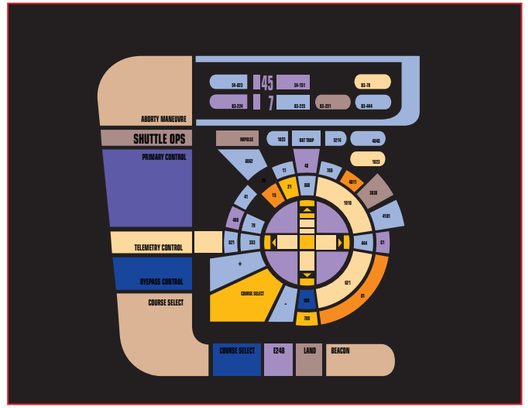
WORKING TOGETHER

The conn officer worked closely with the operations manager, also known as the ops officer, who controlled many functions closely related to flight operations, such as scanning and monitoring the ship's systems. The conn was also in constant contact with engineering, and could take direct control over many of its functions.

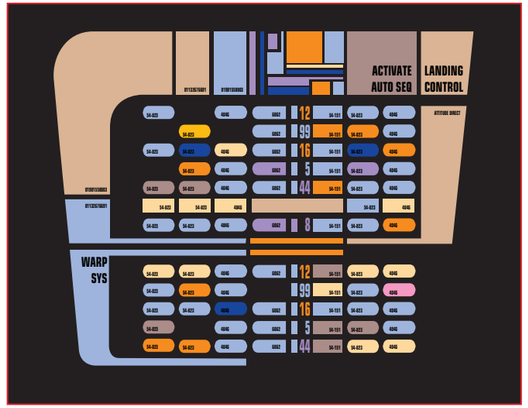


Voyager's conn was one of the largest stations on the bridge. It was normally manned by Tom Paris.

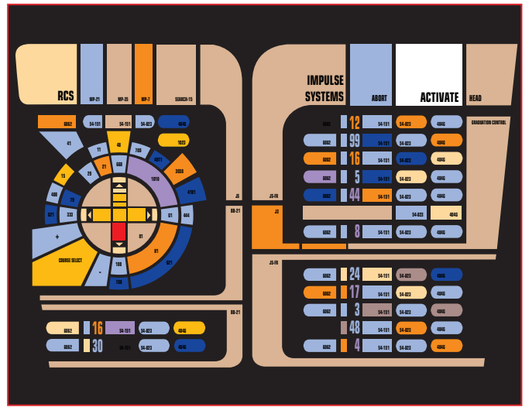
STANDARD CONN LAYOUT



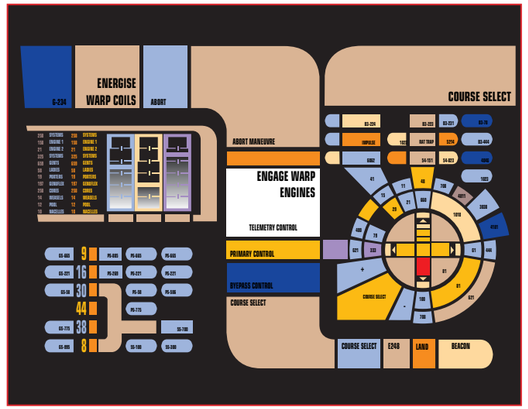
The panel on the far left of the conn was used to monitor shuttlecraft and receive their telemetry data during landing, take-off, and during away missions.



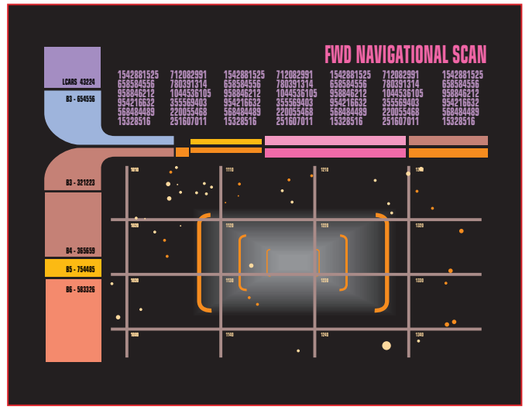
The warp propulsion systems were monitored via the second panel on the conn. This panel also provided controls for the ship's landing procedure.



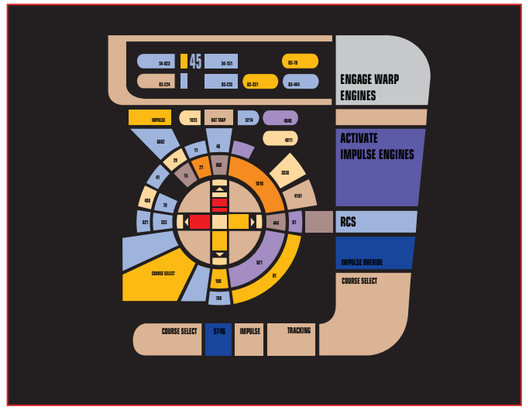
The panel on the left of the central display area was used to control the warp engines and input the ship's course.



The impulse engines and RCS thrusters were controlled from the panel on the right of the central display area.



The raised monitor on the right hand side of the conn displayed data from navigational scans gathered by the sensors.



The panel on the far right of the console duplicated several of the controls found on other panels, each of which was reconfigurable.

OPERATIONS STATION

Managing the resources of a 24th century starship required a dedicated bridge officer, and a workstation designed to offer adaptable functionality vital to the ship's operation.

The introduction of the role of operations manager in the 24th century lead to a majority of Starfleet vessels incorporating a specific workstation on the bridge to accommodate it. Universally referred to as the ops station – or ops – this dedicated workstation allowed the operations officer to carry out their routine scheduling and resource management duties, as well as any number of additional functions required during a mission. Given the unusual situation in which the *U.S.S. Voyager* found itself, the role of operations officer was much expanded, and the reconfigurable control interface of the ops station proved to be an advantageous design function.

The station consisted of a wide, forward-facing console and a series of display screens and interfaces mounted on the rear bulkhead, allowing the operations officer to control a wide variety of functions while maintaining a clear view of the main screen.

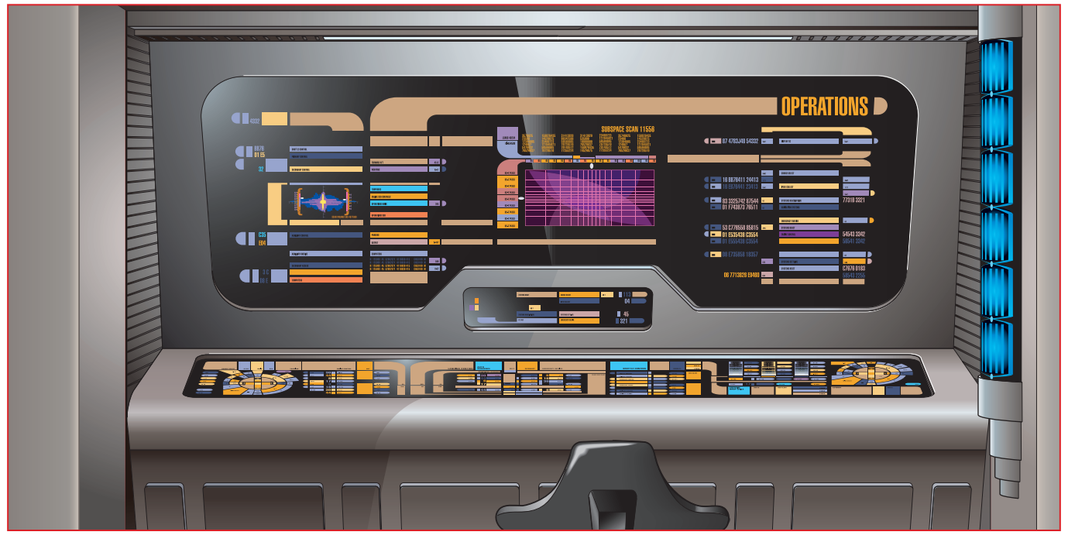
Situated to the port side of the upper, rear level of the bridge, the ops station's proximity to the senior command officers allowed for fast and direct lines of communication, increasing response time to commands during a crisis.

OPS STATION LAYOUT

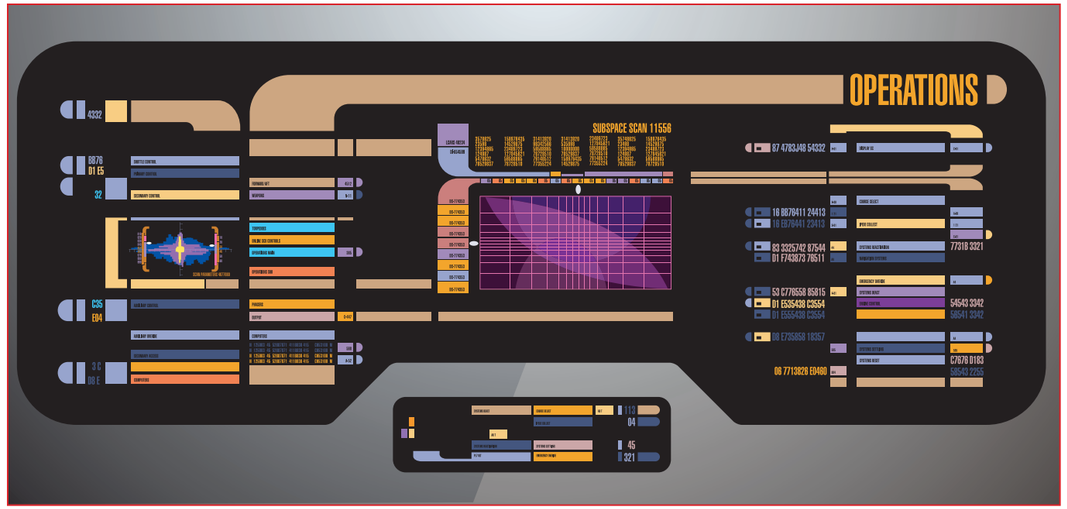
The main operations management controls were split into three sections. The left contained the primary operator keyboard for the station, with an overview of power distribution and plasma constriction in the center, along with the landing auto-sequence controls. The right side panel included a second operator keyboard, allowing manual manipulation of controls when required. Directly below, a smaller display monitored how the LCARS (Library Computer Access and Retrieval System) was being utilized between departments.

The majority of the ops officer's work was carried out using the forward-facing main console, displaying the primary department status monitor. Two contingency systems panels were connected to a dedicated computer subprocessor, intended to serve as a backup in the event of a primary systems failure.

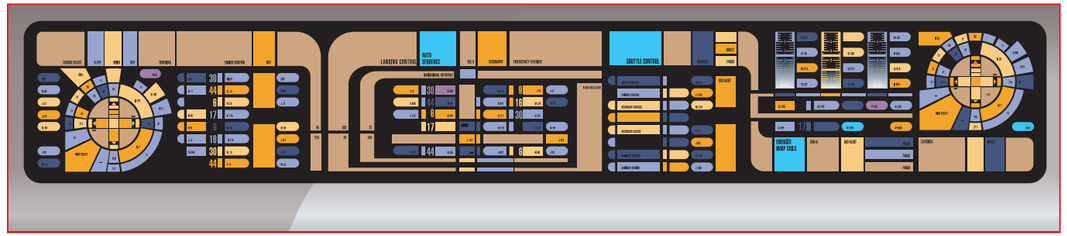
Duplicating some of the functionality of the tactical station in case of an emergency, the console also incorporated the subsystem for energizing phasers and a photon torpedo launch control.



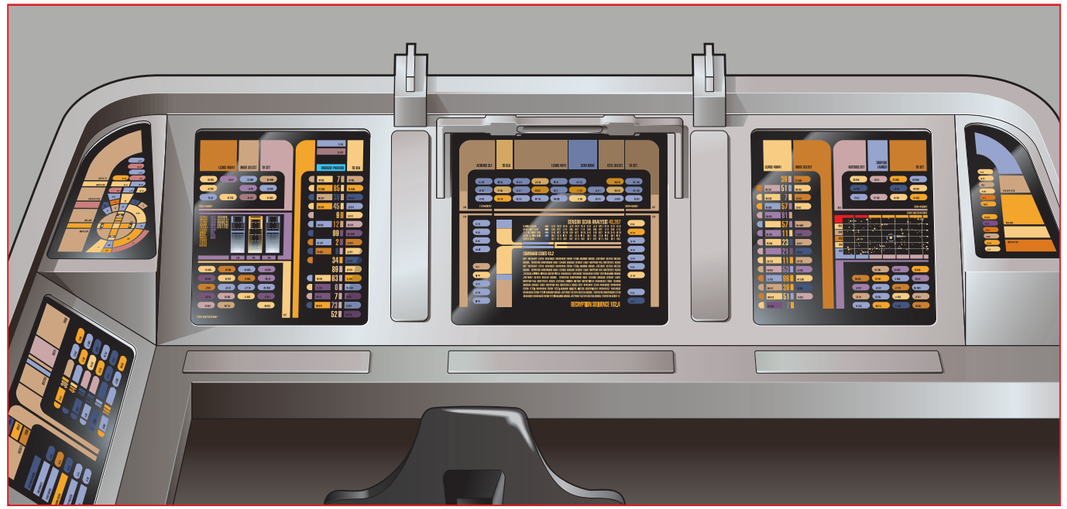
The operations station aboard *Voyager* retained a similar layout to the tactical station located on the opposite side of the bridge. The various controls were arranged in a logical fashion, and a low-backed stool was provided to ensure that the officer manning the workstation could complete their duty shift while either standing or being seated.



The display unit located on the back wall of the operations station incorporated the primary LCARS display terminal. The smaller touchscreen unit located beneath indicated the LCARS system status, ensuring that the operations manager was constantly aware of computer usage across the ship.



The horizontal bank of controls located beneath the LCARS system status display on the rear bulkhead provided the duty officer with a detailed analysis of power distribution aboard *Voyager*. Controls relating to the ship's landing procedures were also located on these panels.



The ops station console was flush with the bulkhead on the left-hand side, enclosing the duty officer in a booth. An opening located on the right-hand side provided access to the workstation. The controls of the operations station console utilized the standard touchscreen interface technology used widely by Starfleet at the time.

TACTICAL STATION

The *U.S.S. Voyager*'s tactical station, sometimes known as the security and tactical station, was the central hub for the ship's offensive and defensive capabilities.

Located to the rear starboard area of the main bridge, the security and tactical station was positioned on the upper deck level, between the main turbolift doors and the entrance to the captain's ready room.

This station was the nexus for maintaining the internal and external security of the ship. Displays monitored a number of vital systems that kept the officer in charge constantly appraised of the ship's status, whether engaged in combat with an enemy vessel or monitoring away team missions. Information on approaching ships, the condition of a planet's atmosphere, or communication problems could all be analyzed from the station, and the appropriate action taken.

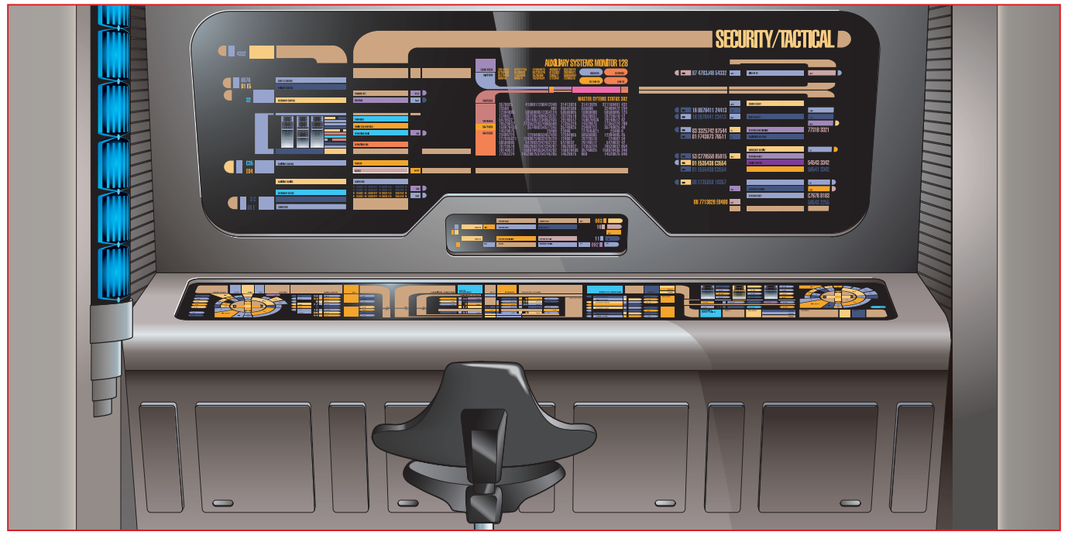
Some controls, including those pertaining to the LCARS and re-routing of command systems, were shared with the operations station, increasing the redundancy of these systems should one of the stations become inoperative.

During its hazardous journey through the Delta Quadrant, the *U.S.S. Voyager*'s tactical station was most often manned by the ship's chief of security, Lt. Commander Tuvok.

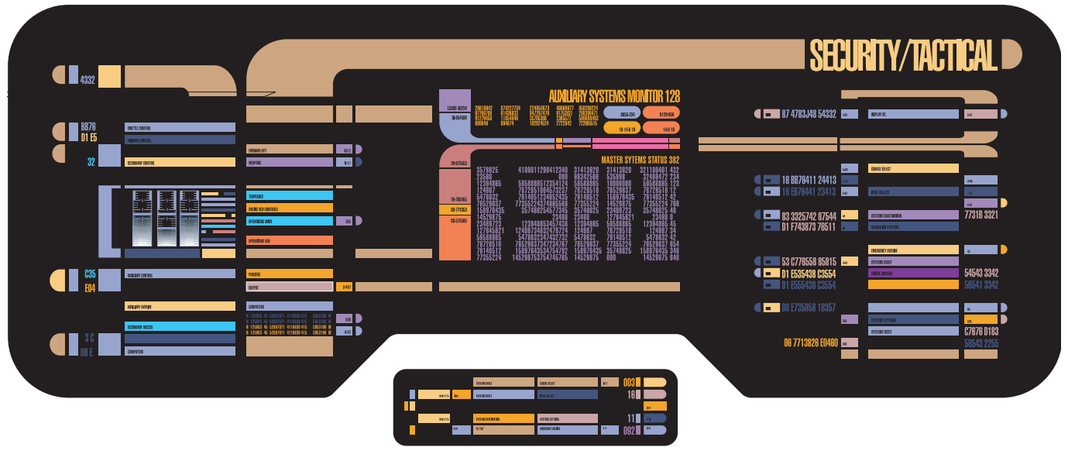
SECURITY SCENARIOS

The tactical station became the most important interface on the bridge during combat or in the case of a security breach aboard the ship, offering its operator a range of responses to any given scenario.

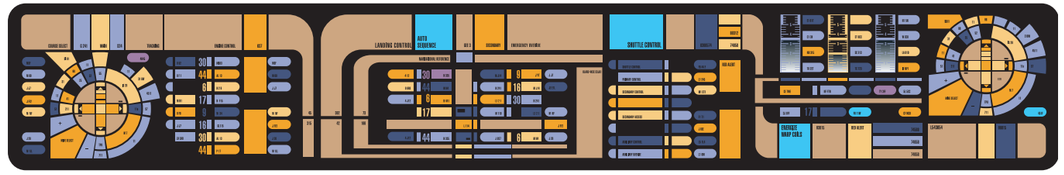
Attacks on the vessel by external forces often required the ship's shields to be remodulated or an encryption sequence activated to protect the vessel, and such defensive options could be directly manipulated from the large rectangular control panel on the bulkhead behind the console. A trio of panels on the station's main console controlled internal security systems, external defenses such as the shields and tractor beams, and the ship's primary weapons. Photon torpedoes and the main phasers could be armed, targeted, and fired from the right-hand control panel. The compact layout of these panels allowed the tactical officer to respond to situations extremely efficiently, and they were also able to activate the vessel's internal security network and call on additional security personnel from the console.



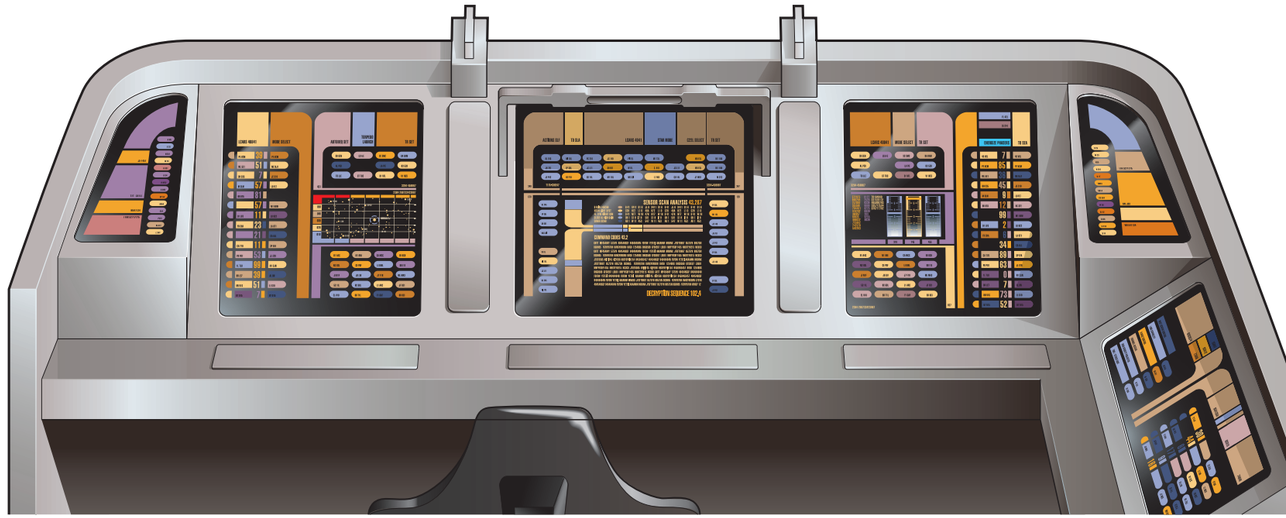
The rear bulkhead of the security and tactical station was dominated by a large workstation that utilized the standard LCARS interface. The officer manning the station was able to immediately access the broad array of offensive and defensive technologies that the *U.S.S. Voyager* was equipped with.



The rear panel of the security and tactical station featured an array of LCARS network controls. This gave the tactical officer access to an incredibly detailed amount of information during situations where the *U.S.S. Voyager* may come into conflict with an alien vessel.



The LCARS system could be reconfigured to improve the efficiency of the tactical officer's responses during times of conflict. These controls were operated via a touch-sensitive user interface. The ship's computer could also offer an audio warning to indicate possible dangers.



The tactical station's forward-facing configuration was comprised of three center panels that controlled various systems, including internal security, and defensive systems such as shields, phasers, and photon torpedo firing controls. The station could be adapted to generate a tactile interface, should the tactical officer be rendered sightless.

SCIENCE STATION

The *Intrepid*-class *U.S.S. Voyager* was equipped with numerous scientific instruments and sensors, monitored and controlled through a dedicated science station on the bridge.

The *U.S.S. Voyager* was designed for long-range exploration and scientific investigation, and while Captain Kathryn Janeway's primary goal was to return her crew home safely to the Alpha Quadrant, no opportunity was wasted in carrying out detailed studies of phenomena encountered along the way.

SCIENTIFIC ACCESS

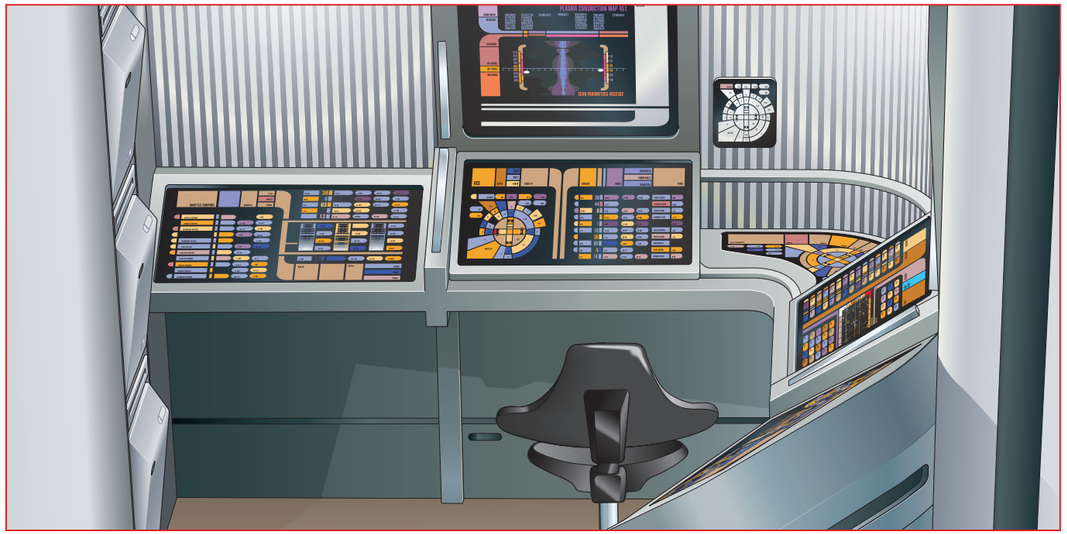
Key to this was the science station, located in the lower forward section of the bridge, adjacent to the senior officer's briefing room, with a layout that mirrored that of the engineering station on the opposite side of the bridge.

The science station was housed within a rectangular booth, and incorporated an array of LCARS control interfaces. The main console was referred to as LCARS Ergonomic Access I, which provided a condensed overview of the science station's primary functions, and allowed the operative to monitor and manipulate a wide range of related systems. More detailed data was available via the station's other terminals, with the compact design of the area allowing for swift access and retrieval of data from the operator's seated position.

LCARS Ergonomic Access I was a flat, angled panel that incorporated controls allowing flight operations to be switched to manual, via an X-Y Axis pad to the left of the panel's surface. Navigational data could be requested and displayed here, with control over the Reaction Control System also possible from this console. Courses could be plotted and input to the navigational system, along with alterations to *Voyager*'s mode of operation and current alert status.

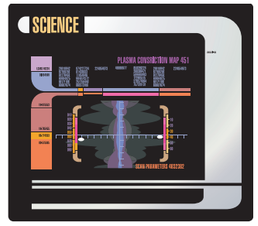
CALIBRATION AND MONITORING

Located to the left of LCARS Ergonomic Access I was a smaller interface, separated from the longer console by a metal alloy bar. Sensor Calibration II provided semi-automatic monitoring and calibration of key sensors, and provided for the automatic recalibration of mission-specific operations. Routine science and tactical scans could also be carried out from this console. Constant calibration of



The science station on the main bridge was located to the front left of the captain's chair. It was designed to operate as a self-contained unit, and was manned by a single crewmember. The diagnostic consoles were arranged to wrap around the operator at a 90 degree angle, offering them instant access to its suite of facilities.

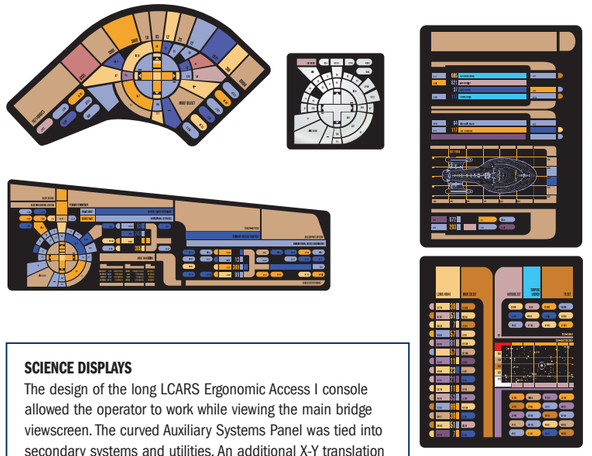
SCIENCE STATION

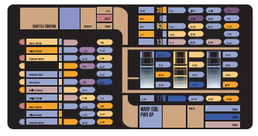


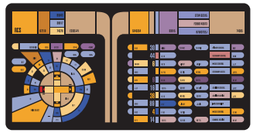
LCARS CONSOLE

The science station was composed of four main LCARS terminals, with a large display screen built into the bulkhead above.

The primary terminal sat directly beneath this screen, providing direct manual access to LCARS. Key sensor instruments and semi-automated monitoring could be calibrated via the science station console.







SCIENCE DISPLAYS

The design of the long LCARS Ergonomic Access I console allowed the operator to work while viewing the main bridge viewscreen. The curved Auxiliary Systems Panel was tied into secondary systems and utilities. An additional X-Y translation padd was positioned to the side of the main display screen.

scientific and navigational sensors was particularly crucial to the crew of *Voyager* during their long journey back to the Delta Quadrant, as any inaccuracies could result in additional journey time.

Located directly above the sensor calibration controls was a computer generated, dorsal plan diagram of the ship. This monitor provided an overview of the vessel's scientific systems, and was used in conjunction with the console below.

AUXILIARY SYSTEMS

A small, touch-sensitive pad known as Auxiliary Systems Panel I allowed tie-ins to secondary systems and utilities, while an X-Y Translational Pad mounted on the bulkhead directly above the systems panel incorporated the same functionality as the control system at the engineering station. Positioned to the left of the low level systems panel was LCARS Manual Access, again identical to the unit built into Engineering II in both size, position, and functionality. This interface was designed to be the main operator in-out terminal for the science station, although Ergonomic Access I often took precedent due to tactical considerations. A wide variety of systems could be controlled from this console, including activation of the vessel's RCS thrusters. Above this large console was the LCARS Energy Monitor, a wall-mounted eye-level display that provided continual data on the ship's energy production and utilization.

The final console located at the science station was Sensor Calibration I, a control interface that provided more extensive data on the calibration of the ship's key sensors. Located to the left of Sensor Calibration I were three vertically aligned automatic access hatches behind which racks of bio-neural gel packs were installed. This enabled engineers or other qualified personnel to gain direct access to the biologically-based computer system in order to undertake general maintenance or replace units. Additional systems could be accessed through a series of surface mounted rectangular panels located on the lower surfaces of the consoles.

The science station was in an alcove on the port side of the bridge. Its consoles were normally set to analyze data from the ship's sensors.

Despite being designed to be crewed by a single member of personnel, the science station had enough space for two crewmembers, although one had to stand.

ENGINEERING STATION

The engineering console on the main bridge provided *Voyager* with a secondary control station for all the ship's essential systems, including the engines and power supply network.

The *U.S.S. Voyager* had a permanent secondary engineering control station located on the bridge on deck 1. This station did not have to be continuously occupied, as its various consoles were duplicates of the primary controls located in main engineering on deck 11. Operational situations sometimes occurred that required the chief engineer to be present on the bridge, and although the flexible control systems allowed engineering information to be directly routed to the tactical or operations stations, engineering station 2 provided far more detailed information and control.

Engineering station 2 was located on the starboard side of the main bridge, directly opposite the science station. The engineering station was a mixture of wall-mounted monitors, touch-sensitive control pads, and access hatches built into a recessed alcove formed by the shape of the bulkhead. The main control consoles were arranged just below waist height, and a low-backed movable stool was provided for the operative.

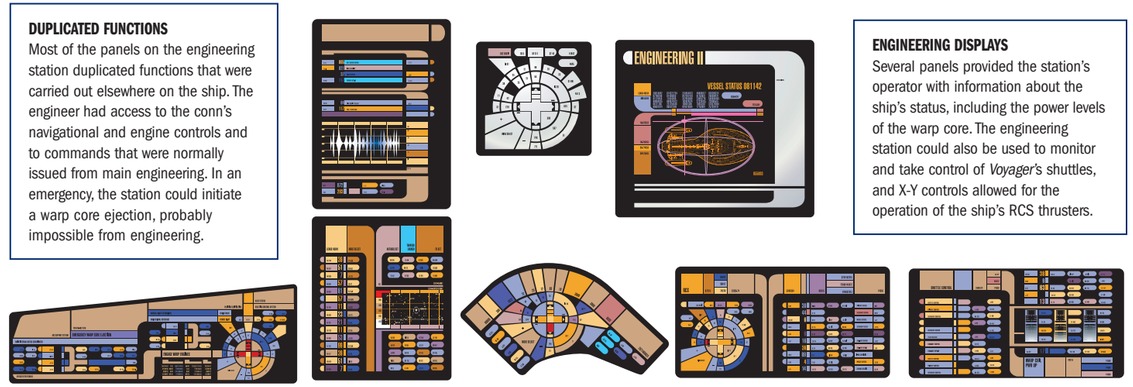
Working from left to right, engineering station 2 began with a projecting console referred to as LCARS ergonomic access 2. The second LCARS incorporated a number of important monitoring and control systems, including the emergency warp core ejection system linked to main engineering. In cases where engineering was badly damaged and had to be evacuated, this control was used to eject the core from the safety of the bridge, although this was viewed as a final measure. Located to the right of the ejection system was a number of configurable controls allowing manual override of the flight operations, access to navigational systems, and engagement controls for the warp engines. A manual X-Y pad allowed various functions to be carried out, including activation of the Reaction Control System and manual course plotting if the other stations dedicated to these systems were inoperable. Cruise mode, position verification, and the alert status of the vessel could also be monitored from this console.

A vertical bank of buttons ran down the left of the elevated interface surface, with the monitoring system on the right including the photon torpedo launcher controls

The engineering station on the main bridge was located to the front right of the captain's chair. It was designed to access and monitor the ship's engines and other major systems, although these were normally controlled from main engineering.

ENGINEERING STATION

DUPLICATED FUNCTIONS
Most of the panels on the engineering station duplicated functions that were carried out elsewhere on the ship. The engineer had access to the conn's navigational and engine controls and to commands that were normally issued from main engineering. In an emergency, the station could initiate a warp core ejection, probably impossible from engineering.



ENGINEERING DISPLAYS
Several panels provided the station's operator with information about the ship's status, including the power levels of the warp core. The engineering station could also be used to monitor and take control of *Voyager*'s shuttles, and X-Y controls allowed for the operation of the ship's RCS thrusters.

and navigational information. Located directly above the first LCARS was the power distribution monitor, allowing a duty engineer to set parameters for shipwide power distribution, including the ability to override preprogrammed allocations to accommodate mission-specific and crisis situations. Built into the upper surface of the lower level curved corner, to the right of the upwardly angled first LCARS, was the small auxiliary systems panel 2 that tied in to secondary systems and utilities. Mounted directly above this console unit, on the vertically ribbed metallic bulkhead wall, was a manual X-Y translation pad for the manual control of the vessel's movements.

The largest panel within engineering station 2 was the LCARS manual access control. The display showed a variety of data on the vessel, including systems integrity checks and continual scans of the ship. The LCARS panel included RCS thruster control within its reconfigurable interfaces. Located at a lower level, to the right of the LCARS manual access, was a smaller console built into a wall-mounted support frame This small unit was a mixture of touch-sensitive buttons and a series of horizontal sliding bar readouts giving instant information on the status of the vessel's warp systems. This panel provided semi-automatic operation of the warp management networks, and also alerted the operator to potentially significant changes in the warp system's status.

BIO-NEURAL SYSTEM

Voyager was one of the first Starfleet vessels to employ bio-neural gel packs – vital biological elements that enabled high-level data processing for the starship's complex operations. Access to three of these major gel pack systems was provided on the narrow bulkhead, to the rear of the operative as they faced forward, by three gray-colored, angled covers that slid down to reveal the vessel's interior circuitry and the gel pack itself.

The engineering station was in an alcove on the starboard side of the bridge. Its consoles were normally set to monitor the ship's status and control the engines.

The engineering station wasn't always manned, but an engineer could be assigned for specific missions and the bridge staff could make use of it at any point.

CAPTAIN'S READY ROOM

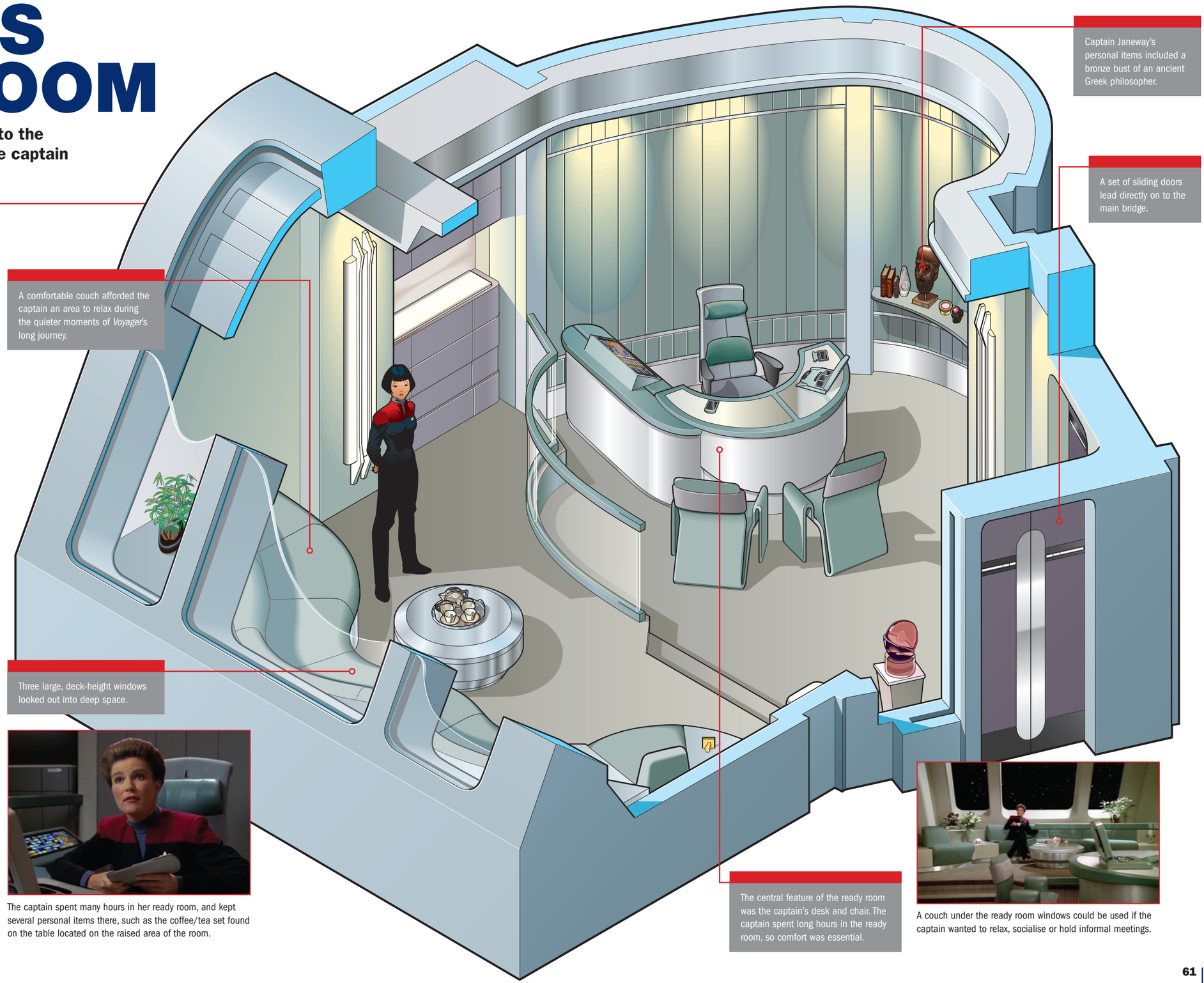
Captain Janeway's ready room was located to the right of the main bridge and was used by the captain to relax, study reports, or hold meetings.

The captain's ready room was located on the starboard side of the main bridge, accessed via sliding doors. Effectively the captain's office, the room was spacious and comfortable enough to allow Captain Janeway to remain close to the bridge at all times, and its contents reflected her calm and collected personality.

COMFORTABLE SURROUNDINGS

Although the *U.S.S. Voyager* was far from home, Janeway's ready room contained many reminders of the Alpha Quadrant, including priceless and personal objects such as plants, antiques, books, and sculptures. The most personal of these was a photograph of Mark Hobbes Johnson, the fiancé Janeway left behind with her beloved dog, Mollie.

On entering the split-level room, visitors would observe a curved desk with an integrated LCARS terminal ahead of them. Two additional chairs stood beside the desk for meetings. To the immediate right, another door lead to an access corridor, and to the left two steps lead up to a more informal seating area, dominated by three large windows that offered a grand view across the upper hull of the ship. Janeway often provided cups of coffee for her visitors using a replicator installed in the ready room.



Captain Janeway often used the ready room to consult with crew members in private. This allowed her to deal with matters of a sensitive or personal nature in an area that was secure and separated from the rest of the crew.

The captain spent many hours in her ready room, and kept several personal items there, such as the coffee/tea set found on the table located on the raised area of the room.

A couch under the ready room windows could be used if the captain wanted to relax, socialise or hold informal meetings.

BRIEFING ROOM

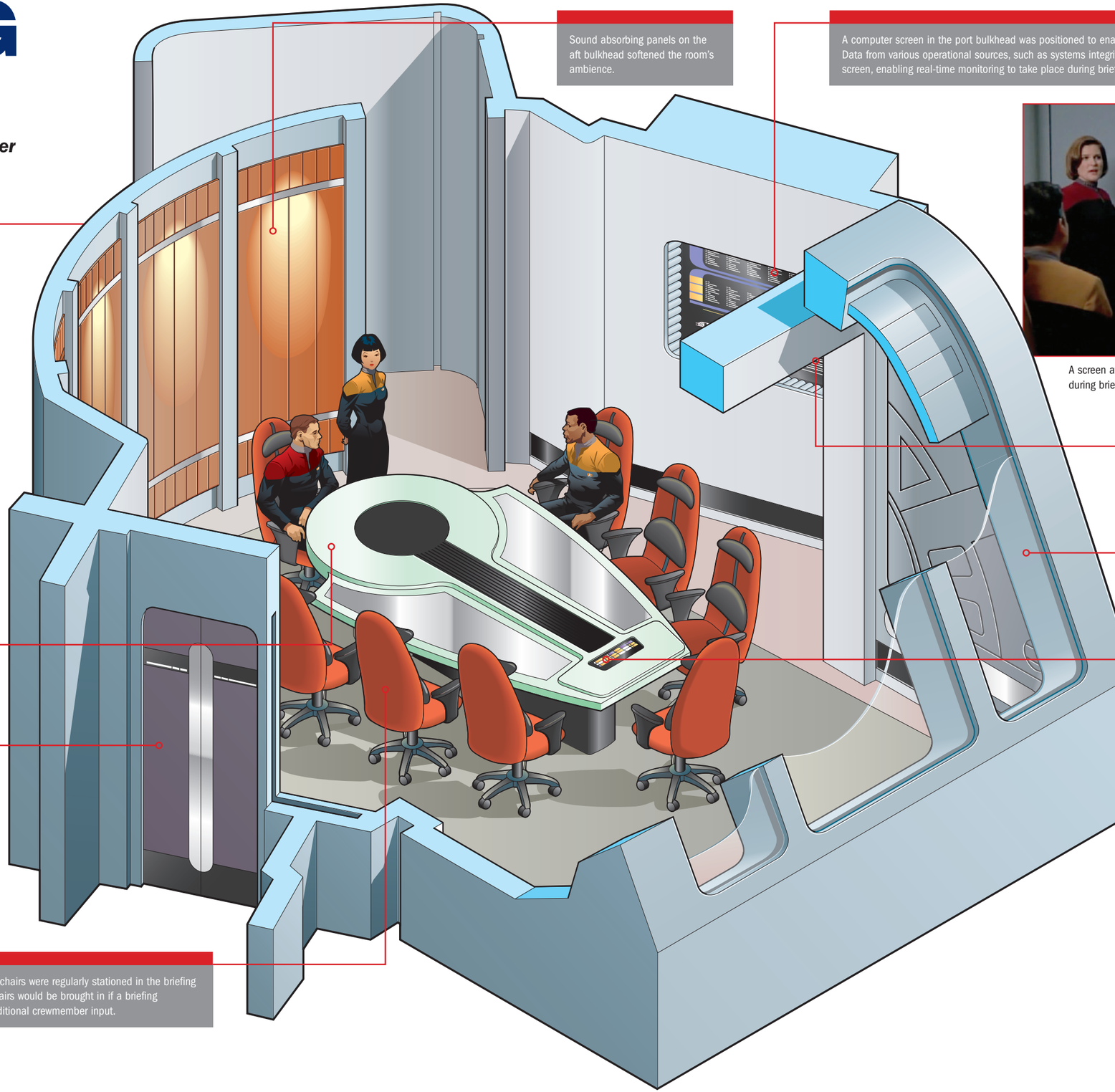
The small briefing room of the *U.S.S. Voyager* was where many of the crew's most important decisions were made.

For occasions when the captain and senior officers required a dedicated area for meetings, a well-equipped and private briefing room was essential. *U.S.S. Voyager*'s briefing room was located on deck 1, directly connected to the bridge. Sometimes referred to as the conference room, the relatively small space was barely room enough for its main items of furniture – a large briefing table and several chairs.

BRIEFING ESSENTIALS

A large computer display, embedded in the port bulkhead, displayed information relating to the mission being discussed. The display also provided an audio/visual communications function, connecting those in a briefing with crew members elsewhere on the ship.

A replicator was integrated into the bulkhead beside the display screen, and three large windows dominated the room. A plant and a small artwork, hung on the rear bulkhead, added a modicum of personality to the otherwise purely functional space.



Sound absorbing panels on the aft bulkhead softened the room's ambience.

A computer screen in the port bulkhead was positioned to enable all briefing attendees to clearly view the display. Data from various operational sources, such as systems integrity and subspace scans, could be routed to this screen, enabling real-time monitoring to take place during briefings.

A screen at the end of the room was used to provide information during briefings and to provide analysis.

A replicator was installed to provide refreshments during long briefing sessions.

Three tall windows offered a view into the depths of space ahead of the ship.

A small data entry terminal was mounted into the table top where the captain usually sat.

One end of the briefing table, furthest from the windows, was circular. This allowed additional crew members to be accommodated at the table when required.

Access to and from the bridge was via two sliding doors.

The senior officers met regularly to discuss operational issues and receive additional orders from the captain.

At least seven chairs were regularly stationed in the briefing room. More chairs would be brought in if a briefing demanded additional crewmember input.

Padded chairs offered lumbar support and comfort to crewmembers engaged in longer briefings.

TURBOLIFT NETWORK

A well-designed network of turbolifts gave crewmembers quick and easy access to all areas of the compact vessel.

The X-Y translation pad could be accessed in order to override car commands and compensate for malfunctioning systems.

The *U.S.S. Voyager* had two non-connecting turbolift networks. The primary system traversed the forward three-quarters of the ship, while the second network covered three aft decks in a small area between main engineering and the shuttlecraft service bay. The primary, or forward, system was composed of four vertical and two horizontal turboshafts. The main vertical shaft linked the bridge on deck 1 to the galley, sickbay, crew quarters, and transporter room, all located just a few decks below.

As *Voyager* was a relatively small ship, its turbolift cars were simpler and more compact than those found aboard *Galaxy*-class ships such as the *U.S.S. Enterprise*-D. Each of the ship's turbolift cars could only accommodate a maximum of five passengers at any one time.

The network of turbolifts provided the fastest way of moving around *Voyager.* They were voice activated and could reach anywhere on the ship within minutes.

VOICE ACTIVATION

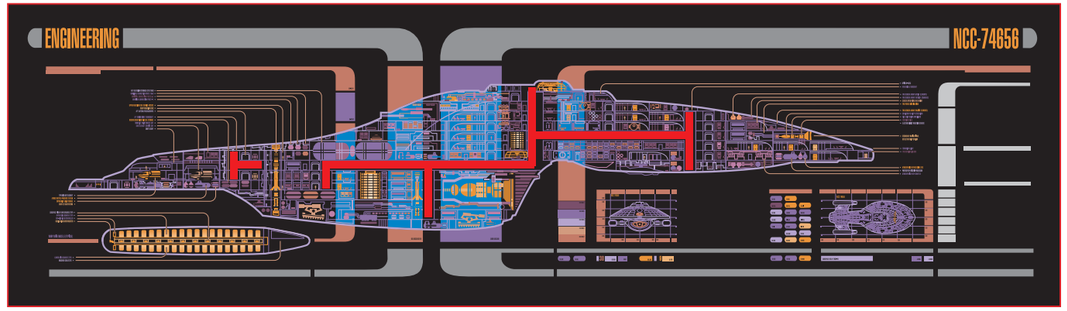
Voyager's turbolifts were connected to the ODN (Optical Data Network) and computer core, enabling fast voice activated control. Upon entering a turbolift, passengers would state their desired destination and the computer immediately calculated the optimum route, depending on several parameters including overall system resources. However, the computer would not always select the most direct path to a destination if there were other cars traveling through the network nearby.

Turbolifts also offered alternatives to the voice command system via two control panels installed either side of the car doors: a basic manual control interface and a user-friendly LCARS control panel.

ON STANDBY

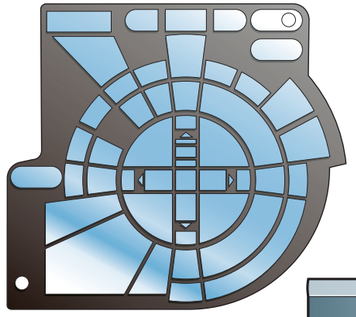
As with other Federation installations, the turbolift system on *Voyager* was powered by EPS conduits lining the network's shafts. Any problems with the network were reported on the master situation monitor display at the engineering station on the bridge. This displayed a constantly updated diagram of *Voyager* and its active systems, including turbolift shaft and car status.

In the event of a turbolift system breakdown, other crawlspaces including Jefferies tubes and maintenance areas parallel to turbolift shafts, allowed the crew to fall back on alternative means of navigating *Voyager*'s interior. A turbolift maintenance bay was located in the ship's aft section, where up to three out-of-service turbolift cars could be held for repair.



This side view schematic of the *U.S.S. Voyager* shows the location of the turbolift shafts. The main network at the front of the ship consisted of four vertical and two horizontal shafts, while a smaller system at the rear had a single horizontal and vertical shaft.

BASIC CONSTRUCTION

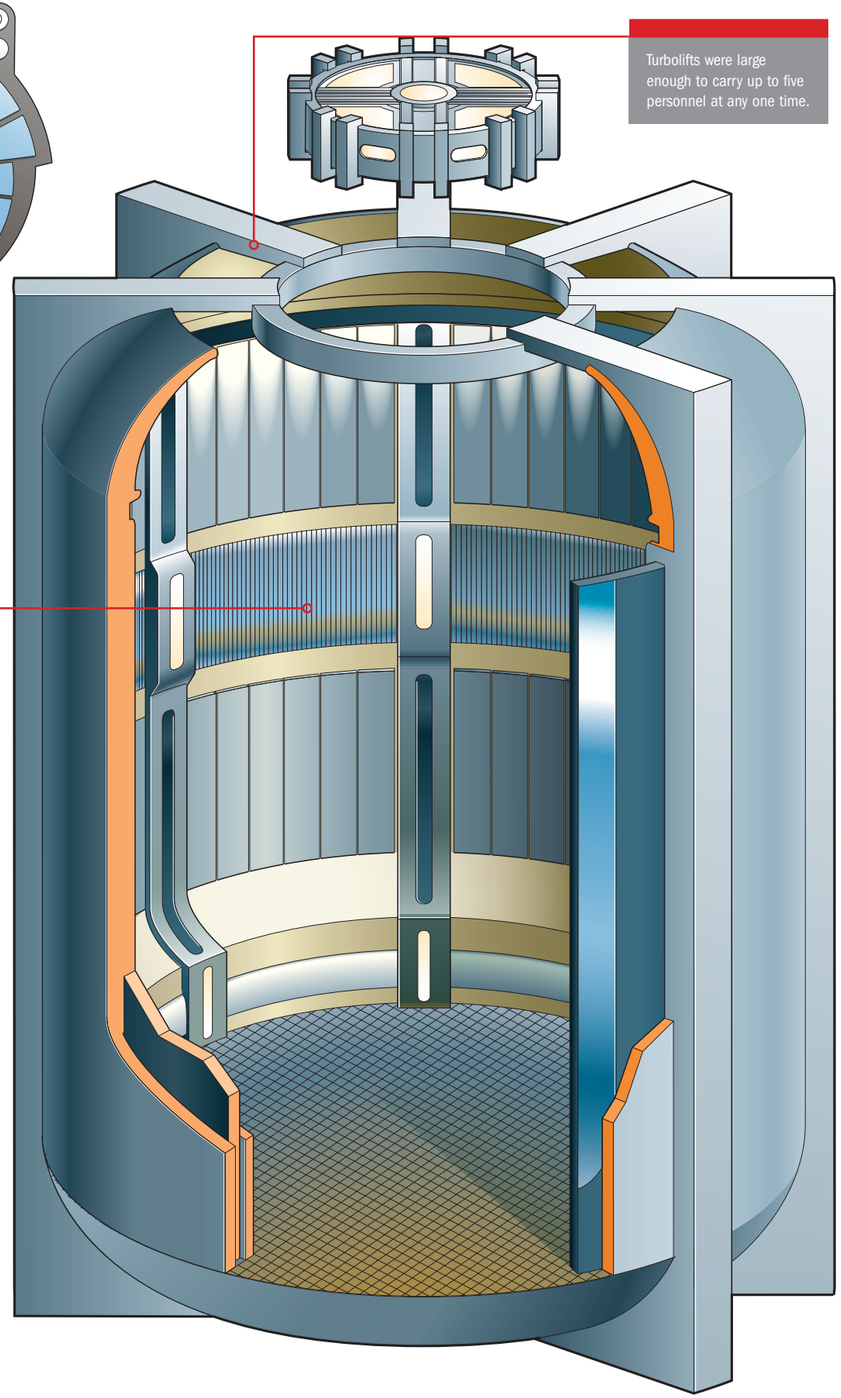


The turbolift system could be monitored on the X-Y translation pad located inside each individual car. The panel was on the right-hand side of the door, opposite the LCARS panel.

The turbolifts were controlled via the EPS conduits that lined each turbolift shaft.

Vertical yellow lights covered a portion of the turbolft walls, flashing continuously from yellow to red when the car was moving. If the car was halted prematurely, the lights stayed red, remaining that color until the turbolift resumed its motion.

In an emergency, passengers could open the roof panel to gain access to the turbolift shaft that ran between the decks.



THE SICKBAY

The medical center of the *U.S.S. Voyager* was equipped to cure everything from a minor headache to severe injuries, with the help of its Emergency Medical Hologram.

Located on deck 5, the *U.S.S. Voyager* sickbay was equipped with a surgical center, recovery units, and specialized treatment rooms, as well as a full stock of medical instruments, equipment, and drugs.

Sickbay contained three standard biobeds and a primary biobed, each of which was equipped with medical sensors that constantly monitored the condition of its patient. An office, from which medical staff could monitor their patients at all times, was located to one side of the main ward. A fully-equipped medical laboratory could be accessed via the office, capable of diagnosing illnesses, analyzing alien organisms, and synthesizing drugs.

THE EMERGENCY MEDICAL HOLOGRAM

The Emergency Medical Hologram (EMH) was an artificial medical practitioner, programmed with the knowledge of hundreds of organic doctors from across the Federation. Intended only as a short term replacement for a 'real' medical officer, the *U.S.S. Voyager* became reliant on its EMH after the ship's entire medical personnel, including the Chief Medical Officer, were killed. This EMH, working far beyond its design parameters, consequently become a permanent member of the crew.

Medical staff could perform numerous tasks, including chemical analysis, at a small workstation in the lab area.

An equipment trolley holding hyposprays and medical tricorders was stationed in the middle of sickbay.

The circular office provided for the on-duty doctor had a computer display panel behind the desk. Briefings with his or her assistant, or consultations with patients, could be carried out here. Windows on either side of the office allowed the doctor to oversee the lab and sickbay areas.

With the ability to form a sterile field around itself, the primary biobed was where most major surgical procedures took place. A forcefield could be applied to the area to protect a patient or staff member from any adverse reactions to medications, to quarantine them, or to stop unwilling patients from escaping.

The *U.S.S. Voyager* used an Emergency Medical Hologram, projected by the strategic placement of holoemitters throughout the sickbay.

A bank of computer panels could be used by medical staff in conjunction with other equipment in the laboratory area.

Sickbay's lab could be accessed from the corridor outside, independently of the main medical treatment area.

Sickbay was fully linked into the *U.S.S. Voyager*'s main computer network.

The EMH dealt with crew illnesses and injuries as efficiently as possible.

Consoles throughout sickbay provided detailed, up-to-the-minute health data.

Sickbay's functional layout included a lab area and an office for the EMH.

The entrance into sickbay was through a door between the biobeds and the doctor's office.

The biobeds of sickbay were virtually self-contained medical units complete with diagnostic displays. Each biobed incorporated an integrated operating device which created a sterile theater for surgical procedures.

MAIN SICKBAY

Stranded in the Delta Quadrant, light years away from more fully equipped medical facilities, the lives of the *U.S.S Voyager* crew were often dependant on the ship's sickbay.

The sickbay on *Voyager* was rarely an oasis of calm, with a steady stream of crew members needing medial assistance for minor ailments, to casualties injured during away missions or in one of the ship's many dangerous encounters with aggressive Delta Quadrant inhabitants. Fortunately, the ship had departed the Alpha Quadrant equipped with the latest medical technology, an eminently capable EMH, and several inexperienced but willing volunteers providing medical support.

The Emergency Medical Hologram was activated after *Voyager* was traumatically relocated to the Delta Quadrant, with the loss of the ships existing medical staff.

NEW PERSONNEL

The ship's violent arrival in the Delta Quadrant had resulted in the death of the ship's entire medical personnel, leaving the EMH to administer medical aid without assistance. Replacements were therefore found among the surviving members of the crew, and Tom Paris was the first to attempt to fill the position of Medic. Paris had taken two semesters of biochemistry at Starfleet Academy, but he had neither the temperament nor the time to make a success of the role, and he was soon replaced by Kes, the Ocampan who had recently joined *Voyager*'s crew with Neelix. Her intelligence and compassionmade her a perfect assistant to the EMH, although she knew little about medicine when she took on the position.

Kes proved to be an able medic when she was appointed as the Doctor's assistant, despite having little medical knowledge or experience of human biology.

INSTRUMENTS AND DRUGS

Various medical instruments were available to the Doctor and his nominal medical staff, such as the standard issue Starfleet medical tricorder and hypospray, but other items of equipment with more specific functions were often called upon. Among other devices, these included an osteo-regenerator, used to regenerate damaged bone; a cortical probe to investigate and treat neurological conditions; a pulmonary scanner, used to analyze the respiratory system; a cytoplasmic stimulator, which could adjust levels of cellular toxicity; and a blood-gas infuser, used to infuse oxygen directly into the bloodstream.

For more serious injuries and illnesses, a surgical support frame was employed to monitor a patient's condition. This created a sterile field around the patient, in which the surgeon could work. It could also administer drugs and therapy to convalescing patients.

Voyager's entire sickbay was a holographic environment, allowing not only for the very existence of the EMH, but also unusual and unprecedented medical procedures and the designing and building of unconventional equipment. Any instrument that was not usually available as part of sickbay's standard suite of medical technologies could be replicated, using design schematics held in the ship's medical database. Drugs would also usually be replicated, as *Voyager*'s physical supplies were limited. However, as the replicators were running in reduced power mode to conserve the ships energy reserves, drugs were often synthesized using more traditional methods, from plants and other materials collected on nearby planets, just as they would have been in the days before replicator technology was available.

The Doctor used a cortical probe to examine Vidiian patient Danara Pel, and found that a complex bio-neural implant had been grafted onto her parietal lobe.

Not all procedures carried out by the EMH were in answer to medical emergencies, with happier events including the delivery of Tom Paris and B'Elanna Torres' baby, Miral.

RECORD KEEPING

Detailed medical records of every crew member were used as a baseline when assessing a crewmember who had fallen ill, as medical staff could compare contemporary sensor readings with the saved data. Changes in condition could be quickly determined, and an effective treatment administered.

The keeping of such records was especially important for Delta Quadrant natives incorporated into the crew who came from races previously unencountered by the Federation, and for whom no biological records existed in the database.

EMERGENCY TRIAGE

Beyond the daily routine of health checks and treating minor ailments, sickbay was often required to provide urgent medical treatment to a greater number of casualties than usual. In such instances, effective triage – prioritizing who should be treated first – could mean the difference between life and death.

When *Voyager* was badly damaged after being hit by a series of proton bursts, the Doctor had to expand triage operations beyond sickbay and into holodeck 2.

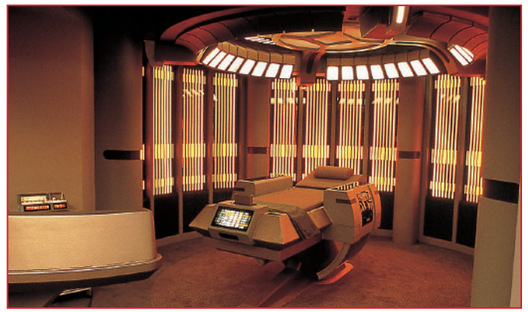
In 2374, while *Voyager* was occupied by the Hirogen, the Doctor was forced to treat wounded Hirogen before turning his attention to casualties in his own crew.

THE BIOBEDS

The sickbay of the *Intrepid*-class *U.S.S. Voyager* was modest in size but fully equipped, and capable of providing effective medical care in all eventualities.

The *U.S.S. Voyager* sickbay was equipped with one primary biobed and three standard biobeds, each capable of advanced diagnostic and surgical functions. The primary biobed was separated from the others in a circular area to the rear of sickbay which could be secured behind a forcefield if necessary.

Each biobed served as an examination table and recovery bed, and contained an array of sensors that fed medical data to biosensor displays mounted at the head and foot of each unit. The biobeds were also fitted with retractable arms which incorporated high resolution medical scanners, providing medical staff with detailed diagnostic information. These extended from the side of the bed to cover a patient's midriff, and could also be used as restraints.



The primary biobed was used to perform surgery and other complex procedures. Other biobeds were normally reserved for monitoring new or recovering patients.

SELF-CONTAINED FACILITY

For routine examinations or during medical emergencies, the primary biobed was the preferred location for initial diagnoses or surgical procedures. Unlike the other biobeds, the unit was free standing and could be rotated through 360 degrees to allow medical staff better access during surgery. With a greater suite of sensors and tools than a standard biobed, the primary biobed was effectively a self-contained medical laboratory and operating theater.

The circular area around *Voyager*'s primary biobed could be isolated by a containment forcefield, which allowed infectious patients to be safely quarantined or employed for crew safety during the treatment of hostile life forms.

MEDICAL ANALYSIS

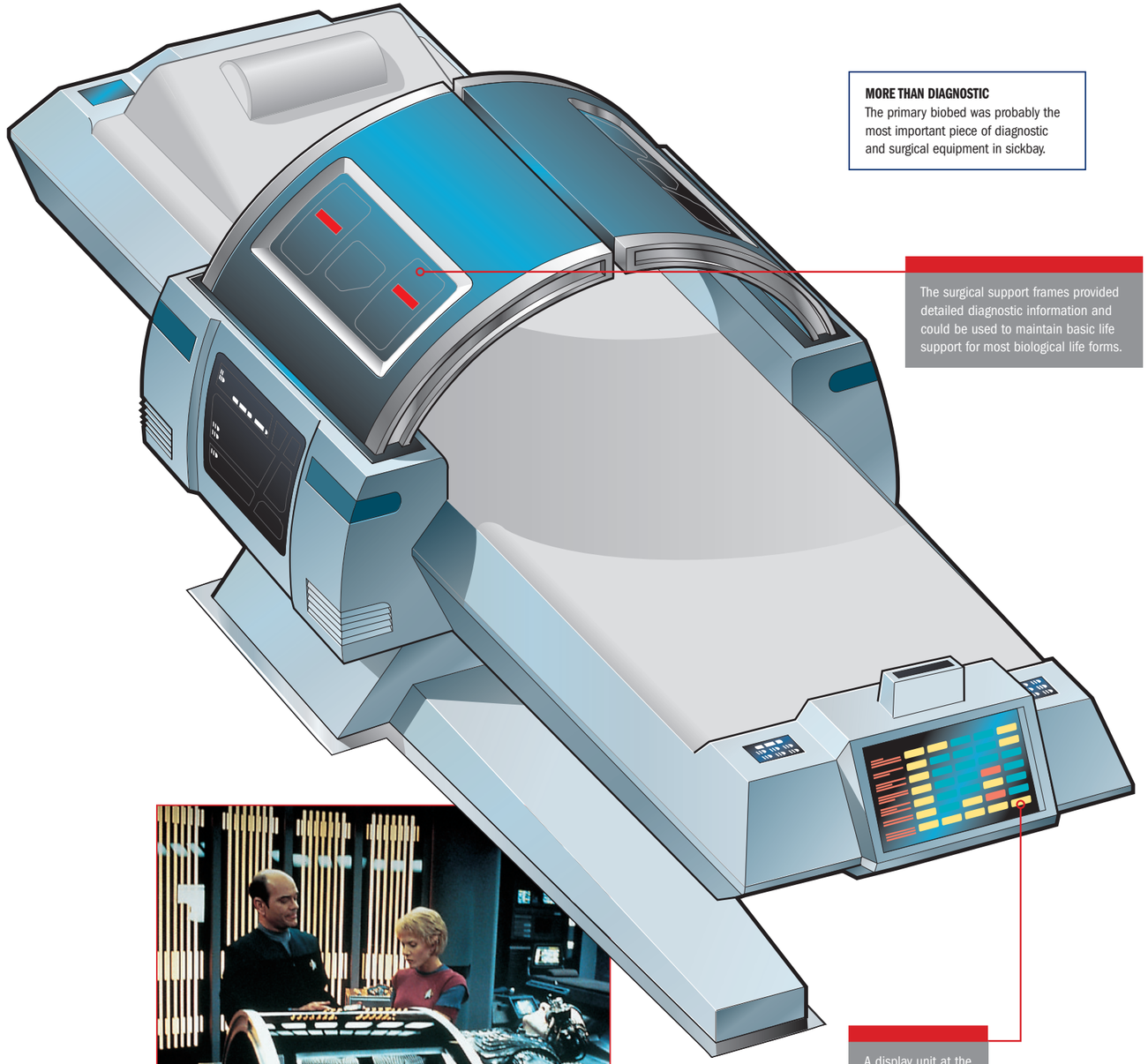
The biobeds' built-in sensors fed directly into the sickbay's medical computers. Readouts were normally displayed on monitor screens, but could be rerouted to medical console stations, the sickbay's main diagnostic display, or to medical tricorders.

A biobed's sophisticated sensors could gather an enormous amount of data, to a molecular level.

Information on a patient's life signs was routed to display screens at the head and foot of the biobed.

Readings from biobed sensors were cross-referenced with the Starfleet medical database.

PRIMARY BIOBED



The diagnostic tools in the primary biobed could be used to analyze a wide variety of life forms, from humanoids to cybernetic life forms or bio-neural gel packs.

MEDICAL HYPOSPRAY

The medical hypospray administered medicines directly into a patient's bloodstream via a high-powered jet of liquid, ensuring clean and hygienic treatment.

The hand-held hypospray was standard issue to all Starfleet doctors and was an essential part of the basic medical kit.

The hand-held hypospray was one of the basic tools of 24th-century medicine. The simple device was used to administer medication, such as tricordrazine or hyronalyn, directly into a patient's bloodstream, muscles, or fatty tissue. It was standard issue to all Starfleet doctors, whether operating in a sickbay or in the field.

DESIGN LINEAGE

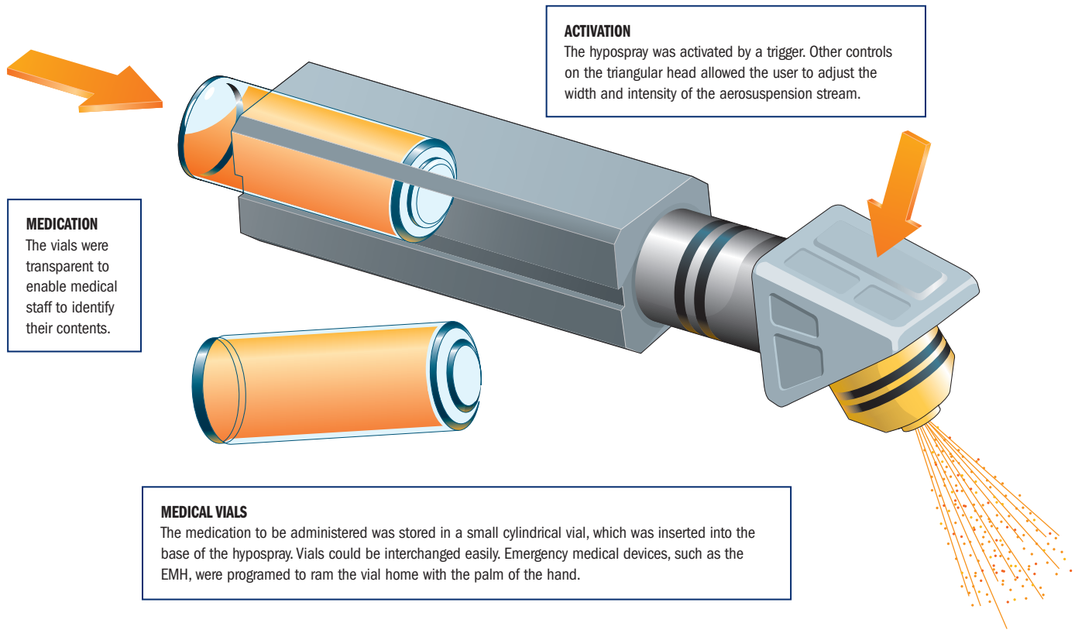
The lineage of the hypospray in use in *Voyager*'s sickbay can be traced to a primitive 20th-century device called a hypodermic syringe – the term 'hypodermic' meaning 'under the skin.' Both devices were used to inject a suspension into the body. The syringe accomplished this by puncturing the patient's epidermal layer with a fine, hollow needle, through which liquid medication was forced via a manually-operated plunger. The first automatic hypospray was invented towards the end of the 20th century and accomplished the same goal without a needle. Unlike its predecessor, the hypospray was pain-free.

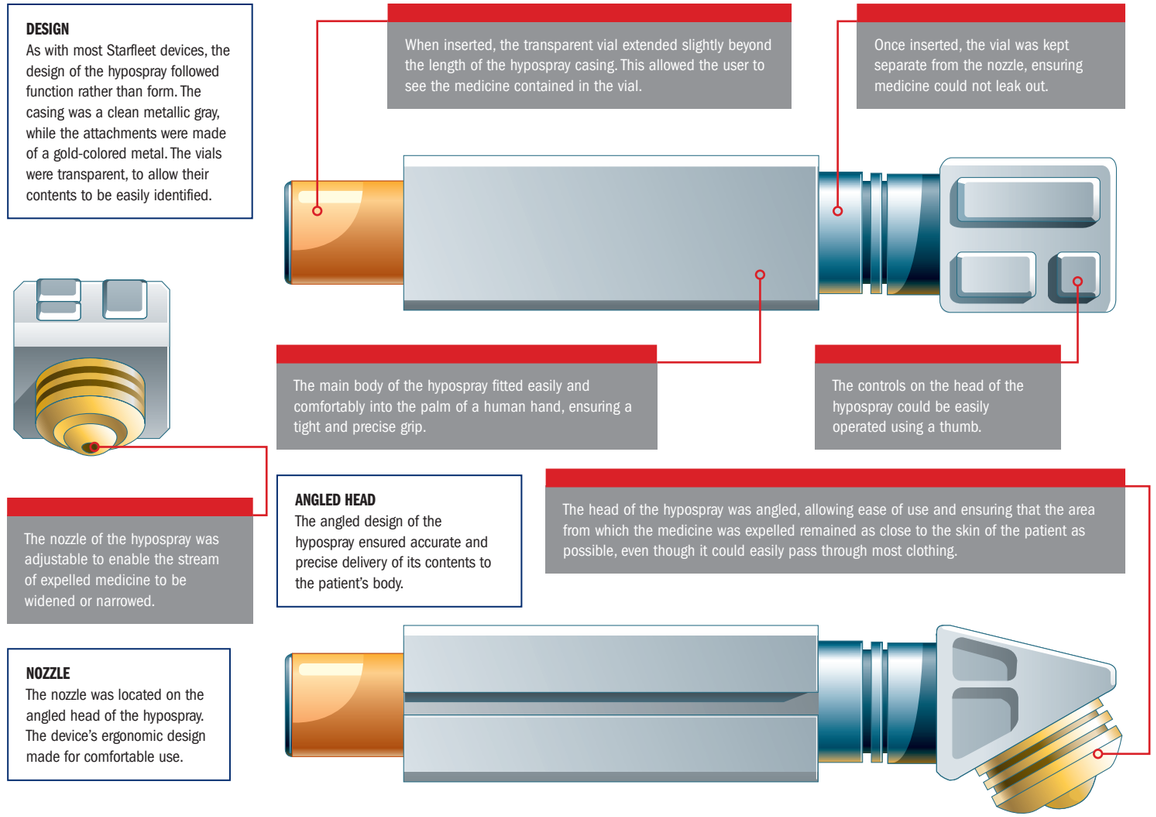
MEDICAL MIRACLE

Medication was administered by placing and holding the hypospray nozzle firmly against the patient's upper arm or neck, then activating a trigger that instantly shot the required medication through the patient's epidermis. The preferred point of injection was usually the large carotid artery on either side of a human crew member's neck. Many inoculants were administered to the upper arm.

The hypospray converted the contents of a transparent vial containing the selected drug into a high-pressure, microscopic aerosuspension stream which could penetrate clothing, skin, and subcutaneous tissue to deliver medication directly into the patient's blood stream and musculature. This highly efficient method of delivery ensured that the beneficial effects of the medication were felt as quickly as possible.

The volume of medication delivered, and the width of the aerosuspension spray, could be adjusted using controls on the head of the device, close to the nozzle and the trigger





that activated the hypospray. The nozzle could be adjusted to enable a wider distribution pattern which in turn yielded a higher absorption rate. However, in this configuration, the medicine could not be injected into areas of the body deep beneath the skin.

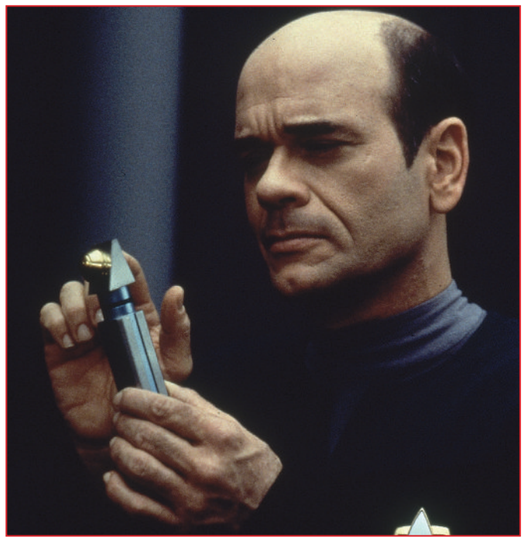
The small vials that contained each dose of medication were easily interchangeable, and were inserted into the base of the hypospray. Medicines were replicated in sickbay, and vials containing the most commonly used medications were stored there for quick access.

FIELD MEDICINE

A second model of hypospray, the field hypospray, was standard issue with every medikit. These hyposprays were intended for medical emergencies away from sickbay, or when basic resources were inaccessible.

The field hyposprays held five different medication ampules at one time. These concentrated emergency medicines were pre-loaded into the hypospray as standard, and automatically diluted with a saline solution contained in the field hypospray when the device was activated.

Starfleet Medical came to rely on the hypospray, as it proved versatile enough to deliver medicine to a wide variety of divergent species.



The hypospray delivered medication directly into the patient's bloodstream or muscles. The angled head of the device enabled a medical practitioner to precisely administer the required treatment.

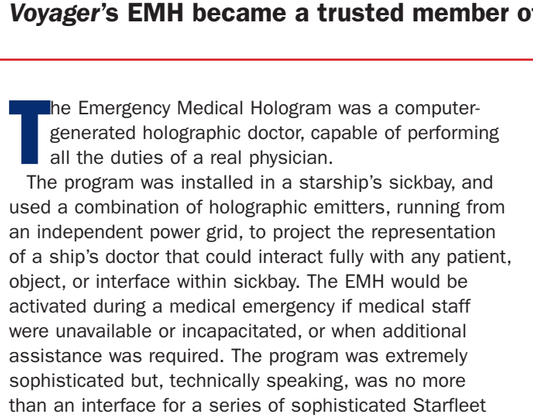
EMERGENCY MEDICAL HOLOGRAMS

Emergency Medical Holograms were developed by Starfleet as a temporary failsafe in case a ship's doctor was incapacitated. *Voyager*'s EMH became a trusted member of its crew.

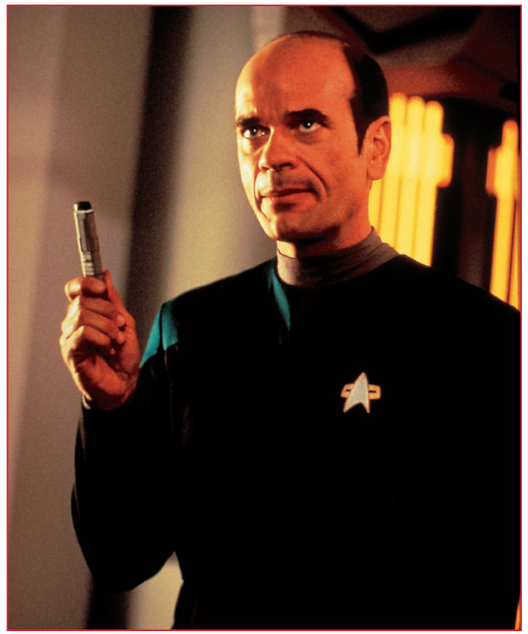
The Emergency Medical Hologram was a computer-generated holographic doctor, capable of performing all the duties of a real physician.

The program was installed in a starship's sickbay, and used a combination of holographic emitters, running from an independent power grid, to project the representation of a ship's doctor that could interact fully with any patient, object, or interface within sickbay. The EMH would be activated during a medical emergency if medical staff were unavailable or incapacitated, or when additional assistance was required. The program was extremely sophisticated but, technically speaking, was no more than an interface for a series of sophisticated Starfleet technologies, coordinated by an advanced and adaptive AI program.

The primary developer of the original medical hologram, designated Emergency Medical Hologram AK-1, or EMH, was Dr. Lewis Zimmerman, a Jupiter Station technician working in Starfleet's Holoprogramming Center. The development team also included Lt. Reg Barclay, who tested the EMH's interpersonal skills. The first version of the program was adaptive, creative, and able to perform with or without human input for an aggregate of 1,500 hours before failure. However, as its name implied, the EMH was only ever intended as a short term, emergency stopgap solution.



Dr. Julian Bashir of *Deep Space 9* was chosen to be the template for a new long-term Medical Hologram. Dr. Zimmerman visited him at the station to make notes.



The original EMH resembled Dr. Lewis Zimmerman, and shared several of his mannerisms. Like Zimmerman, the hologram could seem smug and self-satisfied.

MEDICAL INTEGRITY

The EMH's medical programming included a 50 million gigaquad database spanning 3,000 cultures (including those with psychospiritual healing beliefs), the experience of 47 physicians, 2,000 medical references, and five million possible treatments, all with contingency options. It was activated either by voice command or a Red Alert. If triggered by the Red Alert, the EMH would immediately tie into the ship's key systems to ascertain the ship's status. On other occasions, the EMH would ask, "Please state the nature of the medical emergency," upon activation.

Zimmerman formulated a highly adaptive multitronic pathway that endowed the EMH with the ability to create additional subroutines as new situations were encountered. It was this ability to learn and adapt that made the EMH particularly useful. The hologram was equipped with the required protocols and subroutines so that he appeared to function as a real human being, although true emotions were not part of the program. Nor was he given a name, responding to the epithet "doctor" when spoken to.

The later EMH Mark II was a more advanced program, but the *U.S.S. Voyager*'s EMH had one major advantage: the benefit of extensive experience in the field.

The EMH looked just like a regular person, but in reality he was composed entirely of light, and given solidity via sickbay's holographic projectors, which operated a magnetic containment field around the Doctor's physical form, thereby trapping electromagnetic energy. This energy was the primary element of a tactile subroutine that gave the EMH both a sense of touch, and a solid presence. The EMH was therefore able to interact physically with crew members, perform surgery, or work with other medical devices and equipment. His magnetic cohesion could, however, be reduced at will, and the doctor could literally turn into thin air if an attempt was made to grab him. As a result, the EMH could not be physically damaged or coerced.

BEDSIDE MANNER

The personality of the EMH was the least developed element of the system, although as its purpose was to save lives, not to make friends, this was not seen as a problem by Zimmerman. The original template for the medical hologram's body and personality was actually derived from Dr. Zimmerman himself; a man who was often smug, caustic, and overly confident.

Fortunately, the doctor's rough edges were ameliorated by an eagerness to do his job well, genuine concern for his patients, and his reverence for the physician's Hippocratic oath. The EMH was even capable of refusing a direct order if it violated that oath.

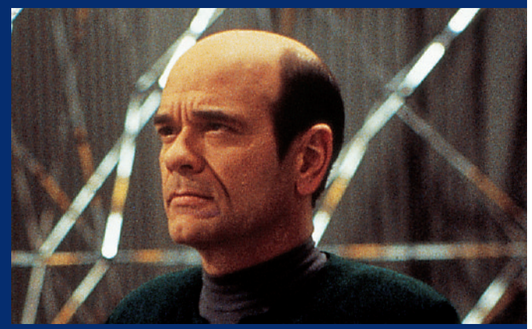
In 2373, Zimmerman began work on a new medical hologram, the Long-term Medical Hologram, or LMH. As its name suggested, this program was intended to run on a continuous basis, not just called into action in emergency situations. The biggest obstacle to overcome was to create a more amenable bedside manner for the LMH. An amiable template was sought by Zimmerman and Starfleet, and they selected Doctor Julian Bashir of *Deep Space 9* for his suitable combination of congeniality and experience.

As work continued on the LMH, a second version of the EMH – the EMH Mark II – was installed in the experimental ship, the *U.S.S. Prometheus*. This ship had holoemitters on every deck, giving the EMH II free rein, and he also had the ability to turn himself on and off.

NO SUBSTITUTE FOR EXPERIENCE

Designed for short-term emergency use only, *Voyager*'s EMH found himself having to deal with the crew's medical and health needs on a full-time basis. After several years of continuous use, the Doctor had added many self-devised subroutines to his own program, and developed a personality of his own.

The Doctor's experiences led him to being capable of showing emotion, and even falling in love. There is no question that he became a fully sentient life form.



The *U.S.S. Voyager*'s EMH became a much valued member of the ship's crew, and his colleagues considered him to be far more than just a computer program.

MOBILE HOLOEMITTER

The Emergency Medical Hologram was originally designed to operate solely within the confines of a starship sickbay. The invention of a mobile holoemitter broadened his horizons.

The autonomous, self-sustaining mobile holoemitter – given to *Voyager*'s Emergency Medical Hologram by 20th-century entrepreneur Henry Starling – was an incredible device. Only a few centimeters in length, the holoemitter contained its own, independent power supply, and was capable of storing the entire EMH program and projecting a solid light hologram into any environment. This not only allowed the EMH to move freely around the ship, but provided him with an opportunity to leave it altogether to accompany the crew on away missions. In fact, the tiny, advanced device was capable of performing all functions usually performed by the holoemitters built into the ship's sickbay and holodeck. The device was so advanced that it took *Voyager*'s chief engineer B'Elanna Torres some time to figure out exactly how it worked.

The Doctor acquired the holoemitter when *Voyager*'s crew got involved with a time traveler, who had brought future technology back to Earth's 20th century.

SYSTEMS AND FUNCTIONS

Although he was no longer limited to *Voyager*, the Doctor's program was still stored in the ship's main computer system, and only downloaded into the holoemitter when he was required to leave sickbay. When returning from an away mission, his program was transferred back into the main computer, while the holoemitter was stored in sickbay. The process of downloading the program from one system to the other only took a few seconds.

In the event that *Voyager*'s computers suffered a system-wide malfunction, the EMH would be safely downloaded to the holoemitter, thereby preventing his program from being lost, deleted, or corrupted.

PORTABLE DOCTOR

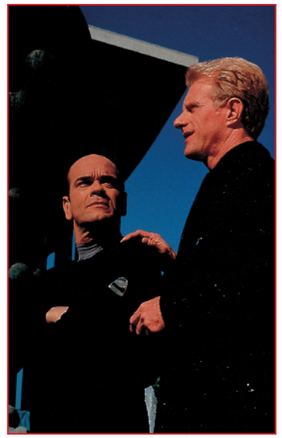
The Doctor's entire program was downloadable, which proved to be especially useful to his crewmates when they were abducted by Nyrians. Chakotay secretly downloaded the Doctor into the mobile holoemitter before joining the rest of the kidnapped crew on a Nyrian Colony Ship.

Realizing there was no point in resisting the Nyrians, Chakotay downloaded the Doctor into the holoemitter before sabotaging the ship's systems.

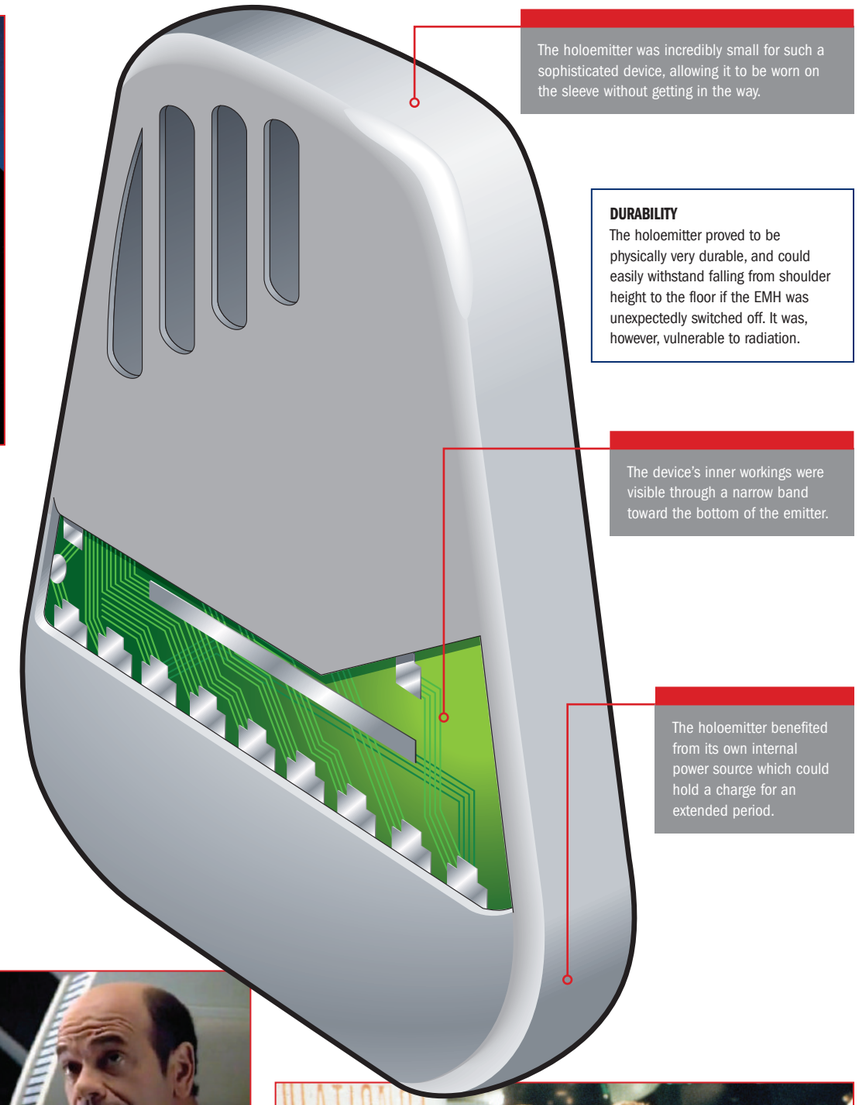
To help them escape from the Nyrians, B'Elanna Torres was able to modify the holoemitter so that he could act as a 'walking tricorder'.

The Doctor was thereby able to visually scan for energy signatures that would reveal a hidden doorway for the crew to escape incarceration.

FUTURE TECHNOLOGY



Henry Starling originally salvaged the holoemitter from Captain Braxton's 29th-century timeship, the *Aeon*.



The holoemitter was incredibly small for such a sophisticated device, allowing it to be worn on the sleeve without getting in the way.

DURABILITY
The holoemitter proved to be physically very durable, and could easily withstand falling from shoulder height to the floor if the EMH was unexpectedly switched off. It was, however, vulnerable to radiation.

The device's inner workings were visible through a narrow band toward the bottom of the emitter.

MINIATURIZED TECH
Reflecting its design rooted in 29th-century technology, the holoemitter was a remarkably small and light device, its size belying its capabilities.

The holoemitter benefited from its own internal power source which could hold a charge for an extended period.

Once the Doctor had the holoemitter he was able to leave the confines of the sickbay and take part in away missions.

The holoemitter also gave the Doctor free reign to move anywhere aboard *Voyager*, allowing him to join in social activities in the mess hall.

HOLOGRAPHIC MEDICAL AIDS

By the late 24th century, Emergency Medical Holograms were commonplace on Federation starships. However, they were not the only holographic technologies and techniques available, thanks to the pioneering work of the *U.S.S. Voyager*'s EMH.

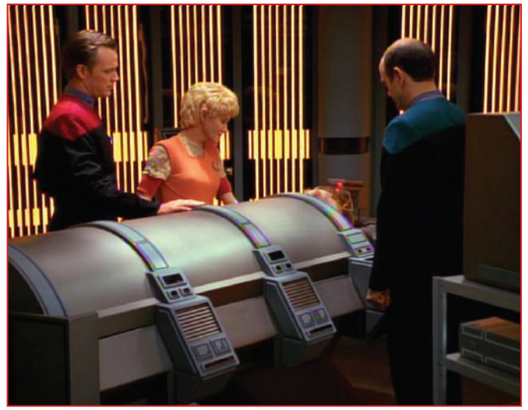
Holograms are created by projections of light working in concert with tractor beams, magnetic containment fields, and matter replicators. By the late 24th century, holographic technology had become invaluable to the medical profession, not only through the ubiquity of Emergency Medical Holograms, but in a broad range of novel applications, many of which were pioneered by the EMH of the *U.S.S. Voyager*.

HOLOGRAPHIC ORGANS

The holotechnology found in *Voyager*'s sickbay functioned at the same quark-enhanced, quantum levels of personnel transporters, which enabled the EMH to invent several new utilities and treatments.

In 2371, shortly after *Voyager*'s arrival in the Delta Quadrant, the EMH had to expand his resources when some Vidiians stole Neelix's lungs. The Doctor's solution was to create temporary holographic organs for the Talaxian. Using subatomic specifications gathered from Neelix's transporter identification matrix, the EMH configured a set of lungs that were fully capable of oxygenating Neelix's blood, relaying neural impulses, and expelling waste. The computer altered the organs' density from solid to porous, so that oxygen and carbon dioxide could be added or removed from the bloodstream.

Neelix had to be completely immobilized to ensure the lungs could do their job, and isotropic restraints prevented more than 2 microns of movement. Had Neelix been able to leave sickbay and its holoimaging system, the lungs would have disappeared with fatal consequences. While the holographic lungs were not a long-term solution, as an emergency measure they served to prolong Neelix's life until a permanent replacement could be found.



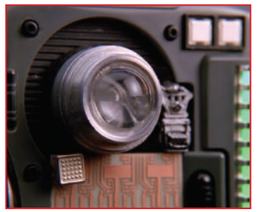
After Neelix's lungs were stolen, the Doctor used the sickbay's holographic imaging system to create a set of temporary holographic replacements for his patient.

REPLACEMENT BODY

The following year, the EMH used holography to help save the life of Danara Pel, a Vidiian female suffering from a pandemic known as the Phage. The Doctor put Pel's body into stasis, and used DNA data to create a holographic representation of her body as it would be if free of the disease. For limited periods of time, Pel's consciousness was transferred into the hologram so she could help develop a course of treatment and participate in her own surgery.

The EMH created a second holographic consultant in 2375, having found details in his medical database concerning a Cardassian scientist named Crell Moset, a leading expert on exobiology. Moset's credentials and position as Chairman of the Exobiology Department at the University of Chulat, made him the ideal consultant in a life-or-death case involving B'Elanna Torres. The EMH recreated a holographic version of the physician, and together they built a holographic simulation of Torres, enabling them to perform test surgery without endangering the engineer. However, the program was discontinued on ethical grounds when it was learned that Moset was a war criminal with deplorable morals.

The diagnostic holoimager used by the EMH was similar to a regular camera.



Its lens acted as a scanner, and could 'photograph' beneath the subject's skin.

The Doctor made records of the physical condition of each of *Voyager*'s crew.

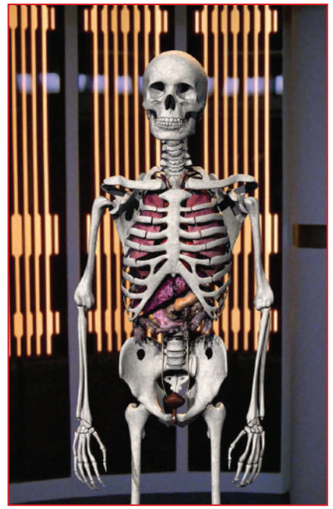
Holoimaging could reveal scar tissue from wounds long since healed.

DIAGNOSTIC HOLOIMAGER

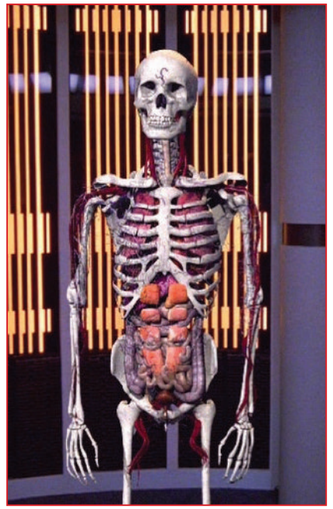
Free of the confines of *Voyager*'s sickbay thanks to his mobile holoemitter, the Doctor was able to join planetary away teams. He became an avid photographer, using a holoimager to document his experiences. Consequently, his inquiring mind lead him to investigate the field of biophotonics – the combination of holoimaging with biology.

The Doctor enhanced his imaging device so that it could generate the photonic pulses needed to capture images of a quality comparable to those of transporter identification matrices. The resultant biophotonic images were composed of many levels of detail, from the patient's bones, arteries, and internal organs, to their musculature and skin. Each scan offered the Doctor an unprecedented overview of his patient, which could be magnified to a factor of 500.

The diagnostic holoimager scanned the patient then projected a detailed image of their skeleton.



The next stage added internal organs into the chest cavity, allowing the Doctor to examine each in turn.



Blood vessels provided the next level of diagnostic details, with arteries showing as red tubes.

With the network of blood vessels completed, soft tissue layers of muscle and fat were rendered.

The holoimager depicted each epidermal layer, and could even isolate areas of clothing.

Once the holoimage was complete, the EMH had a fully diagnosable representation of his patient.

HOLOGRAPHIC IMAGING

A holographic imaging device, or holoimager, was an advanced camera designed for personal and recreational use, although it could be modified to perform additional tasks.

The holoimager was based on technologies drawn from transporter systems, holodeck imaging equipment, and subspace communications components, to create a versatile handheld device for recording still and moving images in three dimensions.

The unit featured a zoom lens, a self-contained light source, and an array of sensors for measuring distance, light, and various other parameters required to conduct multiplane scans of a subject matter, and to determine its photometric levels. The image was captured via photonic pulses and interferometer-type scanners. A viewfinder and controls on the rear of the unit enabled the user to adjust the composition and alter image-capture settings.

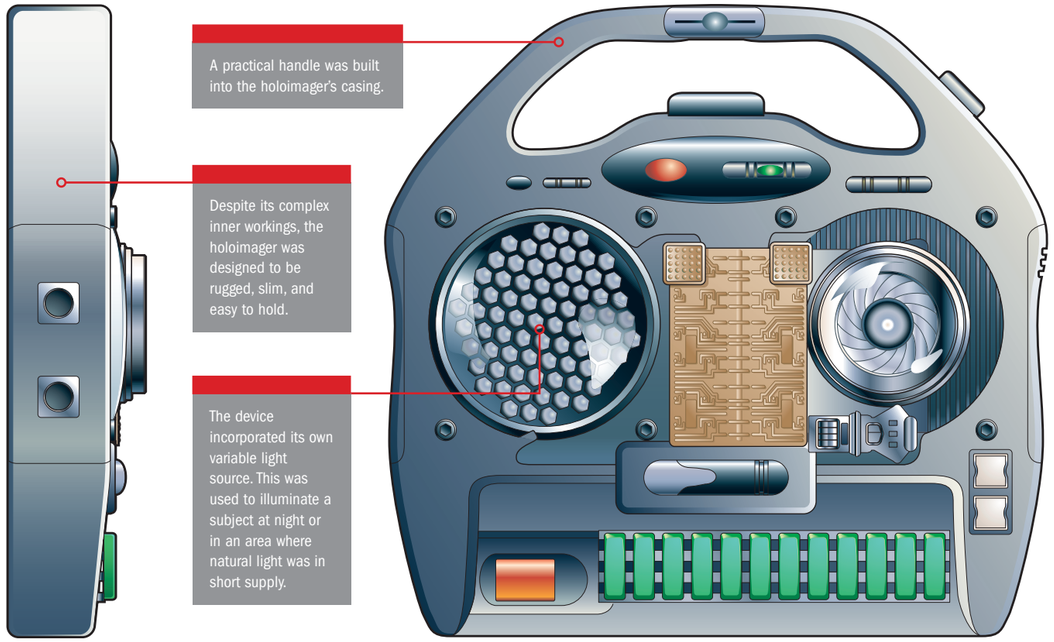
OPERATING PROCEDURE

The recording process could be actioned in several ways – by pressing the record button, by using its built-in timer, or by instructing a computer capable of interfacing with the device to take the picture. Image data would be collected even if the focus was still being fine-tuned or the subject's photometric data had not been properly calculated.

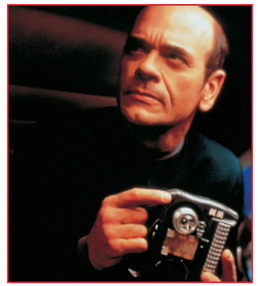
The holoimager could be enhanced beyond its basic specifications, by adding additional modules to the front of the unit or adjusting the paramaters of its sensors. For example, *Voyager*'s EMH adjusted the devices resonance spectrum along a subspace band, enabling him to carry out deep body scans at a subatomic level.

SIDE VIEW

FRONT VIEW



BASIC PRINCIPLES



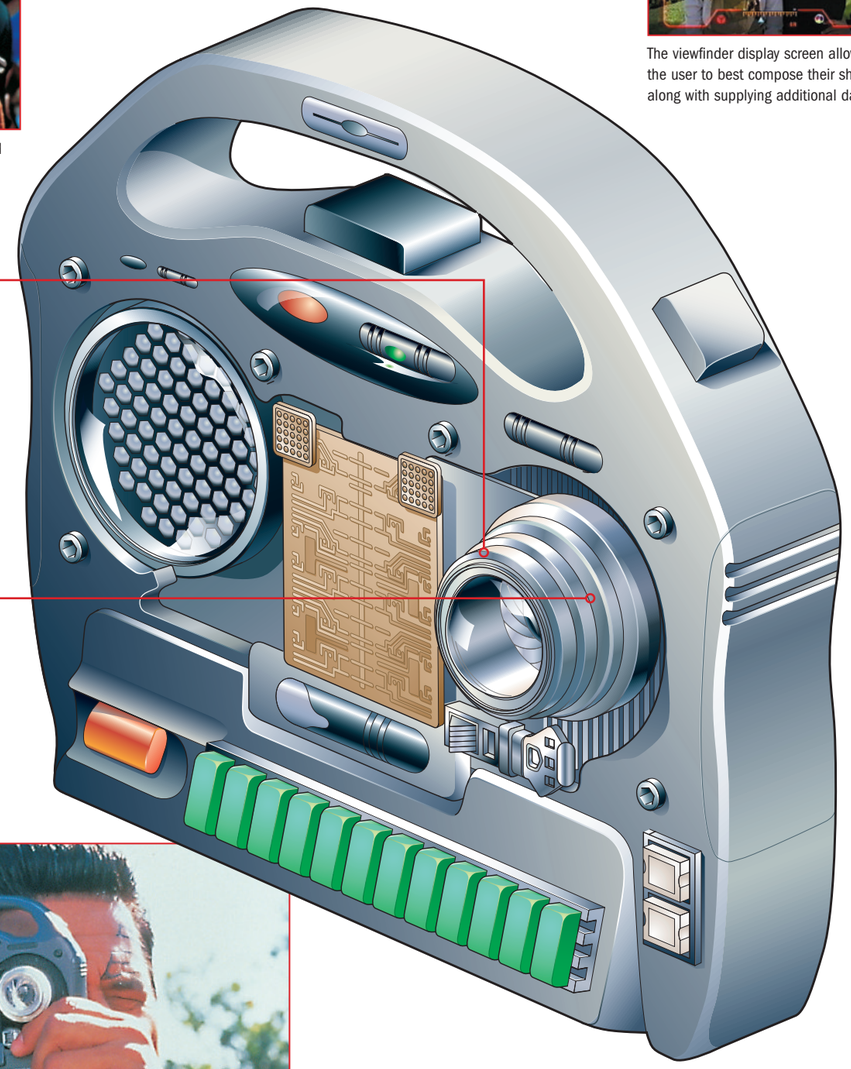
The *U.S.S. Voyager*'s EMH was an avid photographer and often took his holoimager on away missions.

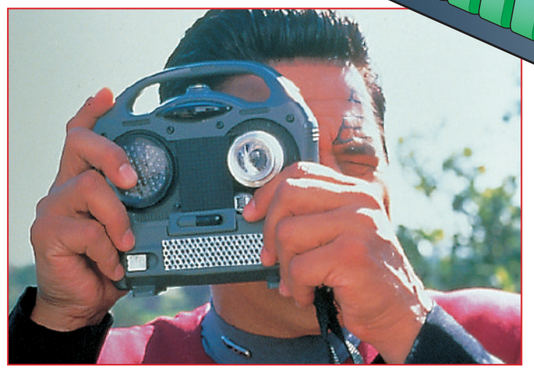
CAMERAS
The holographic imaging device operated via a process fundamentally unchanged since the first photographic systems were developed during Earth's 19th century, although early cameras used a glass or metal plate coated with a chemical emulsion as their recording medium.

The viewfinder display screen allowed the user to best compose their shot, along with supplying additional data.

A holoimager captured an image along the same principles as early cameras did – by pointing the lens toward the subject and removing the aperture cap for long enough to take an exposure.

When the aperture was uncovered, reflected light waves streamed through the lens and made contact with a photonically-sensitive recording medium within, capturing the image.



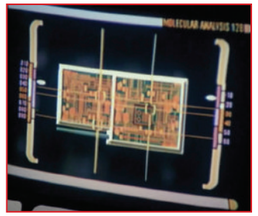


The holographic imaging device was raised to the eye level of the user, who then lined up their shot through the viewfinder like a traditional Earth camera.

CASING
The holoimager components were assembled in a rugged, lightweight, rectangular case complete with a molded handle and shoulder strap. The case's exterior comprised of sensing elements, buttons, a built-in illumination source, and a protruding, cylindrical lens. The rear of the holoimager contained a viewfinder and additional controls.

SYNAPTIC TRANSCEIVER

Starfleet technology continued to improve while the *U.S.S. Voyager* was in the Delta quadrant. One such development proved to be a vital turning point in the ship's journey home.



The synaptic transceiver chip in Admiral Janeway's brain carried an identifiable Starfleet signature.

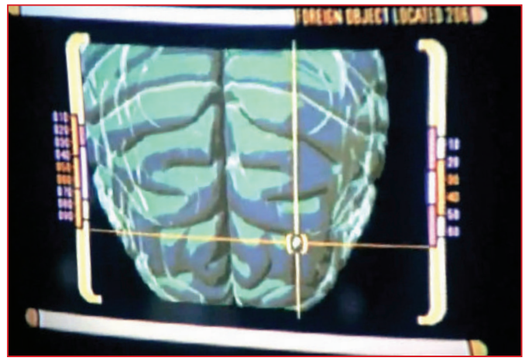
Starfleet technology was constantly improving as its scientists and engineers experimented with new ways of enhancing a starship's performance. This included new control interfaces, which had been gradually moving away from analogue inputs through to touch-sensitive digital systems and beyond. A big disadvantage with manually operated systems was the speed and accuracy at which a crewmember could physically manipulate a control interface, and by 2404 a vessel's onboard computer could be directly linked to its pilot through the use of a synaptic transceiver grafted onto the brain of the ship's operator. This allowed a Starfleet officer to single-handedly control a complex vehicle at least as large as a shuttlecraft.

Admiral Kathryn Janeway was determined to bring *Voyager* home early, and formulated a daring plan that would not endanger anyone other than herself.

TECHNOLOGICAL REVOLUTION

In the year 2404, a future version of Admiral Kathryn Janeway used a synaptic transceiver to operate her specially modified shuttlecraft and travel backwards in time to 2377, in an attempt to assist the crew of the *U.S.S. Voyager* in returning to the Alpha Quadrant 16 years before they had done in her timeline.

Ironically, Admiral Janeway was only able to undertake this highly dangerous mission – and break the Temporal Directive in the process – because at the heart of the synaptic transceiver was an integrated bio-computer system invented by *Voyager*'s Emergency Medical Hologram in 2392 – two years before the vessel had made it home.



A synaptic transceiver was embedded deep within Janeway's cerebral cortex. The device did not have any detrimental effects on her regular brain functions.

When activated, a neural interface built into the pilot's chair in the cockpit of Admiral Janeway's shuttlecraft connected wirelessly to the synaptic transciever.

The Borg Queen was shocked by Admiral Janeway's intrusion into her private sanctum, not realizing at first that the Starfleet officer was a neural projection.

Voyager's EMH developed the integrated bio-computer system central to the synaptic transceiver in 2392, while the ship was still traversing the Delta Quadrant.

ALL IN THE MIND

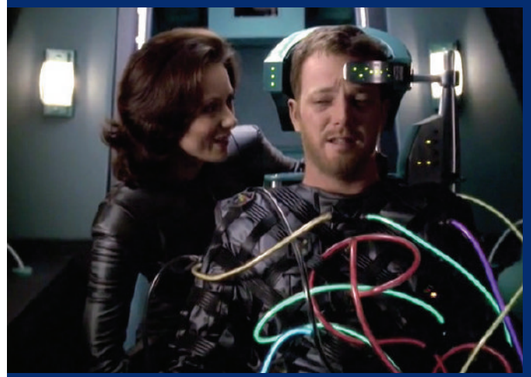
The system consisted of two elements – a small integrated circuit positioned in the cerebral cortex of the pilot, and a neural interface receiver assembly incorporated into a vessel's command chair or pilot's position. The implant located within the brain in no way interfered with the normal functioning of its host, remaining dormant until called into use when aboard a suitably equipped Starfleet ship. A direct connection was formed between the synaptic transceiver implanted in the user's brain and the advanced computer systems into which the interface directly fed, allowing the pilot to simultaneously carry out other duties using a regular duty station.

The combined transceiver elements allowed a pilot to initiate and control a wide variety of shipboard functions through thought alone, without having to manually input commands using a physical interface. A reduced number of traditional control terminals were still fitted to vessels in the year 2404, however.

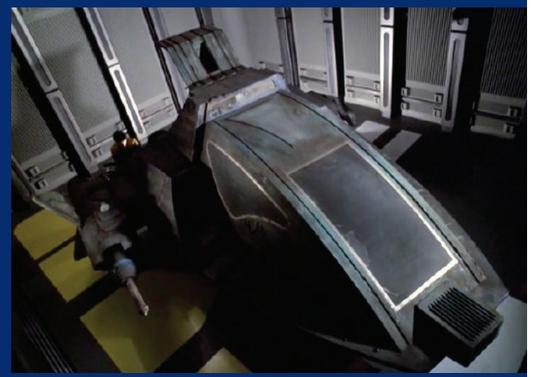
The synaptic transceiver assembly gave a ship's pilot a crucial tactical and technological edge, allowing them to action navigational, conn, and defensive functions with incredible alacrity, while voice-activated commands meant that the pilot could rely on the ship's computer to execute simpler tasks, such as course coordinates or engaging the warp drive. The synaptic transceiver proved to be a very formidable combination, directly linking the experience and tactical skill of its pilot with the instantaneous response times of computer-controlled systems.

UNDER THE INFLUENCE

The crew of the *U.S.S. Voyager* were no strangers to the benefits – and dangers – of technology that allowed a vessel to be controlled via a neural interface. In 2376, Lt. Tom Paris acquired *Alice*, a small shuttlecraft equipped with a neurogenic interface that soon subsumed the pilot, forcing him under its control.



Alice succeeded in taking control of Lt. Tom Paris in order to force him to pilot the shuttlecraft back to the region of space where it originated.



Paris' connection to *Alice* eventually overwhelmed him. Under its influence, Tom found himself dedicating his every waking hour to restoring the shuttlecraft.

STASIS CHAMBERS

Standard issue on *Intrepid*-class vessels, stasis chambers were usually used as a last resort to keep a patient alive in the event of an untreatable medical emergency. The resourceful *Voyager* crew found an alternative use for them.

Traveling through the Delta Quadrant, the crew of the *U.S.S. Voyager* were potentially vulnerable to myriad unknown diseases against which their immune systems could provide little or no resistance. Even with the cutting edge medical technology and treatments available in the sick bay, situations arose in which the greatest enemy was a lack of time, either to develop a cure, or investigate the causes of an illness. In such emergencies, the use of a stasis chamber became the only option.

Designed to accommodate a single crewmember, these sarcophagus-like units maintained a stable and constant stasis field around its unconscious occupant, and were capable of protecting them even in the vacuum of space. Completely self-contained, and with an internal power supply, they could operate for at least 17 days without any maintenance or adjustment.

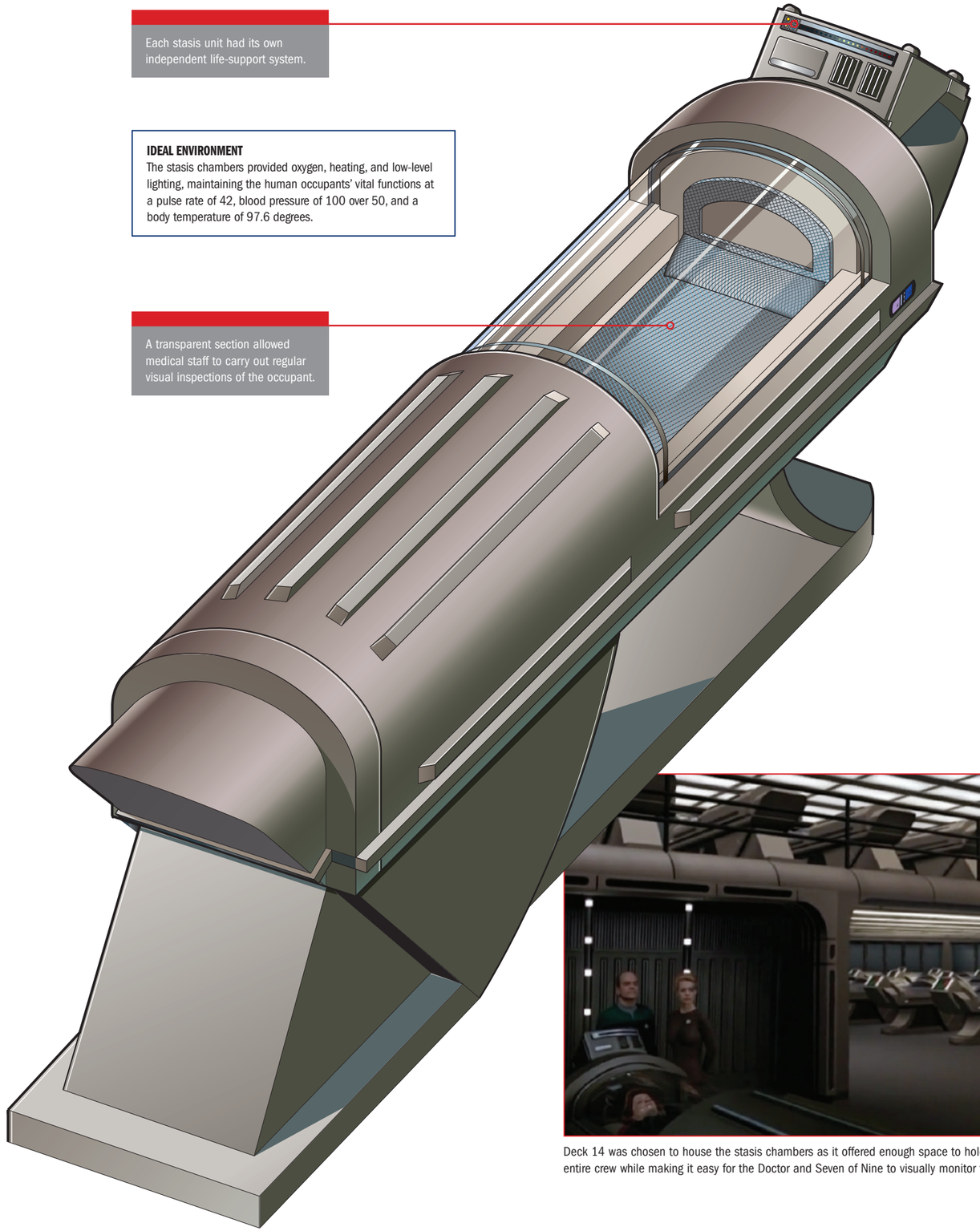
Stasis chambers could be used to store a patient indefinitely, although this was advisable only under constant medical supervision. While they were equipped with a sophisticated medical analysis system, the units were little more than a stopgap measure until a suitable treatment could be developed.

Before warp drives were developed, sleeper ships used stasis technology so that crews could survive long journeys into deep space. Similarly, the entire *Voyager* crew employed stasis chambers to protect them from dangerously high levels of subnucleonic radiation, as the ship traveled for over a month through a Mutara-class nebula.

Each stasis unit had its own independent life-support system.

IDEAL ENVIRONMENT
The stasis chambers provided oxygen, heating, and low-level lighting, maintaining the human occupants' vital functions at a pulse rate of 42, blood pressure of 100 over 50, and a body temperature of 97.6 degrees.

A transparent section allowed medical staff to carry out regular visual inspections of the occupant.



Deck 14 was chosen to house the stasis chambers as it offered enough space to hold the entire crew while making it easy for the Doctor and Seven of Nine to visually monitor them.

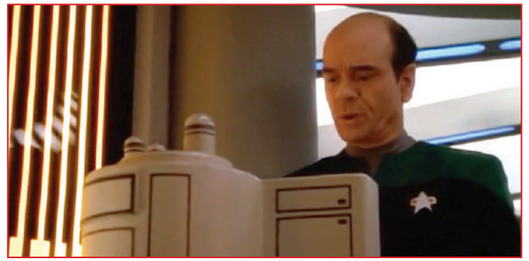
BIO-TEMPORAL CHAMBER

Created by *Voyager*'s inventive EMH to treat Kes in an alternate timeline, the bio-temporal chamber was a means of extending her life as she entered the morilogium – the final stage of an Ocampan's lifespan.

The crew of the *U.S.S. Voyager* often had to be inventive with the facilities they had available to them, adapting or modifying existing equipment for uses other than those for which they were designed. This was never more evident than in an alternate future timeline glimpsed by the Ocampan Kes.

Crewmates and family members that Kes encountered in her time jumps thought that her age was making her confused, but she convinced them to help her.

Realizing that Kes had entered the morilogium, the Doctor devised the bio-temporal chamber as a means of saving her. Unfortunately he had no time to test it.



The Doctor monitored Kes' condition throughout the treatment, ensuring that her chronoton levels continued to drop to acceptable levels.

In this future, Kes entered the morilogium – the last phase of an Ocampan's natural life cycle – in 2379. She began to exhibit similar symptoms to those indicating senility in elderly humans. The Doctor theorized that if he placed her in a bio-temporal chamber and surrounded her body with a bio-temporal field, this could send her cells into a state of temporal flux, effectively pushing them back to a much earlier stage of entropic decay. It was hoped that this radical concept would arrest the aging process and give her as much as an extra year of life.

DESIGN AND OPERATION

The bio-temporal chamber was a modified biobed from *Voyager*'s sickbay, with the most obvious addition being a solid, metallic curved lid which closed to seal the patient within the chamber. The chamber was open at one end, where the patient's head, neck, and shoulders were exposed. Behind this area was a small control panel from which the Doctor could monitor the patient's status and make adjustments. Clamps along the edges of the lid sealed the whole unit, preventing leakage of the energy fields being generated within. Manipulation of these fields was carried out using a separate console, set away from the chamber. An array of emitters inside the chamber bathed the patient in a warm orange glow when the unit was activated and particle generation commenced.

After discovering the cause of Kes's shifts in time – chronoton radition – the bio-temporal chamber was set to bombard Kes with antichronoton particles.

Once the bio-temporal chamber had done its job, Kes was relieved to find herself back in temporal sync with the rest of the *U.S.S. Voyager* crew.

UNEXPECTED SIDE EFFECTS

Unfortunately, the Doctor could not have anticipated that the procedure would have an extraordinary side effect on Kes. Years before, she had been exposed to a Krenim chronometric torpedo attack, and her body had retained dormant chronoton particles at a cellular level. The field reactivated those particles, pushing Kes out of temporal synchronization with the rest of the crew, and causing her consciousness to be thrown backward in time in a series of small jumps, each one taking her further away from the moment when the chamber was activated. In these past eras, Kes was able to enlist the help of her crewmates, although sickbay containment fields were unable to prevent further time shifts.

TIME FOR A CURE

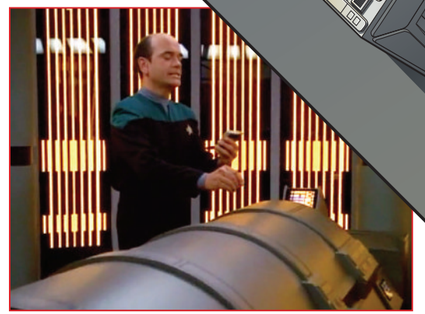
Eventually, Kes jumped back to the point in time when the chronoton torpedo hit *Voyager*, and she was able to take a reading of its exact temporal variance. By feeding those readings into a recreation of the bio-temporal chamber in the era she was currently in, it was possible to generate an anti-chronoton field that reduced Kes' chronoton roentgen count to zero. The time jumps stopped, and Kes found herself safely locked in her own timeline.

CHAMBER CONFIGURATION

CAREFUL MONITORING
More than one member of personnel was required to monitor the status of the occupant. One to adjust the bio-temporal field stresses, and another to track the synaptic relays.

EXTENDING LIFE
The EMH operated the bio-temporal chamber from the main console at the head of the bed. A precisely modulated field of antichronoton particles of 1.47 microseconds was required to ensure that the chronoton particles within Kes remained dormant, halting the temporal fluctuation she had been experiencing.

The patient was placed into the chamber and hermetically sealed inside, leaving only her head visible. Strong clamps locked the hatch closed, thereby preventing the likelihood of harmful emissions leaking out.



The bio-temporal chamber was invented by the Doctor to push Kes' cells into a state of flux, in the hope it would extend her life.

SEVEN OF NINE'S IMPLANTS

The former Borg drone's arrival on *Voyager* offered opportunities that aided the crew in their quest to return to the Alpha Quadrant, although her residual Borg implants could prove as dangerous as they were helpful.

As a Borg drone, Seven was essentially a cyborg and many of her body parts were replaced with cybernetic components.

Although Seven's appearance was restored to normal she sill had many Borg components on – or just above – the skin.

The integration of the former Borg drone Seven of Nine as a permanent crew member of the *U.S.S. Voyager* involved a long and sometimes painful period of adjustment for the young woman, who struggled to come to terms with life as an individual. Among the most difficult aspects of Seven's separation from the Collective were the residual Borg implants that could not be removed by the Emergency Medical Hologram. Without them she could not survive, but they also proved to be a source of discomfort and more serious problems, including life-threatening damage and malfunctions, alien species attempting to steal them, and efforts to use the implants to control her actions. Conversely, on several occasions Seven's Borg implanted technology was used in unorthodox ways to save herself, her crewmates, and *Voyager* itself.

SUPERHUMAN POWERS

Seven fully understood the strengths and limitations of her Borg components, and while the majority of the crew had some knowledge of her enhanced senses and physical prowess, her attitude to her own abilities sometimes caused alarm. An example of this came during the preparation of the astrometrics laboratory with Ensign Harry Kim early, when she accessed the main power supply by simply removing the conduit cover and reaching into the exposed assembly. In order to prevent physical contact with the five million gigawatts running through the element, Kim pushed her out of the way, unaware that the Borg exoskeleton on her left arm could easily withstand such a tremendous current. In fact, Seven viewed the safety protocols surrounding the power supply as irrelevant, it being perfectly safe for the former drone to carry out alterations to the system while it was still active.

SECRET VISIONS

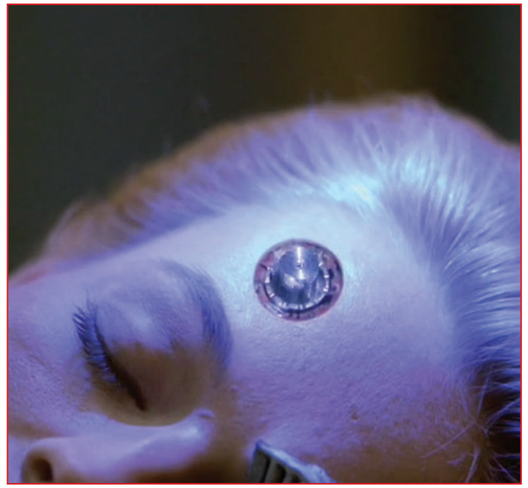
On Stardate 51244.3 *Voyager* was invaded by the Srivani, a group of malicious aliens invisibly experimenting on the crew of the *Intrepid*-class ship in the hope of finding cures for disorders afflicting their race. Following the EMH's discovery of deliberately hyperstimulated DNA in several incapacitated crew members, the aliens attempted to delete his program. Realizing that the vessel was under great threat, the Doctor used the ship's communications system to contact Seven through her highly sensitive audio implants so that only she could hear him. Concluding that their actions could be monitored, they worked to collect more information on the unseen threat.

The EMH, recalling that B'Elanna Torres had suggested adjusting the ship's internal sensors to a phase variance of 0.15 in order to scan the ship, proposed to do the same thing to Seven's Borg sensory nodes. With the aid of a type-4 microinducer, the EMH adjusted the sensitivity of the ocular implant above Seven's left eye until her optical perception was altered. Scanning the ship for any unusual energy signatures or signal transmissions, within a matter of moments Seven of Nine detected items of experimental apparatus attached to members of the crew, and a large contingent of alien medics secretly carrying out research on them. Seven's discovery led to the alien incursion being revealed and the crisis was eventually resolved.

SECOND CHANCE

One of the most important uses of Seven's unconventional physiognomy took place 15 years into an alternative future,

Seven of Nine's ocular implant was modified by the Doctor to enable her to detect the presence of a group of Srivani carrying out secret tests aboard *Voyager.*



Not all of Seven's implants were permanently visible. For example, her cortical node, which controlled all her other implants, was concealed under the skin over her right temple, above her eye.

when Harry Kim and Commander Chakotay attempted to avert *Voyager*'s destruction after the use of an experimental quantum slipstream drive caused the ship to crash on a barren Class-L planet, killing the entire crew. Kim and Chakotay stole the *Delta Flyer* and traveled back to the crash site where they reactivated the Doctor and extracted one of Seven's cranial implants – an interplexing beacon transceiver designed to communicate with other drones during her time in the Collective. Determining the translink frequency of Seven's beacon as 108.44236000, her chronometric node was retrieved, and the exact time of her death established as Stardate 52164.3. Using a stolen Borg temporal transmitter, Kim sent a set of phase variance calculations – correcting mistakes he had made compiling them 15 years previously – back in time to four minutes prior to *Voyager*'s crash, directly to Seven of Nine. The first attempt failed, but a second set of figures safely disengaged the slipstream drive, allowing *Voyager* to safely re-enter space.

RECEIVING MESSAGES

This highly dangerous procedure would not have been possible without the Emergency Medical Hologram's great knowledge of Seven's implants, and by sacrificing his future self he guaranteed the safety of the ship and its crew in the year 2375. Seven reciprocated the Doctor's selfless act on stardate 54238.8, by transporting the EMH's entire program into her cybernetic matrix in order to avoid its complete decompilation by the photonic-hating Lokirrim. During his occupancy the Doctor took full advantage of the opportunities offered by a solid body, but without the former drone's quick thinking and unorthodox use of her Borg physiology, his existence would have ended.

Seven of Nine's implants made her a highly adaptable asset in almost any situation, and she proved to be a valuable addition to the crew on numerous occasions.

THE MORGUE

The compact morgue facility aboard the *U.S.S. Voyager* was an unfortunate necessity, although thankfully it was only rarely called into use.

Despite the best efforts of the ship's Emergency Medical Hologram, fatalities aboard the *U.S.S. Voyager* were unavoidable. This necessitated the provision of a small mortuary for the storage of the deceased. Bodies could be held in stasis within this room indefinitely, or until disposed of by burial or ejection into space.

AFTER DEATH

Following a postmortem, cadavers were transported to the morgue, where bodies were stored in bays recessed into the bulkheads. These were protected by hermetically sealed hatches which pivoted open to provide a horizontal base onto which the mortuary slab would slide out. The morgue had a maximum capacity of six bodies, with two bays located on the right wall and four on the left.

A level 5 dampening field decreased any chance of contamination from the bodies stored in the morgue.

Following traditional morgue protocols, bodies were positioned on slabs feet first.

Bodies could be examined at length from either side of a retractable slab. A diagnostic display screen positioned in the storage bay provided detailed information on the corpse and their cause of death.

A control panel located to the side of each storage bay opened the hatch and deployed its slab.

The floorspace of the morgue was kept clear to ensure there was sufficient space to deliver bodies via gurney. Cadavers were generally moved to the morgue via transporter beam.

There was only one entrance into the *U.S.S. Voyager* morgue. The double sliding doors were sealed in order to protect other areas of the ship from crewmembers investigating the cause of death, or preparing the bodies for disposal.

The morgue contained six hermetically sealed bays in which to store the bodies of deceased crewmembers. Each bay contained an extendable slab, control panel, and an information display.

THE LABORATORY

The science laboratory aboard the *U.S.S. Voyager* was a vital resource for research and interpreting data, with a range of advanced tools at its disposal.

The *U.S.S. Voyager* was equipped with a series of research laboratories, which were concentrated mostly across decks 7 and 8. The main science laboratory was located in section 22 of deck 8, and was home to several items of sensitive equipment, including an electron resonance scanner.

SCIENTIFIC ANALYSIS

The room's main feature was a large circular console that was mainly used to carry out compositional analyses of various substances. For crew safety, the entire area was designed to allow containment fields of up to level 10 to be erected in cases of emergency or, if a particularly dangerous experiment was being carried out, effectively isolate this part of the lab from the rest of the facility.

The main console was located in a circular alcove. This station had sufficient space for several crew members to use it at the same time.

The main console in the laboratory was used to examine the composition of a wide range of biological or inorganic substances.

One piece of sophisticated equipment located in the laboratory was an electron resonance scanner, capable of magnifying individual molecules of DNA.

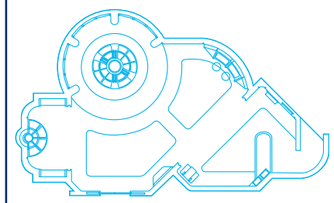
Several work stations were incorporated into the walls and bulkheads of the science lab.

RESEARCH AND EXAMINATION
The laboratory was used for everything from in-depth mineralogical examinations to the overnight monitoring of damaged equipment.

Control interfaces could be reconfigured to mission-specific uses as required.

The flat upper surface of this work station doubled as an information display.

A mobile trolley containing various pieces of equipment could be moved and locked into place anywhere in the single-level room.



LABORATORY PLAN

The laboratory was accessed from deck 8 through a standard pair of double doors.

ASTROMETRICS LAB

The *Intrepid*-class *U.S.S. Voyager* made full use of its advanced astrometrics lab facility – a unique interstellar 'map room' providing much needed insight into the Delta Quadrant.

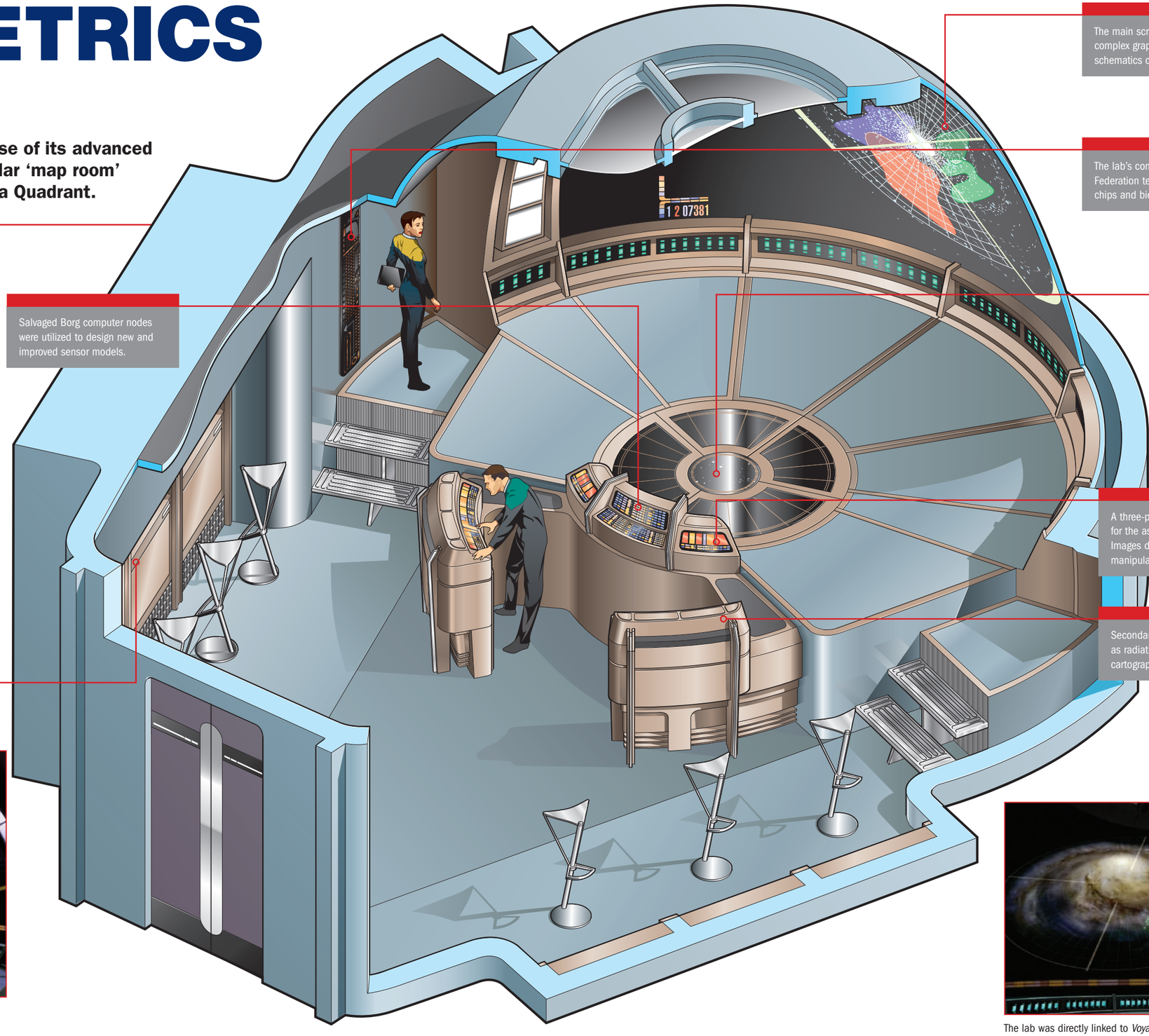
In 2374, shortly after joining the crew of the *U.S.S. Voyager*, Seven of Nine assisted Ensign Kim in upgrading the ship's astrometrics lab. They installed a new system that combined Starfleet and Borg alphanumeric technology to enhance the navigational sensors.

NEW CAPABILITIES

The modified systems were 10 times more accurate than *Voyager*'s original system. The new astrometric sensors used the stars to navigate by measuring the radiative flux of up to three billion stars simultaneously. The computer then calculated *Voyager*'s position relative to the center of the Galaxy. The upgraded system allowed the crew to plot a course home that took five years off their original projected journey back to the Alpha Quadrant.

EXTRA FEATURES

The main screen could display everything from an overview of the entire Galaxy to a specific region of a planet. These displays could be overlaid with charts, labels, and grids to show *Voyager*'s most recent or projected course. It could also be used as a conventional viewscreen to establish face-to-face communications.



The main screen was capable of handling complex graphics, such as internal ship schematics or galactic-scale star maps.

The lab's computing systems used existing Federation technology such as isolinear optical chips and bio-neural gelpacks.

Salvaged Borg computer nodes were utilized to design new and improved sensor models.

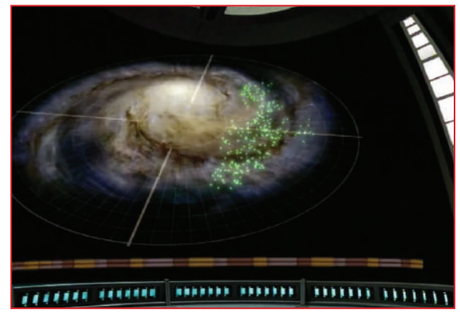
The imaging database was driven by an advanced holographic generator that drew data from a central computer core.

A three-panel console provided the controls for the astrometrics lab's primary systems. Images displayed on the main screen were manipulated from this console.

Secondary consoles handled functions such as radiative flux measurements, stellar cartography, and spectral analysis.

Additional panels were used to operate the lab's subsystems.

The screen relayed a variety of visual data, including communications and log entries, information on political alliances and borders, as well as detailed stellar maps.



The lab was directly linked to *Voyager*'s sensor arrays and could be used to assess everything from nebulae to specific minerals.

CHAKOTAY'S OFFICE

Like the captain, *Voyager*'s first officer had his own dedicated office where he could carry out his regular duties, hold briefings, or confer with department heads.

Located among the senior quarters, Chakotay's office was furnished with a large desk, behind which the rear bulkhead was dominated by a bank of monitors and consoles, enabling the first officer to closely monitor the ship's status away from the bridge. The desk doubled as a work station, containing additional computer terminals and a retractable viewscreen. Incoming or outgoing messages could be relayed directly to this terminal. A comfortable couch, chair, and table sat beneath a single large window.

PERSONAL TOUCHES

Chakotay chose to display a few personal effects in his office, including artefacts that reflected his passion for his Native American heritage. He occasionally changed the items on display: in 2372, there were two brightly patterned ethnic rugs, held together by a wooden pole, and the following year these were replaced by a large, decoratively marked tribal shield. A small, gold sculpture bearing a fish symbol was also on display.

Captain Janeway and other members of senior staff often joined Chakotay in his office for informal meetings.

CHATOKAY'S OFFICE PLAN

The first officer's office had a large number of screens that could display any information he wanted and be used for communication.

BRIGHTENING THE ROOM
A handful of potted plants offset the office's otherwise functional appearance and layout.

INSTANT INFORMATION
A large bank of displays on the bulkhead behind Chakotay's desk kept the first officer appraised of *Voyager*'s current status. Some of the displays could be used as communications viewscreens.

An informal seating area provided the first officer with a less intimidating backdrop when assessing members of the crew.

Data terminals built into the desk were connected to the LCARS, allowing Chakotay to access a wide variety of information at any time.

The desk in Chakotay's office was fitted with numerous data input panels and a retractable viewscreen.

THE LOWER DECKS

A world away from the streamlined corridors and welcoming rooms of the upper levels, the lower decks of the *U.S.S. Voyager* were a collection of dark, cramped spaces that were home to many of the ship's vital systems.

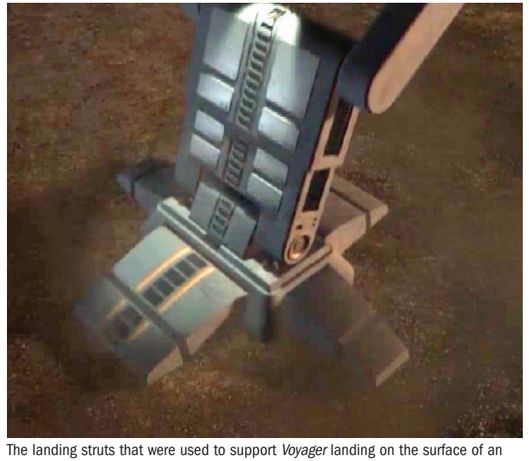
Deck 11 of the *U.S.S. Voyager*, where main engineering was located, was the lowest area of the *Intrepid*-class design to be regularly accessed. Below that deck was an area of the ship classified as the 'lower decks,' where space was at a premium due to the exterior contours of the vessel. Cramped access corridors, storage areas, and several vital systems made good use of the limited volume of the lower decks, which had a significantly different design to the decks above.

LOWER DECK EQUIPMENT

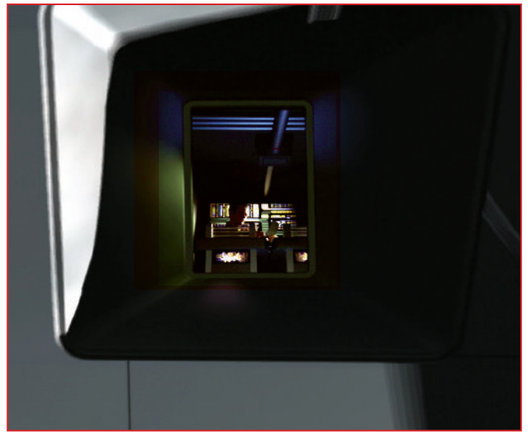
Decks 12 to 15 housed a number of major systems, including antimatter storage, the fore and aft tractor beam emitters, and navigational and environmental controls. Much of the infrastructure of the lower decks was taken up with large pieces of equipment, such as the support structure for the warp core stack, and the housings for the retractable landing struts that were used when the starship landed on a planet. For the safety of personnel assigned to these decks, several escape pods were located in the vicinity, taking up further valuable space.

A minimal complement of crewmembers was required to carry out operational duties below deck 11, as there were vital systems running through the lower decks that required monitoring and attention at all times. These included the base of the primary computer core on deck 12, and the plasma relay junction room on deck 15.

Deck 15, the lowest on *Voyager*, was an even more confined space. Access to this deck was important, particularly for the engineering crew based on deck 11, since requests for the transfer of power were routinely delivered by hand to the crew member stationed within the plasma relay room – usually Crewman Mortimer Harren, a competent theoretical cosmologist, who preferred the isolation of deck 15 in order to develop his theories on the origins of the universe.



The landing struts that were used to support *Voyager* landing on the surface of an alien world were housed in the lower decks of the *Intrepid*-class vessel.



The plasma relay junction room in which Crewman Mortimer Harren spent most of his time had just a single, small window looking out into space.

NARROW CORRIDORS

On entering deck 15 from the turbolift, a visitor was confronted with a series of narrow passageways that were considerably thinner than those on the upper decks, to such an extent that passing another crew member often involved sidling by to avoid a collision. With easy maintenance in mind, there was very little paneling covering the various conduits running along the corridor walls, allowing immediate access to a number of exposed systems on the lower section of the bulkheads. A number of rectangular panels, running along the center of the corridors at a height of around one meter, provided nominal illumination for crew members stationed on the lower decks, in stark contrast to the brightly lit decks on the rest of the ship.

METALLIC MAZE

Deck 15 was something of a labyrinth, and it could be extremely difficult for crew members who were unfamiliar with the area's layout to navigate their way around. Even Captain Janeway had to admit that she wasn't familiar with its layout. Some assistance was provided by a series of junction rooms linked to specific departments.

Given the small size of *Intrepid*-class vessels, a lack of cabin space in the upper decks meant that the quarters for some lower-ranking personnel were located in the areas below deck 11. Such junior crew members, often at the start of their Starfleet careers, would find themselves sharing their small cabin with a shipmate; for example, astrometrics specialist Tal Celes and Security Officer Telfer shared quarters with other crewmen.

The lower decks of *Voyager* were much darker and narrower than the corridors that Captain Janeway usually visited.

Crewman Harren was happy to be assigned to deck 15 since it involved relatively light duties, allowing him to work on his theories about the origin of the universe.

TRANSPORTER ROOM

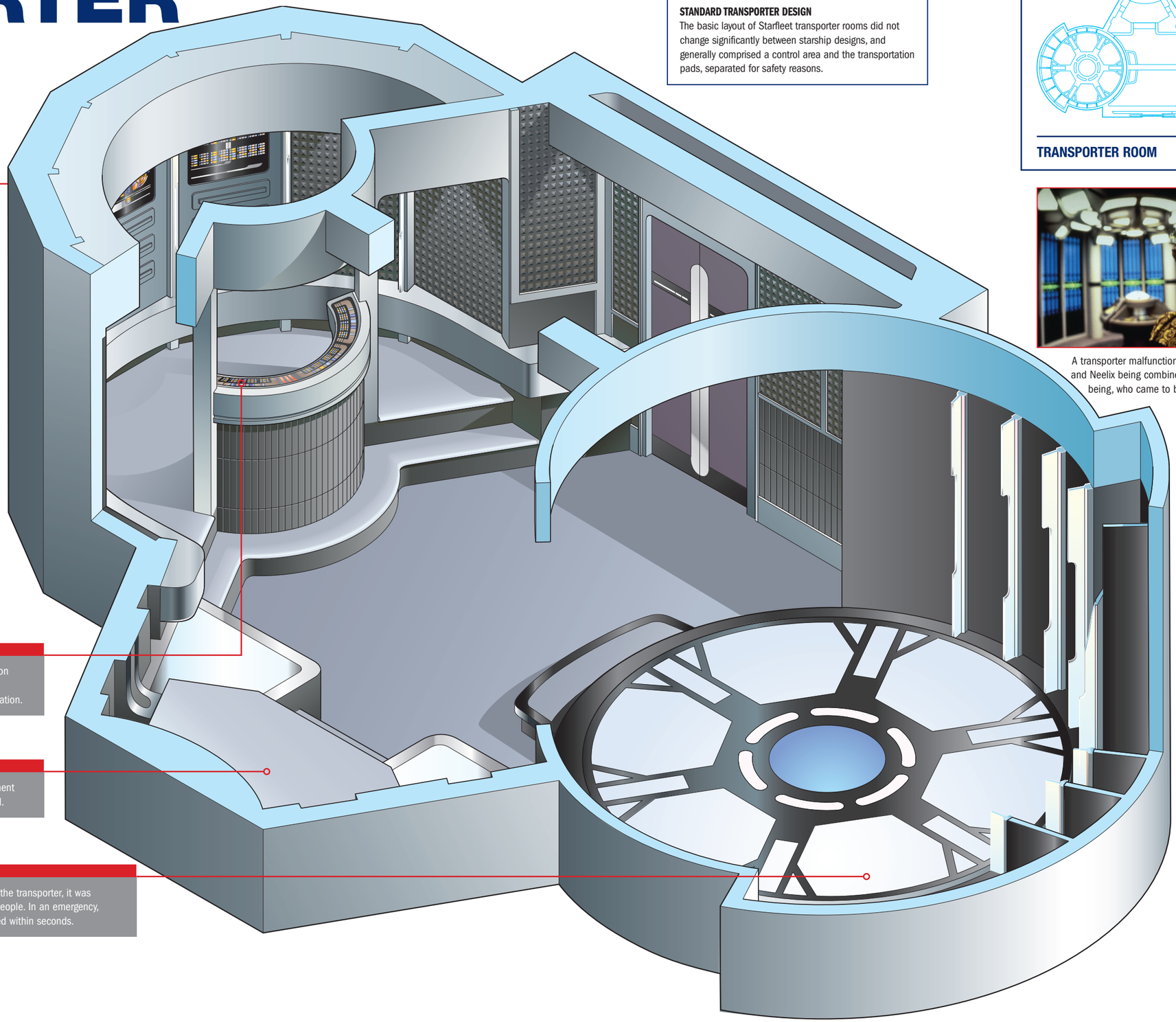
The transporters installed aboard the *Intrepid*-class *U.S.S. Voyager* were the most advanced and powerful of their kind.

The *U.S.S. Voyager* was fitted with a number of state-of-the-art transporters that proved essential during its journey through the Delta Quadrant. The ship's two primary transporter rooms and its cargo transporters – used for moving larger objects – were located on deck 4, close to the main turboshaft.

TRANSPORTER ADVANCEMENTS

The development of site-to-site transportation in an emergency situation meant that a whole shuttlecraft could be beamed directly to a shuttlebay, or, in the event of a ship evacuation, hundreds of personnel could be beamed to safety from a cargo bay within seconds. Additional improvements also allowed the transporters to be operated from the ops console on the bridge, meaning that the transport procedure could be executed far more quickly.

The transporters did have their limitations, however, as retro viruses disguised as genetic material could not be detected or removed by the transporter biofilters. Even this shortcoming was overcome in 2372 when, with a little ingenuity, transporter technology was employed in a pioneering medical operation to separate Tuvix at the genetic level into his constituent beings, Tuvok and Neelix.



STANDARD TRANSPORTER DESIGN
The basic layout of Starfleet transporter rooms did not change significantly between starship designs, and generally comprised a control area and the transportation pads, separated for safety reasons.

TRANSPORTER ROOM

A transporter malfunction resulted in Tuvok and Neelix being combined into one single being, who came to be known as Tuvix.

The *Voyager* crew successfully transported a Romulan scientist through time using a micro-wormhole in 2371.

The transporter control console held all information pertinent to a transport in progress. The annular confinement beam could be altered from this location.

An equipment locker provided storage for equipment needed by away teams and transporter personnel.

Even though there were only six pads located on the transporter, it was capable of transporting a far greater number of people. In an emergency, several hundred crewmembers could be evacuated within seconds.

THE SHUTTLEBAY

Despite its relatively small size, the *U.S.S. Voyager* was equipped with full shuttlebay and hangar facilities, enabling the crew to effectively maintain and store its shuttlecraft.

Voyager's main shuttlebay was located at the rear of the secondary hull, with further hangar bays available for shuttle storage.

The designers of the *Intrepid*-class starship went to great lengths to incorporate shuttlecraft maintenance and storage facilities into their ship that were as extensive and well equipped as those of a much larger vessel. Fitting these into the confines of the vessel's limited spaceframe required some original thinking, including the provision of an L-shaped layout for the main shuttlebay, and a separate maintenance hangar known as shuttlebay 2.

Located on decks 9 and 10 at the rear of the vessel, the *U.S.S. Voyager*'s suite of shuttlebays was comprised of two linked, double-height areas, separated by a heavy hangar door. It was possible to depressurize Shuttlebay 2 independently of the main shuttlebay, allowing maintenance crews to work in the area safely while the main shuttlebay remained in active use. Several smaller storage bays could be accessed within both shuttlebays, where shuttlecraft, parts, and other supplies could be kept, keeping the primary deck areas clear of clutter.

MAIN SHUTTLEBAY

Shuttlebay 1 was the main operational area from which shuttlecraft and other auxiliary or visiting vessels would enter or exit the ship. This area, which was protected from the vacuum of space by a retractable hangar door at all other times, had an L-shaped layout with a small area to the port side where a shuttlecraft could be permanently stationed in readiness for immediate launch. This left a clear runway for incoming vessels to land and progress through to shuttlebay 2. Both shuttlebays could be monitored from separate control rooms that overlooked each area.

Shuttlebay 2, also known as the hangar, was adjacent to the main shuttlebay. Another hangar area was also available beneath the main shuttlebay.

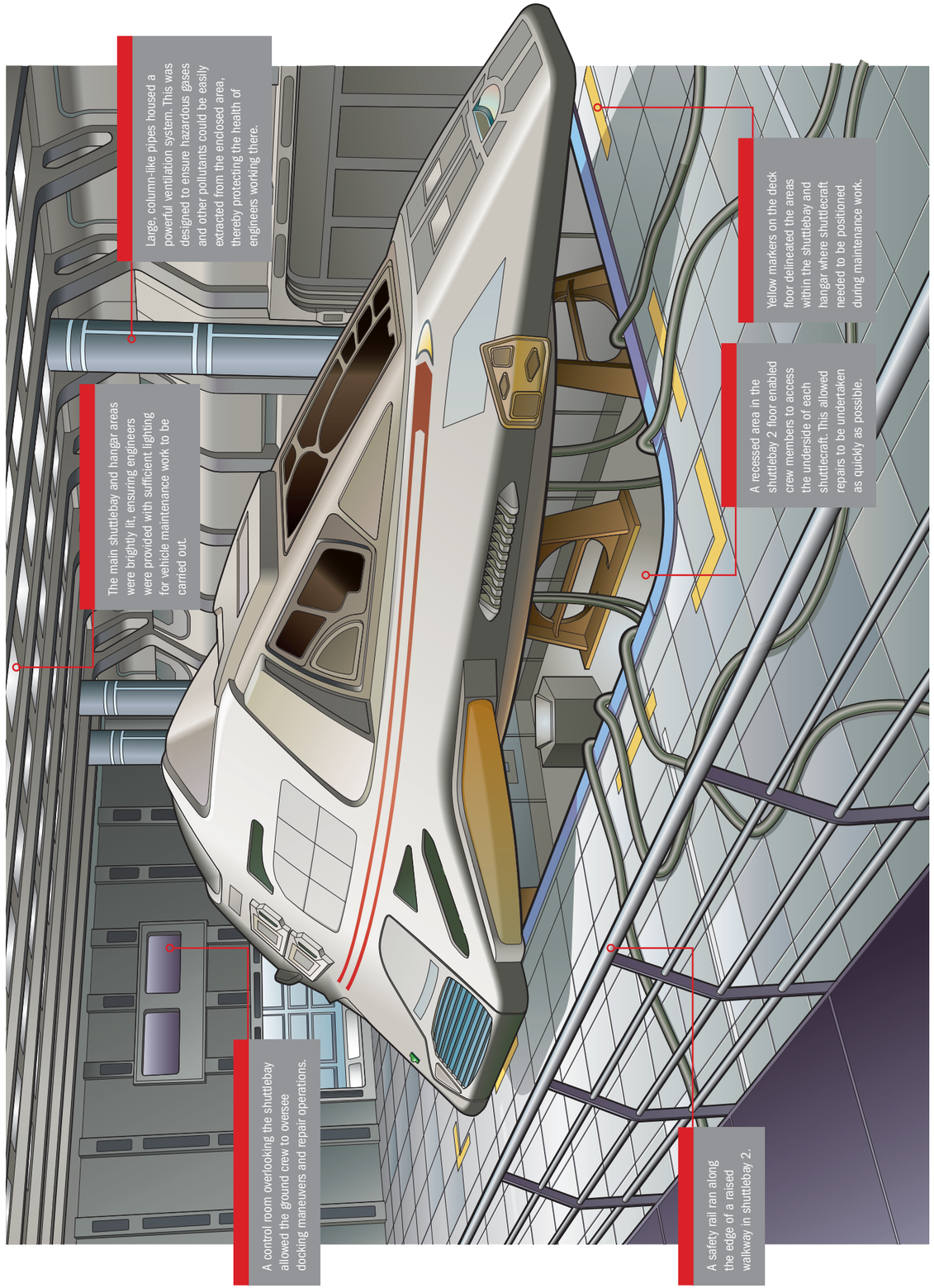
The shuttlebays could accommodate several small vessels, including the *Delta Flyer*, which was designed, constructed, and maintained on board.

REPAIR AND MAINTENANCE

Forward of the main shuttlebay was a larger hangar referred to as shuttlebay 2, where repair and maintenance of shuttlecraft was carried out. It was in this area that the *Delta Flyer* was constructed and stowed between missions.

Shuttlebay 2 included a maintenance pit that allowed engineers to inspect and carry out repairs to the underside of auxiliary vehicles, and a mezzanine walkway providing a higher vantage point from which to assess a shuttlecraft's condition. To ensure crew safety, the recessed area – along with a moving platform that transported shuttlecraft to a storage area on the deck below – were clearly marked with yellow lines around them, warning personnel to stand clear.

Safety of the crew was of paramount importance, and the shuttlebays were protected by a number of emergency systems that sought to guarantee that the ship's integrity and the crew's well-being were not compromised. A complex ventilation system extracted any dangerous emissions and hazardous gases away from the enclosed areas, for example, and in addition to the hangar doors located at various points throughout the shuttlebay complex, shields could be deployed in the event these physical partitions were damaged or malfunctioned.



THE SHUTTLECRAFT

Throughout the *U.S.S. Voyager*'s hazardous journey across the Delta Quadrant, its complement of shuttlecraft proved to be of tremendous value, often utilized as pathfinders for the *Intrepid*-class ship.

The *U.S.S. Voyager* was equipped with a variety of shuttlecraft models, including type-2, type-6, type-8, and type-9 (Class-2) vessels. This complement of support vessels was based in *Voyager*'s shuttlebay, located at the rear of decks 9 and 10. In addition to storing the shuttlecraft, this facility was equipped to repair and even manufacture new shuttles, although the energy cost of replicating an entire vessel was prohibitive for the resource-starved Starfleet ship.

TYPES AND USES

Decisions regarding the deployment of shuttlecraft types were determined by the parameters of the mission being undertaken. The smallest, short-range, type-2 shuttles were used to transport crew over relatively short distances, for example. Type-2 shuttles were notorious for their cramped interiors, leading to Starfleet crews often complaining of "type-2 claustrophobia," as the class was not ideally suited to extended missions.

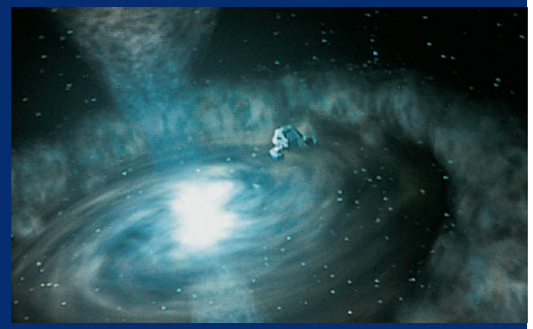
Type-6 shuttles had been in use by Starfleet for a number of years prior to *Voyager*'s mission, and provided better comfort over longer distances. While the type-6 had limited offensive and defensive capabilities, they were able to withstand a considerable amount of punishment. Type-8 shuttles were of a similar design to type-6 vessels, but were slightly larger. These shuttles required a crew of two, and were equipped with a personal transporter, enabling the crew to undertake short-range transportation within the orbit of a planet. Enlarged twin warp nacelles gave the type-8 shuttles an extended range over their sister ships.

The type-9 shuttlecraft, sometimes referred to as the Class-2 shuttle, introduced further improvements in shuttle design, and could be crewed by a single person if required. Type-9 shuttlecraft had the greatest range of the standard

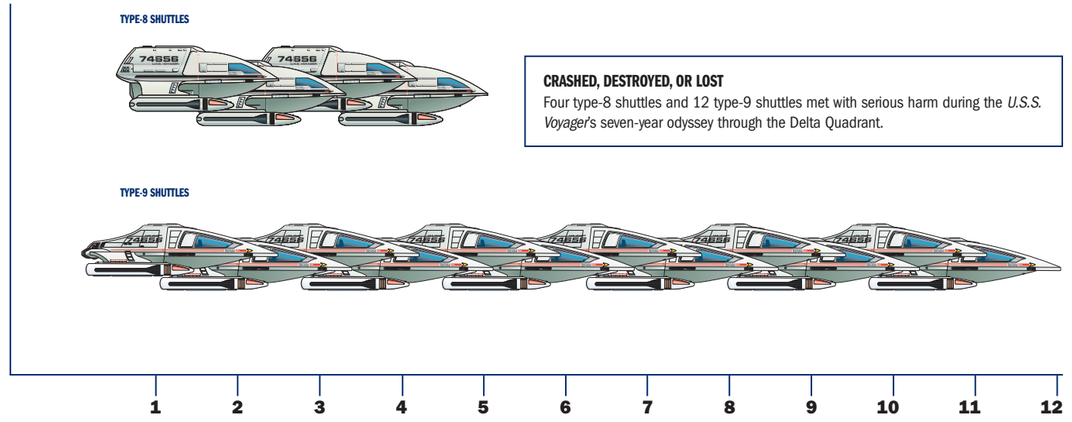
The type-9 (or Class-2) shuttlecraft *Cochrane* was adapted with an experimental transwarp drive, in an effort to improve the *U.S.S. Voyager*'s own warp capability.

MISSING IN ACTION

When Kes evolved into a non-corporeal life form in a burst of intense white light, the shuttle she was traveling in disappeared along with her.



A group of telepathic Brenari refugees evaded capture by a Devore inspection team by piloting one of *Voyager*'s shuttlecraft through a wormhole.



CRASHED, DESTROYED, OR LOST

Four type-8 shuttles and 12 type-9 shuttles met with serious harm during the *U.S.S. Voyager*'s seven-year odyssey through the Delta Quadrant.

Starfleet shuttles carried by *Voyager*, and were specifically designed for deep scouting missions, despite being smaller than the type-6. They were equipped with similar weaponry and shields to the type-8 shuttle, and were fitted with a single transporter pad. The biggest advantage of the type-9 shuttlecraft to a vessel the size of *Voyager* was its relatively compact dimensions, as a greater number could be stored within the shuttlebay area, which was far smaller than those found on a *Galaxy* or *Sovereign*-class vessel.

All higher-class shuttles were equipped with weaponry and shields designed to offer some degree of protection against hostile forces, although none of them could survive prolonged combat with a more powerful vessel.

NAMES AND NUMBERS

In keeping with Starfleet tradition, a number of *Voyager*'s shuttles carried individual names along with their Starfleet registration numbers.

The *Cochrane*, for example, was a redesigned type-9 shuttle fitted with an experimental transwarp design, piloted by Tom Paris in 2372. The transwarp technology ultimately proved problematic and was removed, and the *Cochrane* met a similar fate to numerous other *Voyager* shuttlecraft when it was destroyed a year later. The type-6 shuttlecraft *Sacajawea* was damaged by atmospheric conditions while surveying a planet rich in nitrogenous compounds, and was forced to crash land, illustrating the vulnerability of shuttlecraft and the very real dangers they faced during even the most routine of missions.

The custom-built *Delta Flyer* was perhaps the best-known named shuttlecraft used by *Voyager*, often deployed to ensure the safety of its *Intrepid*-class mother ship from potentially catastrophic situations. This highly streamlined hybrid vessel incorporated Starfleet and Borg technology, and was capable of sustained impulse and high warp speeds due to its retractable warp nacelles. Constructed from tough parametallic hull plating over a tetraburnium hull construction, the *Delta Flyer* was designed to carry a crew of up to four people.

Tom Paris and B'Elanna Torres found themselves floating in space after their shuttle exploded following a meeting with the Caatati.

Voyager's complement of support ships was briefly added to in 2376 when a small alien shuttlecraft was procured from a trader. This shuttle quickly became a pet project for Tom Paris, who looked beyond its worn exterior to see the advantages of a craft he described as a "diamond in the rough." *Alice*, as he named the ship, utilized a neurogenic interface that linked directly with its pilot, thus enabling it to outmaneuver other ships – including the *Delta Flyer*. This, allied with an optronic weapons array, helped Paris to convince Commander Chakotay that *Alice* would be an asset to *Voyager*. However, the neurogenic link created a humanoid female 'personality' for *Alice* that swiftly took control of Paris's mind. Fortunately, the pilot was rescued shortly before *Alice* was destroyed.

EXPENDABLE RESOURCE

While additional vehicles were added to *Voyager*'s roster over time, a large number of shuttlecraft were lost along the way, with several being destroyed in encounters with the Kazon, the Caatati, and the Hirogen.

Two shuttles went missing when a group of refugees being harbored by *Voyager* fled through a wormhole, and another was lost when it was used as bait to make a Borg sphere lower its shields. A further shuttle disappeared along with the evolving Ocampan, Kes.

TYPE-6 SHUTTLECRAFT

The *U.S.S. Voyager*'s complement of auxiliary support craft included a pair of type-6 shuttlecraft, used to transport crew members, passengers, cargo, and heavy equipment between planetary and spacebound locations.

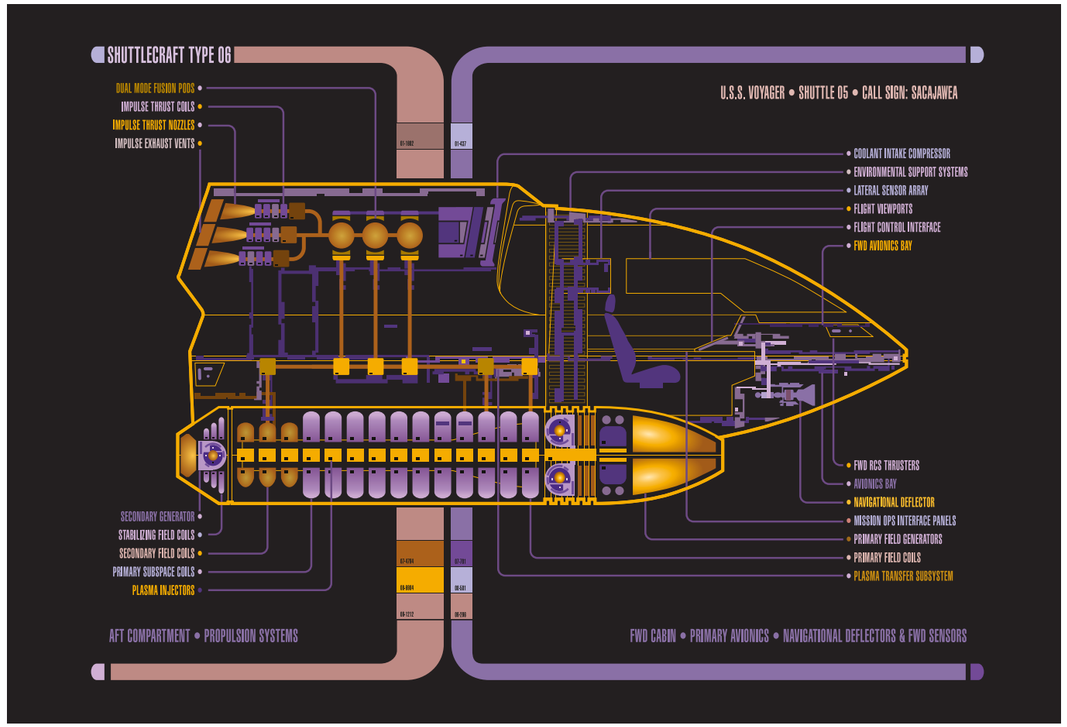
The venerable type-6 shuttlecraft had already been in service for several years before construction had even begun on the *U.S.S. Voyager*, yet the cutting-edge starship still benefited from the inclusion of two of the six-meter-long personnel and cargo shuttles in its complement of auxiliary vehicles.

SHUTTLE CONFIGURATION

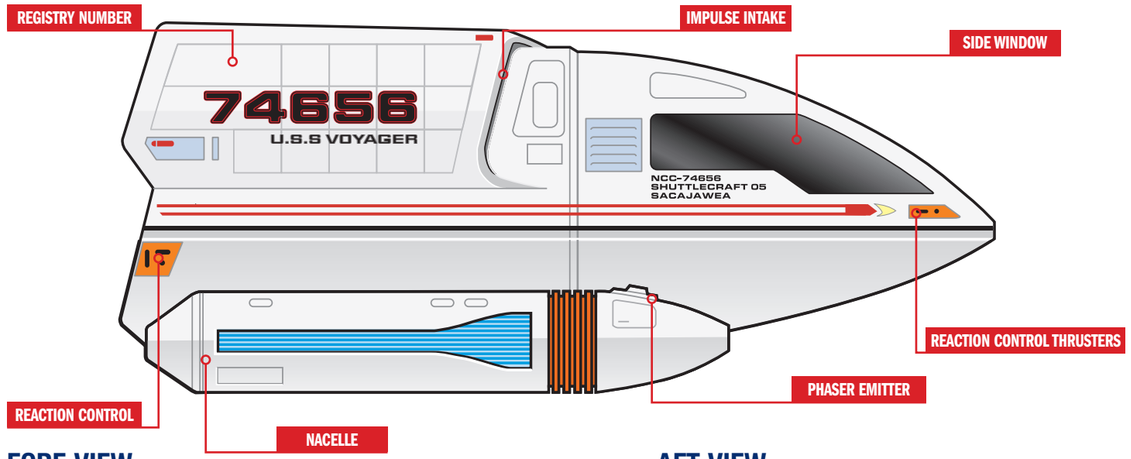
As standard, the type-6 was configured as a short-range, warp-capable vessel, used primarily to ship cargo, equipment, or people between locations where the use of a transporter was impracticle or impossible. The type-6 could maintain warp 1.2 for 48 hours or warp 2 for 36 hours, but was upgradeable to achieve warp 5 for up to 14 days.

In its basic configuration the type-6 was powered by two 1,250 millicochrane fusion reactors, providing superheated plasma that powered the ship's warp capability. The fusion reactors also provided power to the impulse engines, which consisted of dual thrust coils protected by grilles at the rear of the shuttle. The type-6 used 12 DeFI 3234 microfusion RCS thrusters to maneuver, and the ship was designed to enter a planet's atmosphere and to land on its surface. To enable such missions, the shuttlecraft was fitted with an atmospheric airscoop and hover field antigravs that could only be operated within a planet's atmosphere.

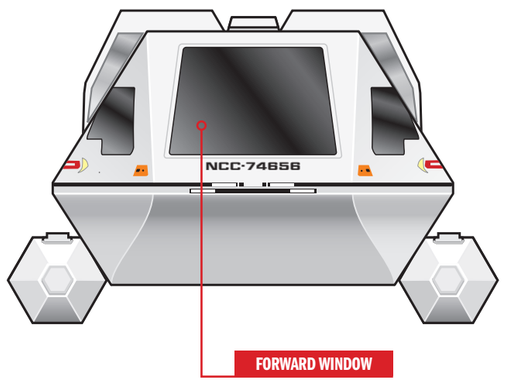
A single compartment ran almost the entire length of the shuttle's interior, and the vehicle was accessed via a hatch at the rear, which opened to form an entry ramp.



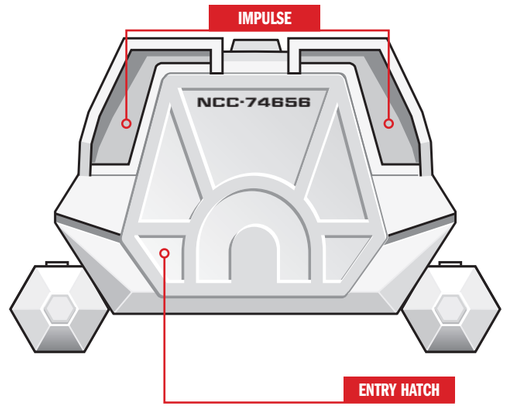
STARBOARD VIEW



FORE VIEW



AFT VIEW



TYPE-6 SHUTTLECRAFT SPECIFICATIONS

BUILT:	ASDB Integration Facility, Utopia Planitia Fleet Yards, Mars
TYPE:	Light short-range warp shuttle
L/H/M:	Length: 6.0m Beam: 4.4m - Height: 2.7m - Mass: 3.38 metric tonnes
CREW:	2, with 6 passengers (standard) or 2 (diplomatic operations)
ARMAMENT:	None (standard version); two Type-4 phaser emitters (special operations)
POWERPLANT:	Two 1,250 millicochrane warp engines, 12 DeFI 3234 microfusion RCS thrusters (standard model); two 2,100 millicochrane warp engines (upgraded version)
PERFORMANCE:	Warp 1.2 for 48 hours (standard model); Warp 2 for 36 hours (upgraded version)

TYPE-8 SHUTTLECRAFT

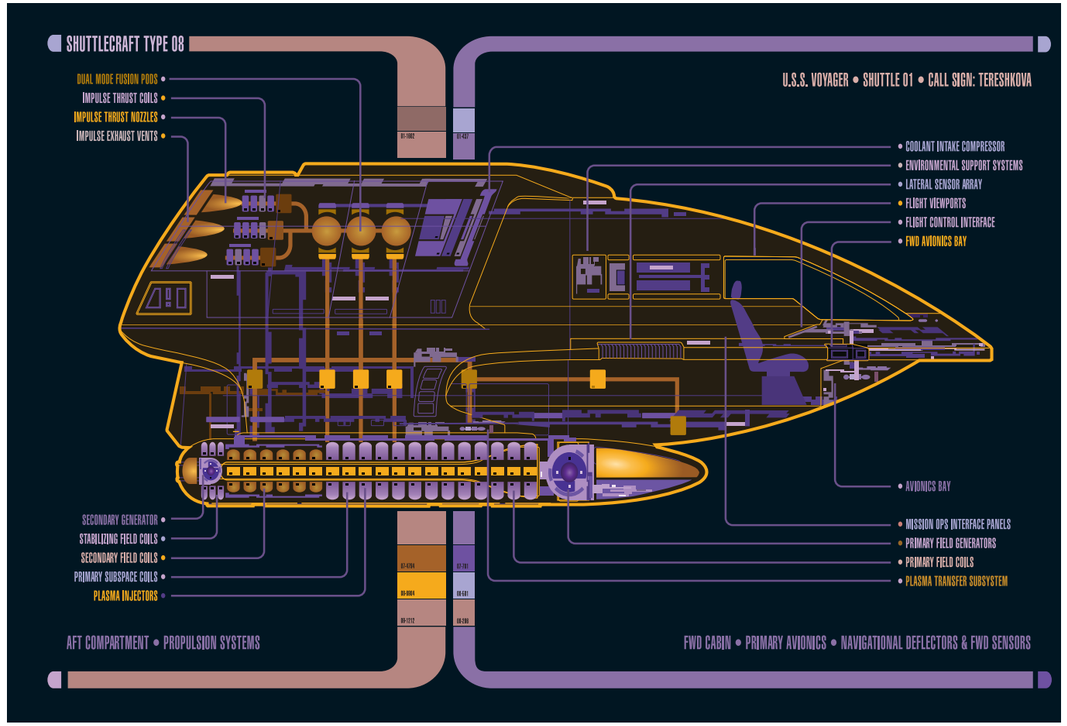
One of several auxiliary shuttlecraft utilized by the crew of the *U.S.S. Voyager*, the type-8 was a solid and dependable vessel used primarily for short term missions.

The type-8 shuttlecraft was a medium short-range ship, equipped with warp and impulse engines. Not usually armed, twin phaser arrays could be installed on the warp nacelles. Ideally suited to a crew of two, the type-8 shuttlecraft could comfortably accommodate four personnel, with additional seating along the bulkheads behind the pilots' seats. The consoles containing the shuttle's controls and system readouts were arranged around the pilots in a horseshoe pattern, with a large viewscreen allowing the crew a clear view of the path ahead. The craft was accessed via a hatch at the rear of the cabin. Despite its reliability, however, the vehicle was often overlooked in favor of the starship's type-6 and type-9 shuttles.

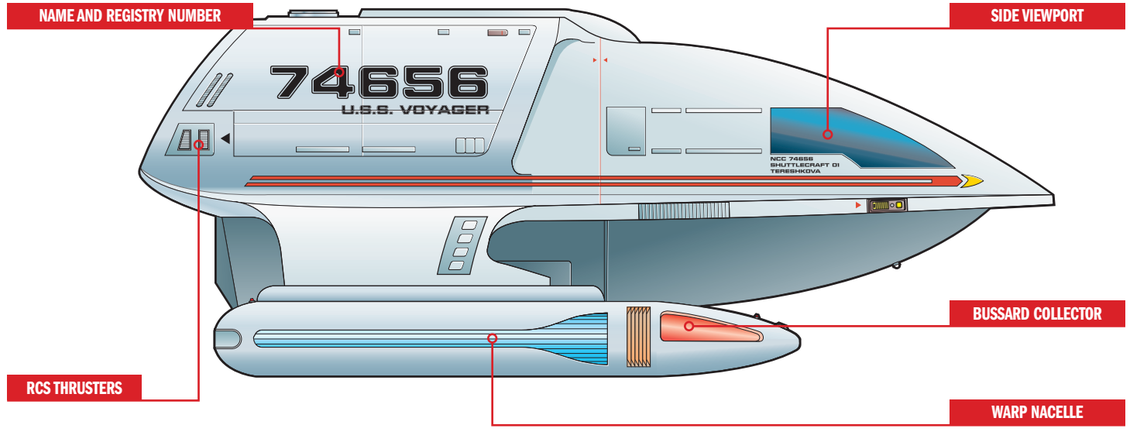
DOUBLE DILEMMA

The shuttlecraft *Tereshkova* was called into service in 2371 when the *U.S.S. Voyager* became trapped by the event horizon of a type-4 quantum singularity. Crewed by Captain Kathryn Janeway and Lieutenant B'Elanna Torres, the shuttle's mission was to emit a dekyon beam to widen a rift in the singularity large enough for *Voyager* to escape its grip.

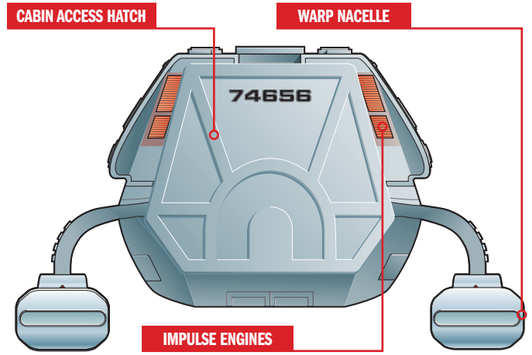
With the shuttle low on power, they attempted to return to *Voyager* only to be confronted by two versions of the starship, simultaneously occupying different points in time. Janeway and Torres faced a life or death choice – which *Voyager* was theirs? Ultimately logic won the argument, and the shuttle landed safely on the correct *Voyager*.



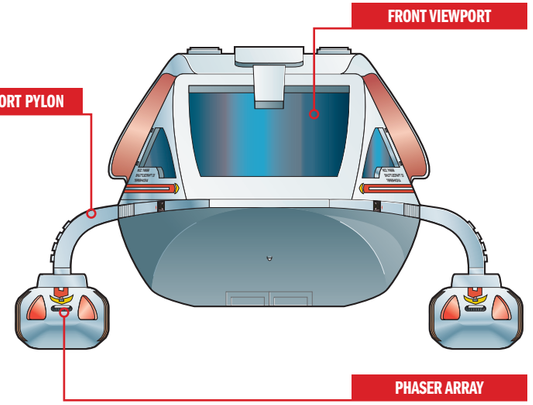
STARBOARD VIEW



AFT VIEW



FORE VIEW



TYPE-8 SHUTTLEPOD SPECIFICATIONS

TYPE:	Medium short-range warp shuttle
LENGTH:	7m
CREW:	Two is standard, although it can hold four passengers comfortably and six in an emergency.
LOCATION:	Deck 10

TYPE-9 (CLASS-2) SHUTTLECRAFT

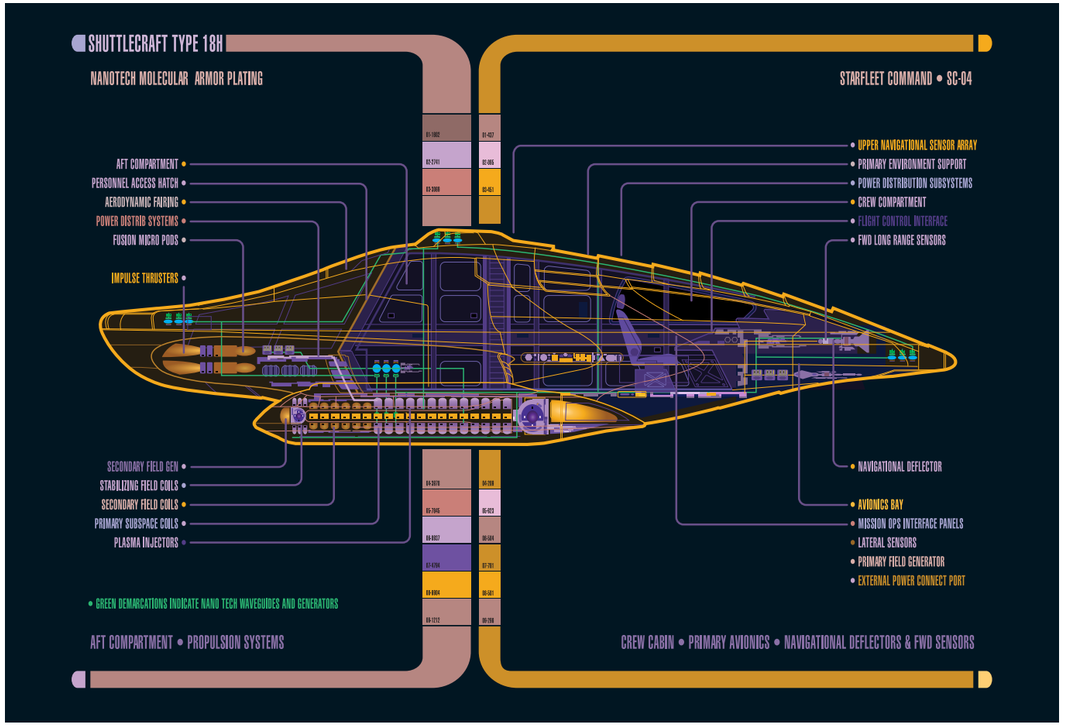
***Intrepid*-class vessels were equipped with a new and more aerodynamic design of Class-2 shuttlecraft, which the *Voyager* crew relied heavily upon during their extended mission.**

Introduced in the 2360s, the type-9 shuttlecraft was an advanced, long-range Class-2 vessel that represented a significant advance on the previous generation of auxiliary vehicles. Used for exploratory missions and in environments where it was difficult or impossible for a larger ship to venture, its extended range over the type 6 made it ideal for scouting missions. The type-9 was widely used at Starfleet Academy as a training ship, where up to half a dozen cadets would be sent off in a shuttle for weeks at a time.

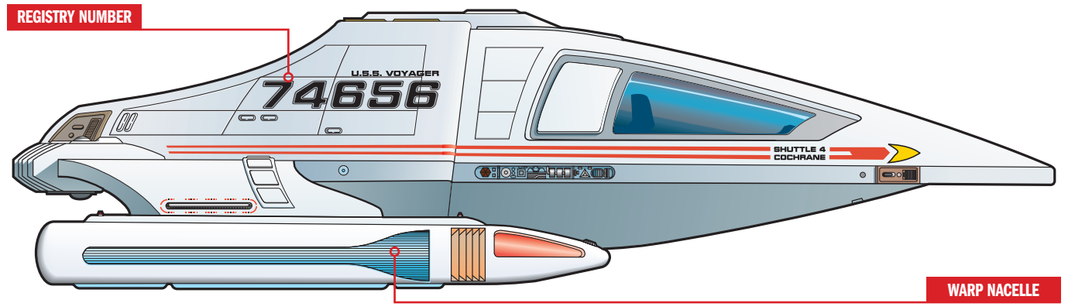
SYSTEM CAPABILITIES

The type-9 was powered by a matter-antimatter reactor rather than a fusion engine, and its aerodynamic shape and powerful warp engines allowed the shuttlecraft to sustain speeds as high as warp 4 for extended periods. The shuttle's warp coils could be manipulated to allay the effects of electro dynamic turbulence, and its hull was constructed of tritanium alloy, which was further protected by powerful shield emitters. The type-9 was equipped with a phaser array as standard, and if necessary the weapons systems could be upgraded with a micro-torpedo launcher.

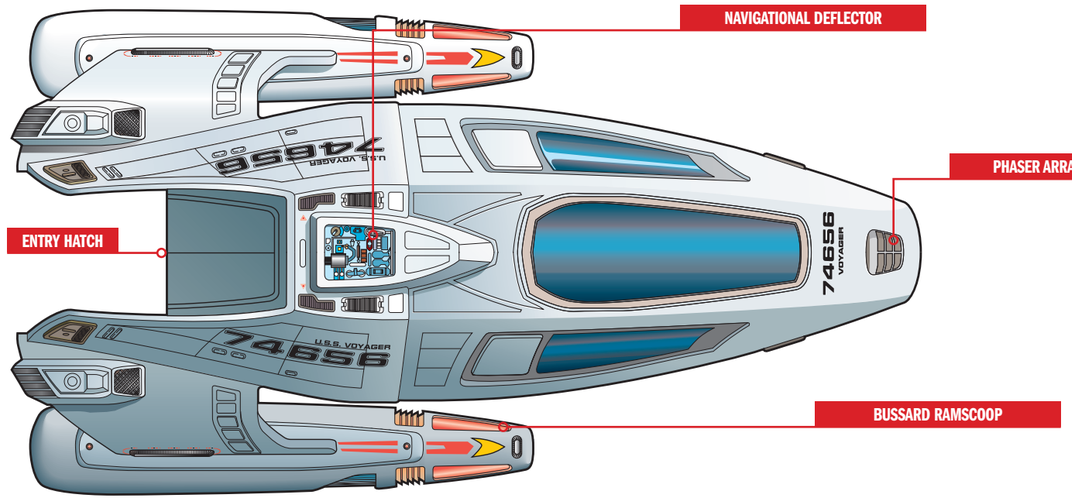
Entry to the shuttle was via a hatch at the stern, with the entire rear bulkhead opening to provide a ramp for entry. Inside, the shuttle was divided into two areas. The front cabin section served as the cockpit, behind which a separate cabin housed a transporter and equipment lockers, containing spacesuits and emergency supplies.



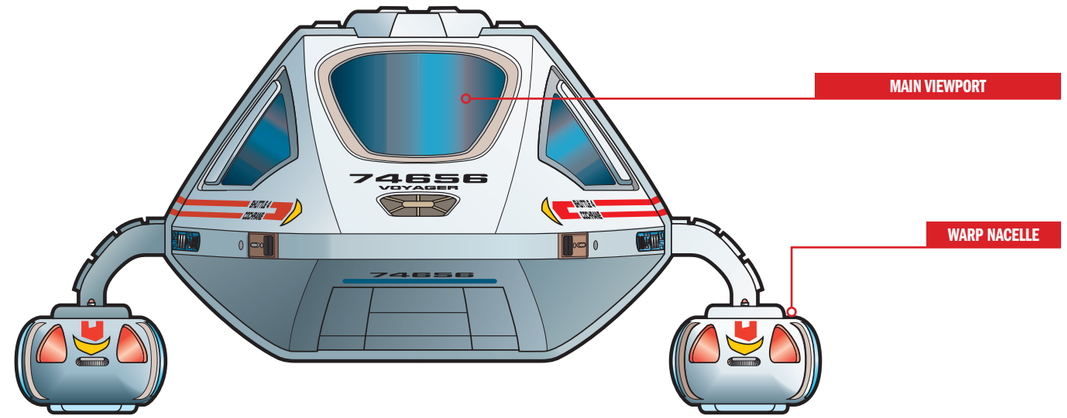
STARBOARD VIEW



DORSAL VIEW

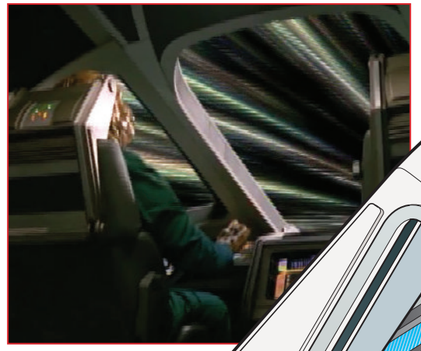


FORE VIEW



The type-9 shuttlecraft was small, sleek, and nimble, but had a reputation for lacking somewhat when it came to crew comfort, given its cramped and occasionally claustrophobic interior.

Illuminated blue panels running around the periphery of the cockpit emitted constant, low-level safety lighting throughout the main cabin.



The expansive viewports at the front of the shuttlecraft gave the flight crew a wide viewing angle of the space around the ship.

A display console located between the pilot and copilot stations could be operated by either member of the two-person crew.

The pilot and copilot were seated in sturdy padded chairs. These served to hold personnel securely in place during even the most extreme spatial maneuvers.

The rear section of the vessel was separated from the cockpit by bulkhead and an airtight door. Entry and exit from the shuttle was via a hatch at the rear.

The copilot station had access to an extended bank of LCARS interfaces, which supplied a wider range of information from the shuttle's sensors.

A crew of two was standard for the type-9 shuttlecraft, although it could carry more personnel in extreme circumstances.

CABIN LOCATOR

U.S.S. VOYAGER NCC-74656

DELTA FLYER

The *Delta Flyer* was a unique shuttlecraft designed and built by the senior crew of the *U.S.S. Voyager* to withstand the rigors of life in the hostile Delta Quadrant – hence its name. It was faster, better armed, and much more rugged than the standard Starfleet shuttlecraft, combining traditional Starfleet design principles with Borg technology.

ANNOTATED EXTERIOR VIEWS

Identifying the need for a more robust shuttlecraft designed specifically to meet the challenges of the Delta Quadrant, Captain Janeway authorized the development and construction of an entirely new ship – the *Delta Flyer*.

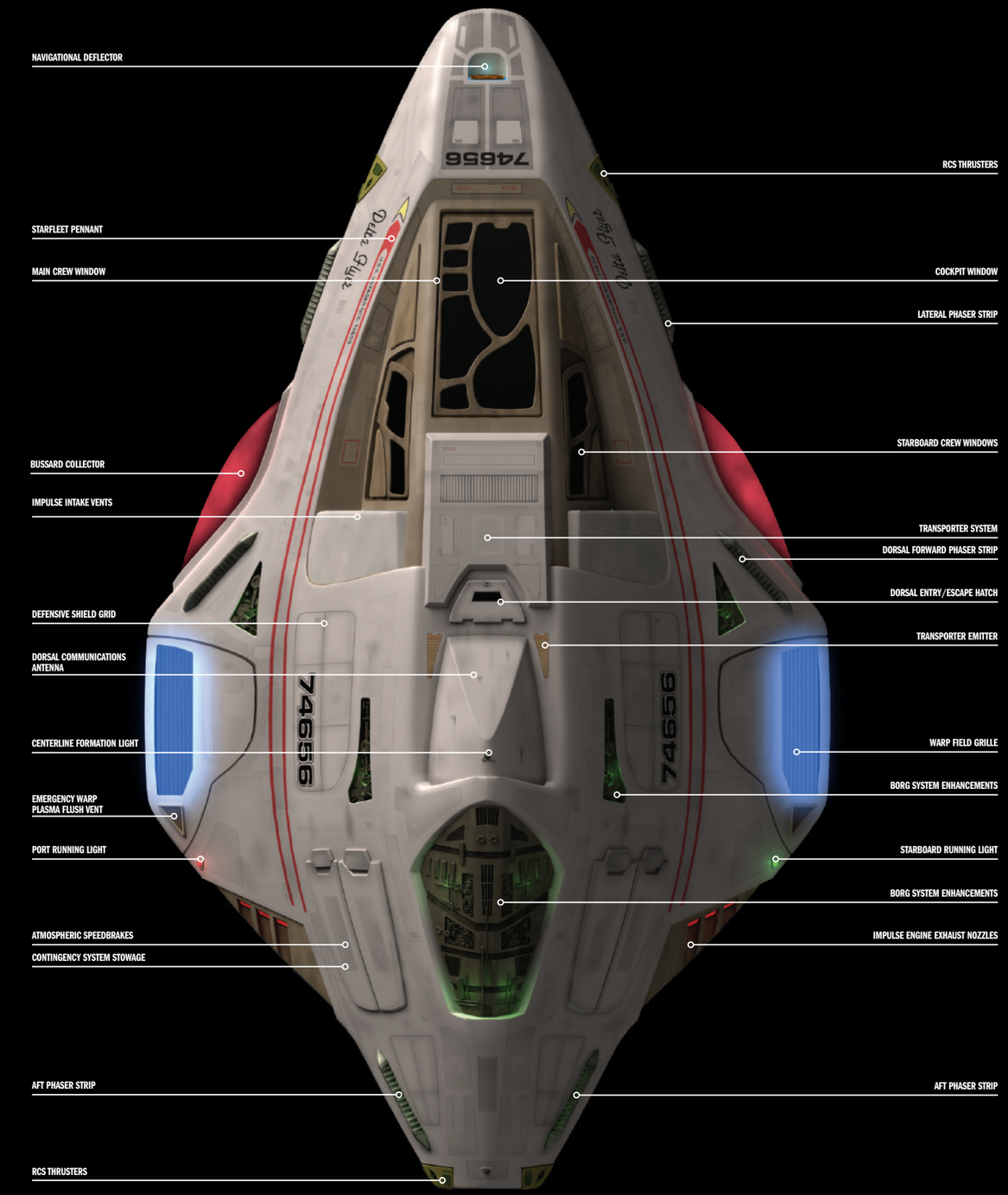
The main proponent for the creation of the *Delta Flyer* was *Voyager*'s helmsman Tom Paris, who repeatedly championed the idea of constructing a specialized shuttlecraft that was better suited to the crew's needs than standard shuttles. Captain Janeway and Commander Chakotay initially rejected his suggestion because they felt that the crew did not have the time to design and build a shuttle from scratch, so Paris began to work on a design in his spare time.

In 2375, the project gained official sanction when the crew needed to retrieve a multiphasic probe from the atmosphere of a Class-6 gas giant to prevent it falling into the Malon's hands. Since no alternative was available, Janeway gave the go-ahead to build the *Delta Flyer*.

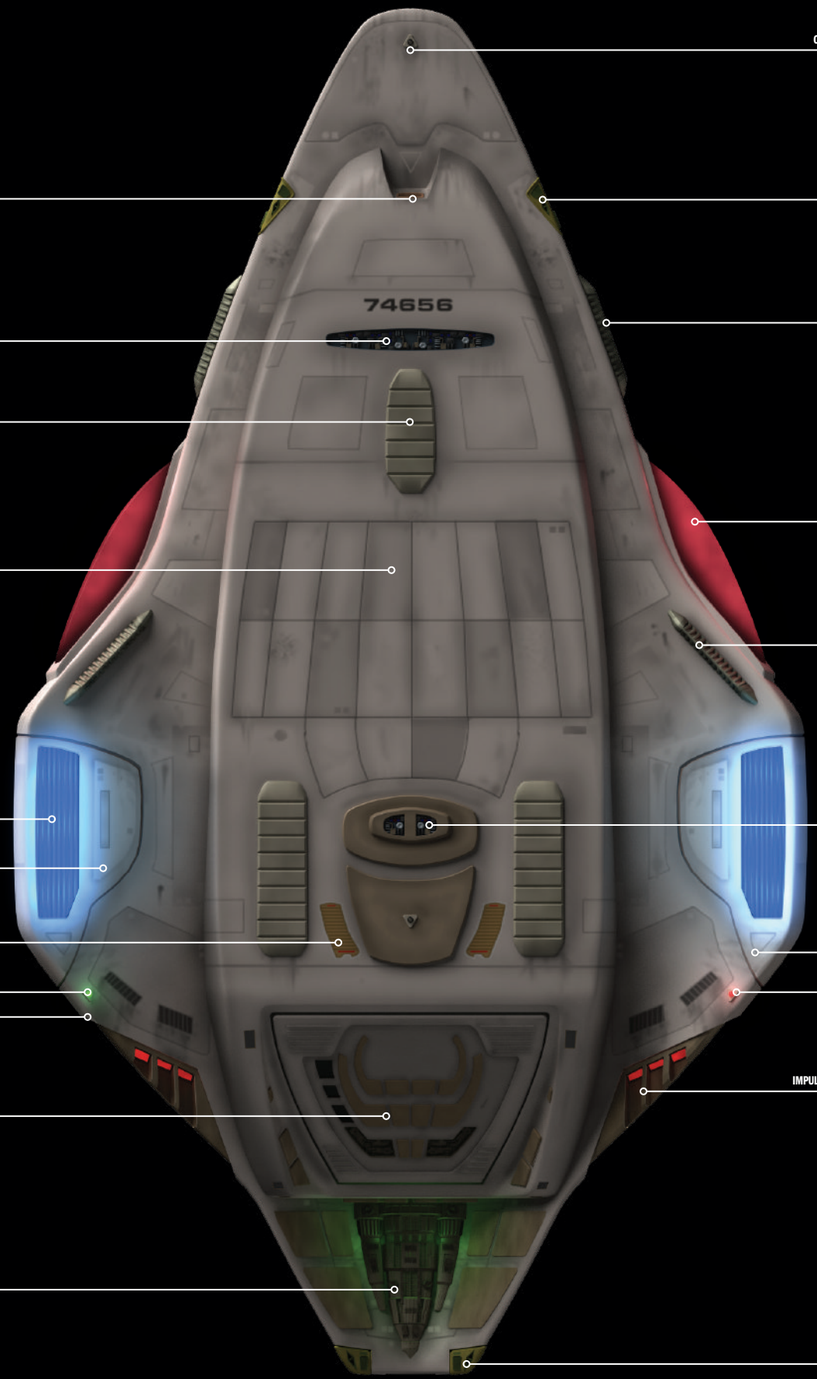
The entire senior staff contributed to the project, adapting and improving on Paris's initial design. Working around the clock, the new auxiliary vessel was built in just a few days, utilizing alloys and components that were either replicated or adapted from spare parts. Paris described the finished ship as being an "ultra-responsive hot rod."

The *Delta Flyer* featured retractable warp nacelles, unimatrix shielding, and a weapons system inspired by Borg technology, which included fore and aft phaser strips and a nose-mounted microtorpedo launcher capable of firing photonic missiles. The ship was powered by a tuned, circumferential warp reaction chamber, and was equipped with warp and impulse engines, a tractor beam emitter, and a narrow beam transporter.

DORSAL VIEW



VENTRAL VIEW



CENTERLINE FORMATION LIGHT

MICROTORPEDO LAUNCHER

RCS THRUSTERS

MAIN SENSOR ARRAY

LATERAL PHASER STRIP

FORWARD LANDING GEAR

BUSSARD COLLECTOR

DEFENSIVE SHIELD GRID

LATERAL PHASER STRIP

WARP FIELD GRILLE

WARP REACTION CHAMBER

EXTENDABLE WARP NACELLE

TRANSPORTER EMITTER

EMERGENCY WARP PLASMA FLUSH VENT

STARBOARD RUNNING LIGHT

PORT RUNNING LIGHT

WARP PLASMA DUMP VENT

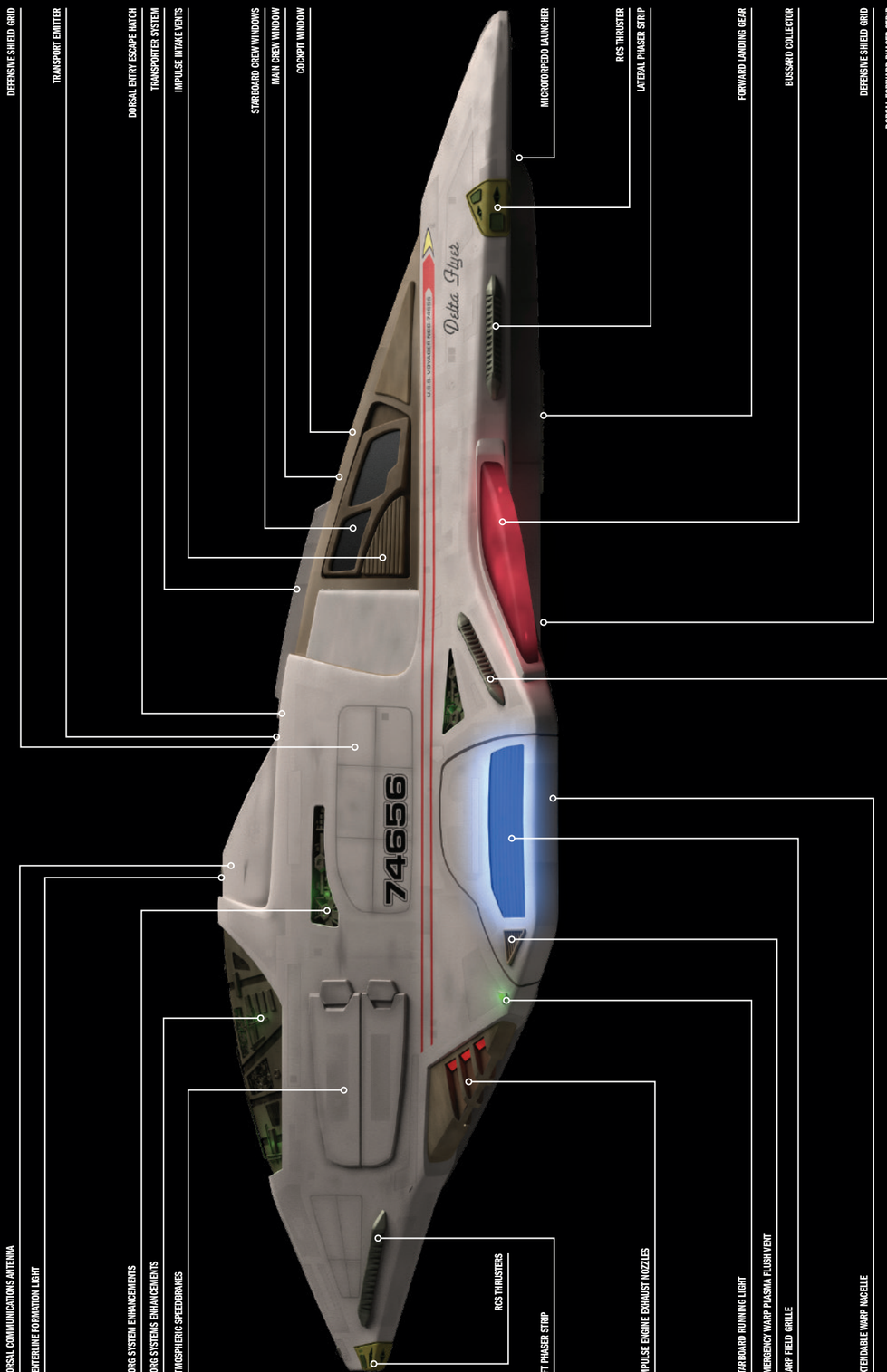
IMPULSE ENGINE EXHAUST NOZZLES

AFT ENTRY HATCH

BORG SYSTEM ENHANCEMENTS

RCS THRUSTERS

STARBOARD ELEVATION



DEFENSIVE SHIELD GRID

TRANSPORT EMITTER

DORSAL ENTRY ESCAPE HATCH

TRANSPORTER SYSTEM

IMPULSE INTAKE VENTS

STARBOARD CREW WINDOWS

MAIN CREW WINDOW

COCKPIT WINDOW

MICROTORPEDO LAUNCHER

RCS THRUSTER

LATERAL PHASER STRIP

FORWARD LANDING GEAR

BUSSARD COLLECTOR

DEFENSIVE SHIELD GRID

DORSAL FORWARD PHASER STRIP

DORSAL COMMUNICATIONS ANTENNA

CENTERLINE FORMATION LIGHT

BORG SYSTEM ENHANCEMENTS

BORG SYSTEMS ENHANCEMENTS

ATMOSPHERIC SPEEDBRAKES

RCS THRUSTERS

AFT PHASER STRIP

IMPULSE ENGINE EXHAUST NOZZLES

STARBOARD RUNNING LIGHT

EMERGENCY WARP PLASMA FLUSH VENT

WARP FIELD GRILLE

EXTENDABLE WARP NACELLE

DELTA FLYER DESIGN

The design brief for the *Delta Flyer* was to construct a specialized ship better suited to missions in the Delta Quadrant than the standard type-9 shuttlecraft. The result was faster and better armed than any of *Voyager*'s shuttles.

The *Delta Flyer* was a unique vessel developed by the crew of the *U.S.S. Voyager* specifically with the rigors of the Delta Quadrant in mind. Combining traditional Starfleet design principles and Borg technology, it was larger and far more rugged than a Starfleet type-9 shuttle, but smaller and nimbler than a *Danube*-class runabout.

"HOT ROD"

The initial idea for the *Delta Flyer* came from *Voyager*'s helmsman, Tom Paris, who repeatedly championed the idea of building a specialized shuttlecraft (in his words, a "hot rod") that was more suited to the crew's needs than the ship's regular complement of shuttles. At first, Captain Janeway and Commander Chakotay rejected his suggestion because they felt that the crew did not have the time to design and build a ship from scratch, so Paris began work on the design in his spare time. In 2375, the argument swung decisively in his favor; the crew had to retrieve a multiphasic probe from the atmosphere of a Class-6 gas giant to prevent it falling into the Malon's hands. Since no alternative was available, Captain Janeway gave the go-ahead to build the *Delta Flyer*. The entire senior staff contributed to the project, adapting and improving on Paris' initial design.

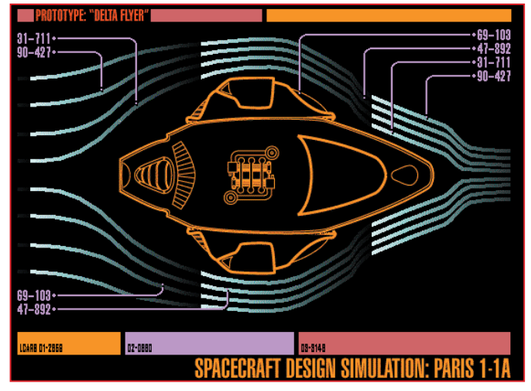
Retrieving the probe from the gas giant's atmosphere pushed the small craft to its limits, severely testing the new ship's structural integrity system. B'Elanna Torres suggested using titanium alloys for the hull, but on Seven of Nine's recommendation the crew chose tetraburnium because of its higher structural integrity characteristics. Even so, the pressures involved were so great that the ship could maintain a structural integrity field for only a few minutes before microfractures began to form in the parametallic hull. Although this problem was never entirely solved, the ship successfully retrieved the probe.

ADVANCED SYSTEMS

The *Delta Flyer* was equipped with warp and impulse engines, a tractor beam emitter, and a narrow beam transporter. It used a tuned, circumferential warp reaction chamber and extendable warp nacelles, and when fitted with a Borg transwarp coil, it could achieve transwarp velocities. The ship was also capable of entering a planet's atmosphere and landing on the surface.

Power distribution was maximized by the use of isomagnetic EPS conduits in the plasma manifold, and many of its systems incorporated Borg enhancements suggested by Seven. In particular, the *Delta Flyer*'s weapons systems were inspired by Borg technology; it had fore and aft phaser strips, and a microtorpedo launcher that could fire photonic missiles.

The ship's design proved to be extremely adaptable. Shortly after the crew constructed the *Delta Flyer*, they modified its hull and thrusters so that it could operate deep within the Monean ocean planet. The ship was modified on another occasion so that it could generate multiadaptive shielding that rendered it invisible to the Borg's sensors.



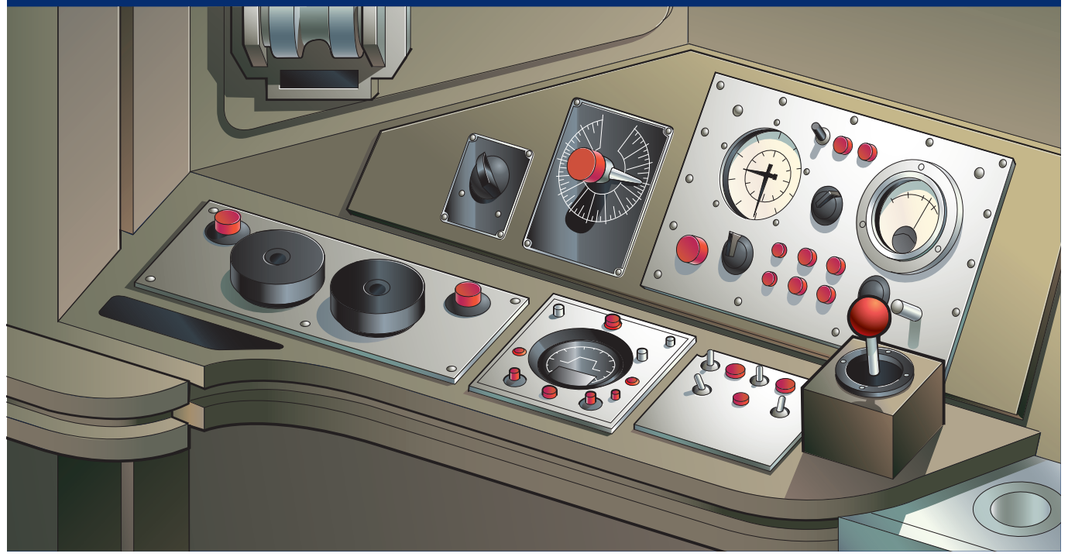
As this analysis of Tom Paris' initial proposal for the *Delta Flyer* shows, great attention was paid to the vessel's aerodynamic properties.

SIMPLE INTERIOR

There were two rooms inside the *Delta Flyer* – the cockpit and a mission module. The cockpit was located at the top front of the craft, and had seating for four crew members; the mission module was located beneath the cockpit at the rear. Typically, this area was used to store mission-specific equipment and it also served as a small lab.

RETRO DESIGN

A devotee of the 20th-century movie serial *The Adventures of Captain Proton*, Tom Paris designed the pilot's controls to follow the signature style of the fictional drama. Fully integrated with the ship's systems, the analogue levers, switches, and dials allowed the pilot to 'feel' how the ship responded in flight.



DELTA FLYER COCKPIT

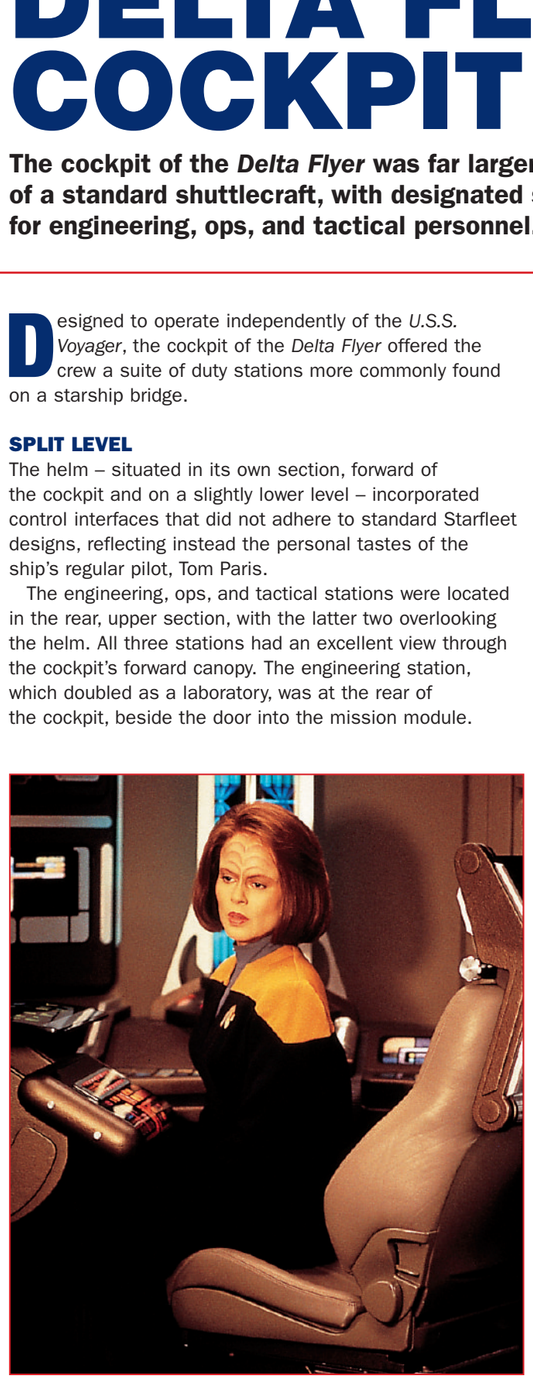
The cockpit of the *Delta Flyer* was far larger than that of a standard shuttlecraft, with designated stations for engineering, ops, and tactical personnel.

Designed to operate independently of the *U.S.S. Voyager*, the cockpit of the *Delta Flyer* offered the crew a suite of duty stations more commonly found on a starship bridge.

SPLIT LEVEL

The helm – situated in its own section, forward of the cockpit and on a slightly lower level – incorporated control interfaces that did not adhere to standard Starfleet designs, reflecting instead the personal tastes of the ship's regular pilot, Tom Paris.

The engineering, ops, and tactical stations were located in the rear, upper section, with the latter two overlooking the helm. All three stations had an excellent view through the cockpit's forward canopy. The engineering station, which doubled as a laboratory, was at the rear of the cockpit, beside the door into the mission module.



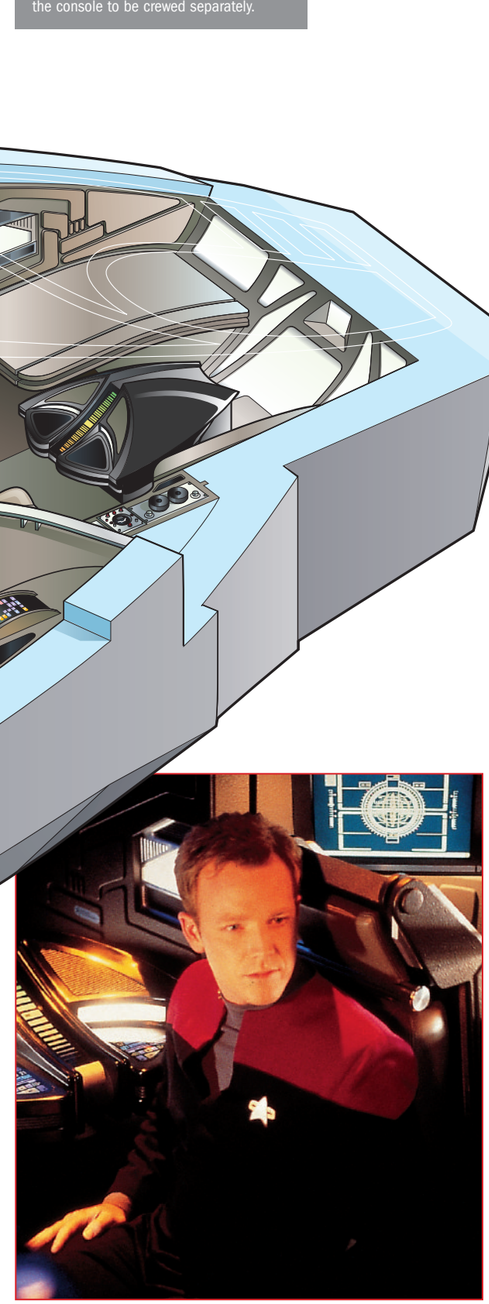
The engineering station was located at the rear of the cockpit, and was primarily used to monitor the condition of the engines and other essential systems.

RESEARCH AND EXAMINATION
The laboratory at the engineering station was used for everything from in-depth mineralogical examinations to the overnight monitoring of damaged equipment.

A second seat next to the conn allowed the console to be crewed separately.

Weapons and defensive systems were controlled from the tactical station. Photon missiles were loaded from here.

A short ramp lead down to the conn.



The helm comprised a variety of consoles which combined standard Starfleet touchpads with Tom Paris's retro-inspired interfaces.

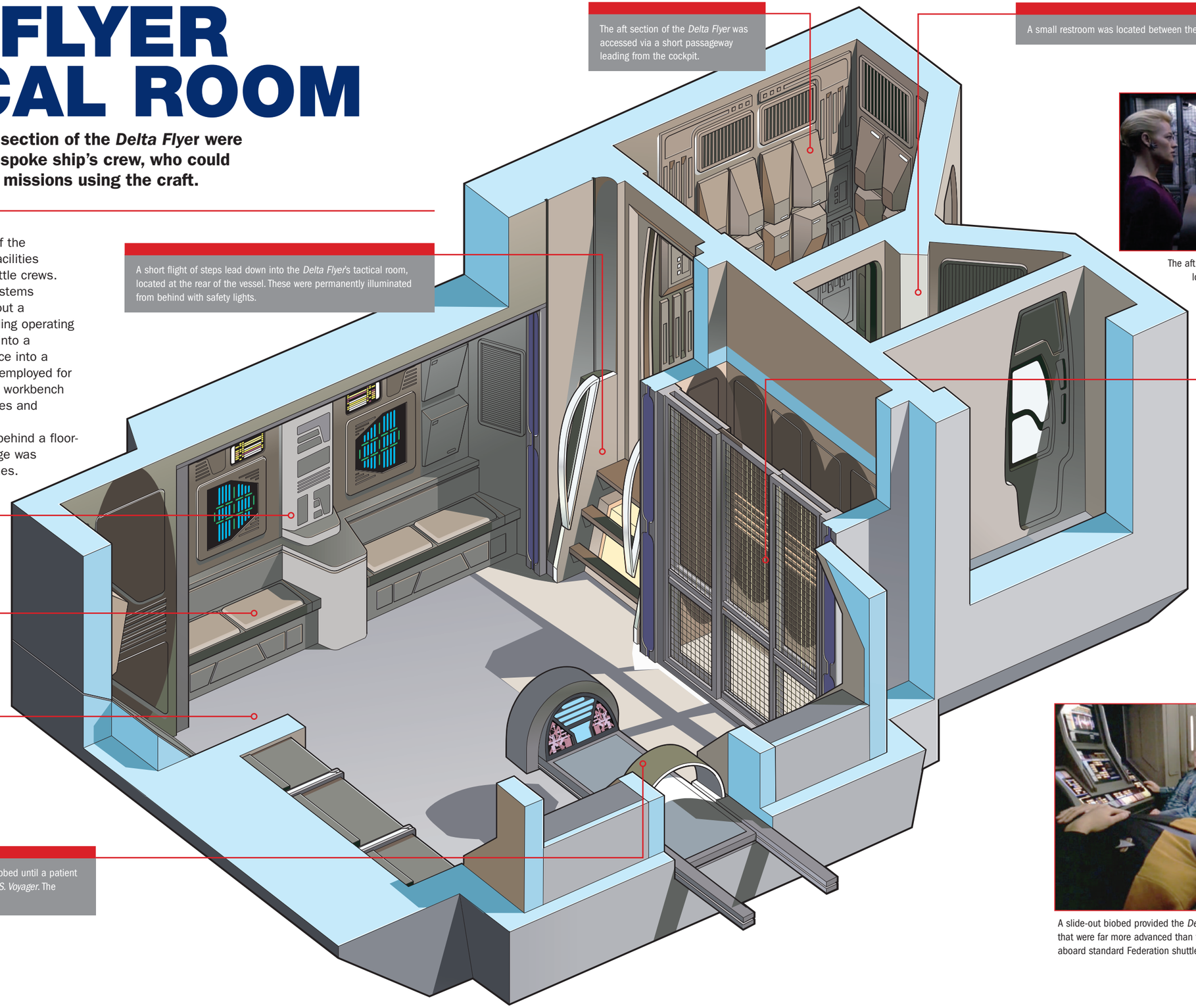
DELTA FLYER TACTICAL ROOM

The facilities available in the aft section of the *Delta Flyer* were an invaluable resource for the bespoke ship's crew, who could undertake an increased range of missions using the craft.

A functional yet flexible area at the rear of the *Delta* Flyer, the tactical room included facilities previously unavailable to *Voyager*'s shuttle crews.

The grey bulkheads incorporated several systems consoles which could be configured to carry out a multitude of mission-specific functions, including operating as a tactical station. A biobed that retracted into a bulkhead when not in use, converted the space into a temporary sickbay. The biobed could also be employed for low-temperature storage, or double as a solid workbench to carry out repairs or examinations of samples and materials recovered during a mission.

A multi-purpose storage area was secured behind a floor-to-ceiling wire mesh barrier, and further storage was available beneath two low-level padded benches.



The aft section of the *Delta Flyer* was accessed via a short passageway leading from the cockpit.

A small restroom was located between the two main areas.

A short flight of steps lead down into the *Delta Flyer*'s tactical room, located at the rear of the vessel. These were permanently illuminated from behind with safety lights.

An enclosed area provided secure storage for valuable equipment such as environmental suits. The sliding mesh door was lockable.

Computer interface terminals were embedded into the bulkheads, ensuring that the space remained clear of workstation clutter.

A number of flat bench seats were built into the bulkheads, offering personnel areas for relaxation when not required in the cockpit.

The adaptable space could be reconfigured to serve as a tactical room, sickbay, work space, dining area, or recreational lounge, depending upon the needs of the mission. It often served all these purposes in the course of a single journey.

Medical care would be provided via the *Delta Flyer*'s single biobed until a patient could receive more comprehensive treatment aboard the *U.S.S. Voyager*. The biobed receded into the bulkhead when not in use.

The aft section of the *Delta Flyer* had a locker that contained spacesuits.

A slide-out biobed provided the *Delta Flyer* with medical facilities that were far more advanced than those generally available aboard standard Federation shuttlecraft.

DELTA FLYER ESCAPE POD

The *Delta Flyer* was equipped to cope with almost any eventuality, and carried a complement of compact escape pods as a means of abandoning ship if disaster struck.

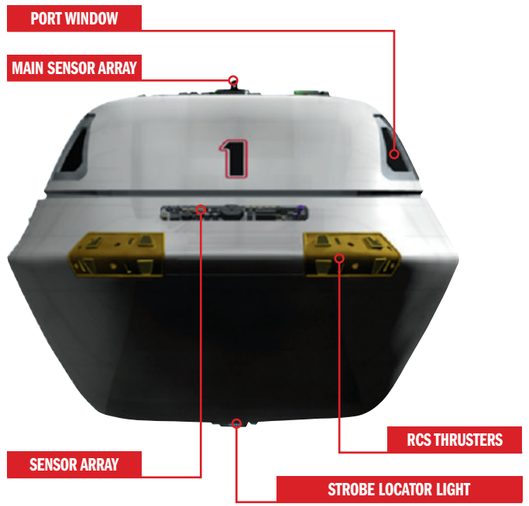
Despite possessing enhanced defensive capabilities, the potentially hazardous nature of the *Delta Flyer*'s missions always involved the possibility that the vessel might have to be abandoned in situations of dire emergency. However, the ship's relatively small dimensions – just 16.45 meters in length – precluded the inclusion of a full-sized escape pod, capable of carrying the entire crew to safety. To ensure the survival of the crew in such an instance, the *Delta Flyer* was instead equipped with a number of self-contained, single occupant escape pod units measuring 2.3 meters in length.

These small escape pods were constructed from hard-wearing interlocking plates which formed a durable outer shell, offering high levels of protection against the vacuum of space, the heat of entering a planetary atmosphere, and impact protection for landing. The interior was somewhat claustrophobic, due in part to the number of survival and other systems that were built into each unit. These included minimal navigation controls, a sensor array located directly above the head of the occupant, and a subspace communications transmitter.

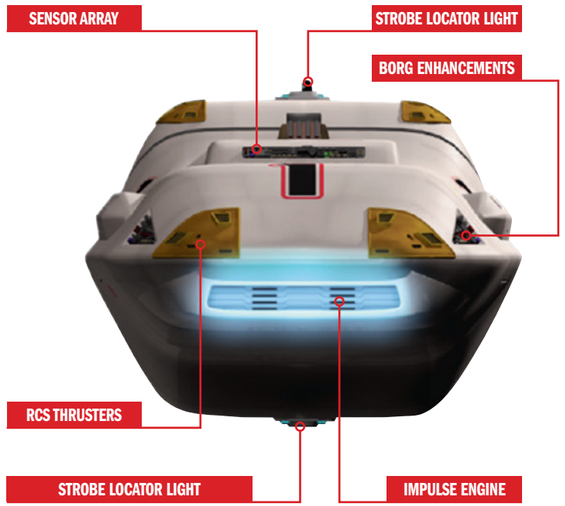
Each escape pod could be ejected from the ship with the press of a single control once an occupant had secured themselves inside. After launch, the escape pod was programmed to follow a flight path that steered it away from danger, and it could be piloted manually if required.

The *Delta Flyer* escape pods were only marginally larger than a photon torpedo, but were nevertheless fitted with an array of advanced survival systems.

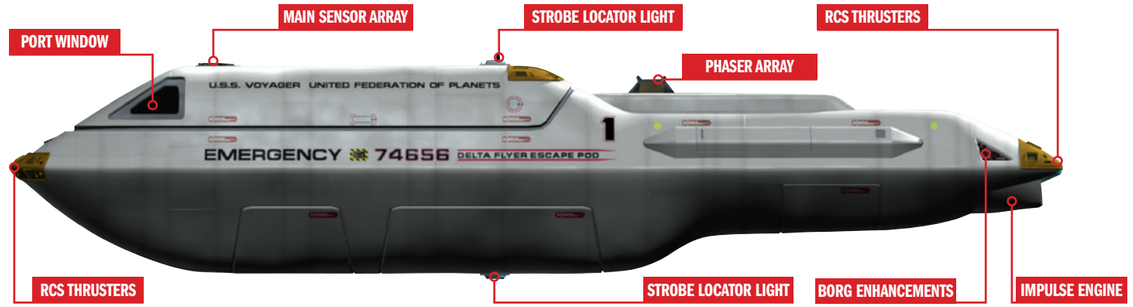
FORE VIEW



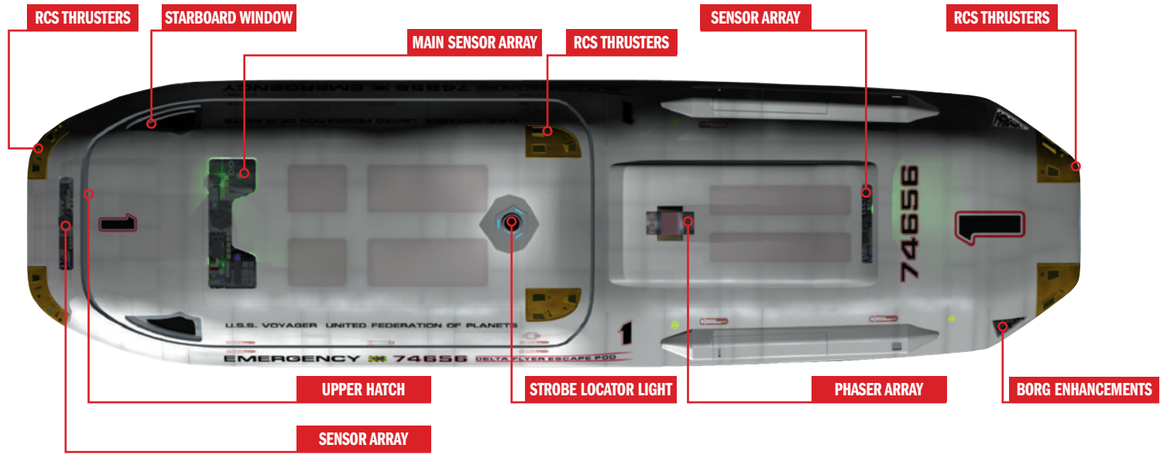
AFT VIEW



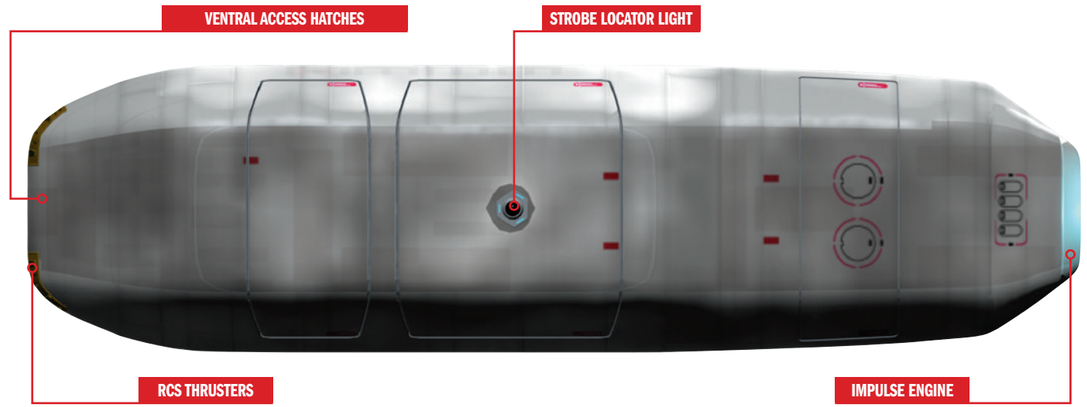
PORT VIEW



DORSAL VIEW



VENTRAL VIEW



DELTA FLYER II

The loss of the original *Delta Flyer* in 2376 led to the construction of a replacement vessel. The new ship featured numerous updated and enhanced systems.

While competing in the Trans-Stellar Rally, the *Delta Flyer II* was forced to eject its warp core, that a competitor had sabotaged.

Following the untimely destruction of the original *Delta Flyer*, a new version was immediately commissioned to counter the ongoing threats of the Delta Quadrant. While the *Delta Flyer II* appeared identical to the original, the new ship included a number of revised features, additional systems, and enhancements that increased both its speed and maneuverability.

The *Delta Flyer II* replaced the original ship's atmospheric speedbrakes with retractable impulse thrusters, located at the rear of the ship's upper hull. The extra impulse speed generated by these twin engines could be increased even further by rerouting power from the ship's back-up generators. The flight controls were also reconfigured to include two joysticks in addition to the ship's *Captain Proton*-inspired analogue control panel. The joysticks combined navigational thrusters and drive systems, and provided an extremely responsive method of control.

The aft workstation was the only console in the cockpit to face backward. The swivel chair allowed the officer on duty to easily turn around in order to converse with the other crew members.

The cockpit retained the layout of its predecessor, an indication of the sound design of the original vessel.

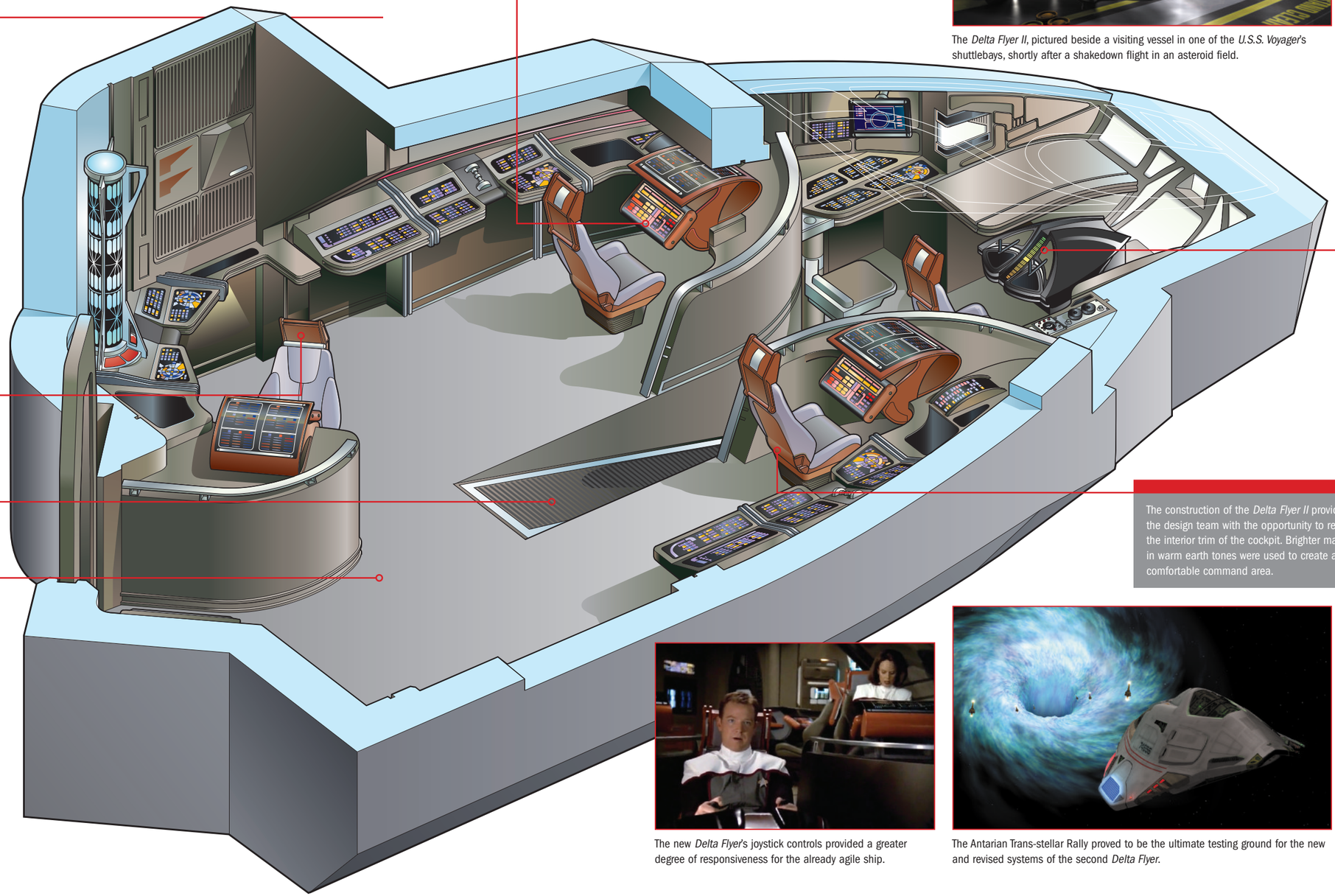
The interior of the *Delta Flyer II* provided plenty of room for the crew members who operated it. The three forward crew stations were stacked so as to allow all personnel a clear view out of the expansive forward viewport.

A pair of twin retractable impulse engines in the upper hull gave the *Delta Flyer II* a significant increase in sublight speeds.

The *Delta Flyer II*'s new impulse thrusters were activated from the operations console, located on the port side of the cabin. The vessel was capable of flying at greater impulse speeds, with a higher degree of maneuverability.

The most significant revision in the design of the *Delta Flyer II*'s cockpit came in the form of two small joysticks, used to pilot the vessel. This revised interface afforded the officer at the helm a more intuitive control of the ship.

The *Delta Flyer II*, pictured beside a visiting vessel in one of the *U.S.S. Voyager*'s shuttlebays, shortly after a shakedown flight in an asteroid field.



The construction of the *Delta Flyer II* provided the design team with the opportunity to revise the interior trim of the cockpit. Brighter materials in warm earth tones were used to create a more comfortable command area.

The new *Delta Flyer*'s joystick controls provided a greater degree of responsiveness for the already agile ship.

The Antarian Trans-stellar Rally proved to be the ultimate testing ground for the new and revised systems of the second *Delta Flyer*.

AEROSHUTTLE DEPLOYMENT

Of the *U.S.S. Voyager*'s complement of auxiliary vessels, the least used was its aeroshuttle, which remained docked on the underside of the saucer section for the duration of the ship's journey through the Delta Quadrant.

Despite its comparatively small size, Starfleet's *Intrepid*-class vessels were equipped with a feature more commonly associated with far larger *Galaxy* and *Sovereign*-class vessels – an integrated shuttle that was incorporated into the design of the starship, with a docking facility built into the ship's superstructure.

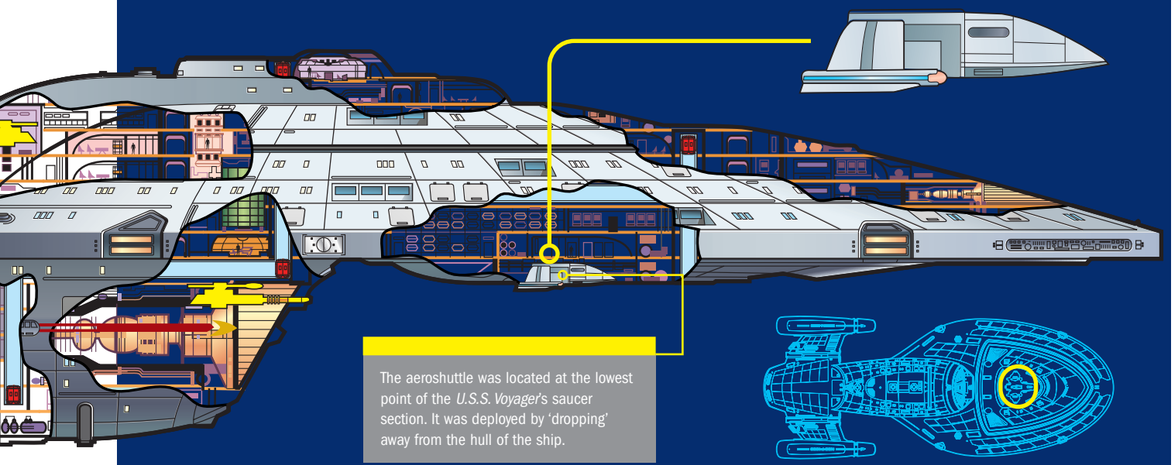
This craft was the aeroshuttle, a sleek vessel developed as a high-speed reconnaissance ship that was capable of atmospheric travel. It was also intended as a defensive support vessel and for evacuation purposes. However, for reasons not noted in the ship's log, the aeroshuttle was never deployed during the seven years that *Voyager* spent traversing the Delta Quadrant.

What is known is that *Voyager* lost numerous shuttlecraft during that time, and it is conceivable that the destruction of a vehicle that formed an integral part of the outer hull could have posed a serious long-term problem for the crew.

The outline of the aeroshuttle was clearly visible in its docked position on the underside of the *U.S.S. Voyager*'s primary hull.

THE DOCKING BAY

Access to the aeroshuttle docking bay was via deck 9, the lowest deck on *Voyager*'s saucer section, and the same deck on which the main shuttlebay was located at the rear of the level. Deck 9 was also the primary maintenance level for *Voyager*'s complement of shuttlecraft.



The aeroshuttle was located at the lowest point of the *U.S.S. Voyager*'s saucer section. It was deployed by 'dropping' away from the hull of the ship.

The development of the *Delta Flyer* – a more powerful and heavily armed ship – was specifically designed to withstand the rigors of the Delta Quadrant, and built in response to the high attrition rate of shuttlecraft during the vessel's journey through hostile territories. This may have been a further contributory factor in the aeroshuttle's apparent redundancy and lack of use.

LAUNCH PROCEDURE

The procedure for launching the aeroshuttle closely resembled that of the sequence required to deploy a larger support craft – the captain's yacht – that was built into the design of several vessels, including the *Sovereign*-class *U.S.S. Enterprise*-E. This vehicle also docked on the underside of the larger ship's primary hull.

Unlike other auxiliary shuttlecraft, which were deployed on a horizontal axis from the shuttlebay at the rear of an *Intrepid*-class starship, for safety reasons the aeroshuttle moved vertically away from its docking bay in the ship's primary hull under computer control. The proximity of the aeroshuttle dock to the main deflector dish – as well as an array of several surface-mounted sensor palettes – posed a particular danger to these vital systems during launch. On release of the docking clamps that secured the aeroshuttle inside its dedicated docking bay, the ship quickly distanced itself from the primary hull, engaging its twin impulse engines to move clear.

It was of vital importance that the aeroshuttle did not cause damage to its mothership through an accidental collision with the vessel, or impede the ship's forward momentum. The launch protocols therefore dictated that the auxiliary craft maneuvered quickly to port or starboard and out of the path of the *Intrepid*-class ship as soon as flight control was turned over to the pilot.

1: DOCKED

The auxiliary vessel formed an integral part of the *U.S.S. Voyager*'s exterior hull. When docked, only the aeroshuttle's outline and underside were visible.

2: DEPLOYMENT

Releasing a set of docking clamps allowed the aeroshuttle to detach from its docked position and safely move clear of *Voyager*'s primary hull.

3: STRUCTURAL INTEGRITY

The aeroshuttle docking bay was left exposed as the small vessel began to move away. *Voyager*'s structural integrity field compensated for this.

4: UNDER POWER

The aeroshuttle engaged its impulse engines to move out of *Voyager*'s path once it was clear of the larger ship. The two now operated as independent vessels.

CREW QUARTERS

Personal space was an important factor in maintaining crew morale during the *U.S.S. Voyager*'s extended trip through the Delta Quadrant, and the crew quarters had to adapt to changing circumstances throughout the journey.

Standard crew accommodation on the *U.S.S. Voyager* varied according to rank, although most cabins had a similar look and layout to those found on board *Galaxy*-class starships. Despite being somewhat smaller, however, the cabins on the *Intrepid*-class starship featured similar amenities, and offered crew members a degree of privacy and respite from their daily duties on what was to be a long journey home. In many cases, the crew customized their quarters to remind themselves of home.

CABIN TYPES

Voyager had three main types of crew accommodation, with the most expansive being granted to the captain and higher-ranking officers. The most desirable quarters were on the outer edge of the saucer with curved windows that looked out into space. These larger quarters included both work and social areas, and a separate bedroom.

In the event of a visiting dignitary in need of suitable accommodation aboard the ship, the commanding officer would give them the use of their quarters as a mark of respect. Lower-ranking officers enjoyed single-occupancy quarters with more standard facilities, while the most junior crew members shared their cabins with at least one other colleague. Enlisted crew members were quartered in areas with multiple bunks, with storage lockers in which to store minimal personal effects. All the quarters included a replicator and bathing facilties.

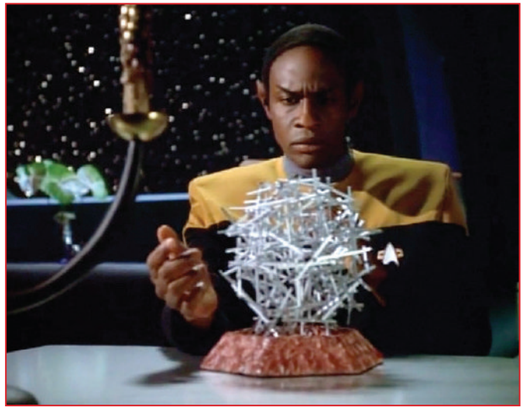
During the course of *Voyager*'s travels, the crew was joined by new members such as Neelix, Kes, and Seven of Nine, each of whom had their own special requirements in terms of accommodation. The ship's internal spaces proved to be eminently adaptable to each new situation.

FAMILY FACILITIES

Although the *U.S.S. Voyager* was never intended to be a generational ship, its long journey through the Delta Quadrant inevitably resulted in new relationships forming among the crew, and new families.

The first child to be born on *Voyager* was Naomi Wildman, daughter to Ensign Samantha Wildman and Greskrendtregk, her Ktarian partner who was still in the Alpha Quadrant. Due to Naomi's half-Ktarian physiology, she grew to the size of a four-year-old human child in just two years. This growth rate necessitated the adaptation of Ensign Wildman's living space from single quarters to larger accommodation in order to give Naomi her own bedroom, which was located adjacent to her mother's.

With no crêche or education facilities on board, Naomi was given her own PADD and assigned homework from classes given to her by different crewmembers – including botany by the EMH and astrophysics by Seven of Nine.



Crew quarters enabled personnel to relax away from their colleagues, and offered a private place to pursue hobbies such as the Vulcan strategy game kal-toh.

All the quarters on *Voyager* had replicators, but because the ship had to conserve power, their use was strictly rationed.

B'Elanna Torres and Tom Paris moved in together and were preparing to adapt their quarters for their baby before *Voyager* managed to reach Earth.

Ensign Samantha Wildman shared her quarters with her half-Ktarian daughter, Naomi. The space was later adapted to give Naomi her own bedroom.

The 'adoption' of four young Borg drones by the crew of *Voyager* in 2376 had a considerably bigger impact on the vessel, due to the physical requirements of the children's Borg physiology.

Effectively rejected by the Collective, the four children had to undergo considerable treatment by the EMH in order to remove their implants, although, like Seven, they still had to regenerate. Janeway's earlier decision to retain a bank of Borg regeneration alcoves in cargo bay 2 proved to be vitally important to the children, who reverted to using their given names of Icheb, Mezoti, Azan, and Rebi. The youngsters began their long and painful path back to individuality with help from Seven and Naomi Wildman.

Seven was initially reluctant in her supervisory role, and her rigorous training program failed to understand the children's need for relaxation and fun. Neelix's intervention led to a more relaxed approach.

BORG ALCOVES

Seven of Nine's quarters in cargo bay 2 welcomed four new residents in 2376, in the form of a group of children who had formerly been members of the Borg collective too. The bank of regeneration alcoves installed there when Seven first came aboard became their "bunks."

Former Borg drones Icheb, Mezoti, Azan, and Rebi found a new home on *Voyager* after being permanently separated from the Collective.

Without the bank of Borg regeneration alcoves already housed within cargo bay 2, the four children would not have survived separation from the Collective.

CAPTAIN'S QUARTERS

In accordance with her rank, Captain Janeway was allocated the largest quarters on board the *U.S.S. Voyager*, offering her some respite from the responsibility of command.

Three large, rectangular windows afforded the captain a view directly across the bow of the ship and into the depths of space.

The captain's quarters could be equipped with a bath so Janeway could relax properly.

Captain Janeway's quarters were located on deck 3, forward of the main bridge. There, she could take time out from the rigors of command, or, as was more often the case, continue working even when off duty. The quarters were divided into three sections: a dining and living room, a sleeping area, and a separate bathroom.

PRIVATE ROOMS

The main area of Janeway's quarters was a comfortable living space, to which the captain added a number of personal touches, including various scientific instruments, an old-fashioned Earth gramophone, and a collection of framed photographs, including one of her pet Irish Setter, Mollie. A desk with a small LCARS console enabled the captain to access the ship's systems. The dining area consisted of a food replicator and a table and chairs.

A doorway led through to a sleeping area, which was furnished with a bed and reclining chair, and a closet built into a bulkhead. Another doorway provided access to a small, private bathroom.

Personal items, such as an old-fashioned gramophone and photographs, added warmth to Captain Janeway's quarters.

A desk with an LCARS terminal gave the captain constant access the ship's systems.

A dining table and chairs allowed the captain to entertain several guests.

The main living section of the captain's quarters was open-plan, and was furnished with a dining table, a wide sofa beneath the windows, a food replicator, and a desk containing an LCARS work station.

CAPTAIN'S QUARTERS PLAN

Captain Janeway sometimes invited Commander Chakotay for a meal in her quarters, where they could discuss the ship's business in more informal surroundings than her office or the briefing room.

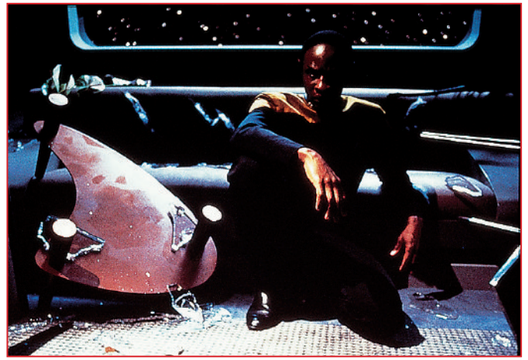
TUVOK'S QUARTERS

Vulcan luxury may ordinarily be an oxymoron, but in the case of Lt. Commander Tuvok's quarters aboard the *U.S.S. Voyager*, aesthetics and meditative design were paramount.

The sense of space in Tuvok's quarters was enhanced by two long windows providing an expansive view into space.

Due to the relatively small size of the vessel, the accommodation offered to the senior officers of the *U.S.S. Voyager* were not the most lavish quarters available within Starfleet. However, with careful positioning of furniture and personal effects, it was possible to make the most of the living area allotted to each individual.

Creating a comfortable and relaxing private environment was important to all crew members, but in the case of Lt. Commander Tuvok there was an additional requirement, in that his quarters had to offer him both an area to undertake his command duties, and the isolation needed to engage in Vulcan meditation and reflection. It might be surprising to learn that the most logical of *Voyager*'s crew chose to surround himself with a rich diversity of Vulcan artifacts and styles, and it would be true to say that the chief of security had one of the most personalized living areas on the ship.



Tuvok locked himself in his quarters and destroyed almost everything after a mind-meld with Lon Suder left him unable to control his residual violent impulses.

A MATTER OF STYLE

Situated on deck 6, Tuvok's accommodation reflected a combination of Vulcan simplicity, ethnic decoration, and tasteful aesthetic functionality that not only enhanced the living area, but also the bathroom and sleeping section.

Tuvok's main living area appeared deceptively spacious due to the relatively large expanse of golden carpet that was laid throughout. The area was separated from the rest of the quarters by a curved bulkhead, which was enhanced by a natural wood vertical beam. A dark, polished organic material was used to great effect throughout Tuvok's quarters, with decorative wooden bulkhead supports following the contours of the outer hull. Natural materials were used everywhere, including curved wooden hand-rests fitted into the sides of the seating area. Tuvok had the advantage of occupying quarters on the outer edge of deck 6, allowing him a view of space through two broad rectangular viewports in the main living area, and one in the sleeping compartment.

The highlight of Tuvok's bedroom was the cover made of a luxurious gold and brown patterned fabric, offset by the stars glittering through the viewport.

As a senior command officer, work was never far away, even when Tuvok was officially off-duty. This was reflected by the presence of a large computer terminal in one of living area's bulkheads. Tuvok also had access to his own personal replicator, allowing him to eat in isolation while working within his quarters.

VULCAN ORNAMENTS

Built into the curved inner wall of the living area, separated by a sectional bulkhead, was a low fabric-covered sofa to the left, and a rectangular shelf and storage unit to the right. A low glass-shelved table was situated in front of the sofa, on which Tuvok kept a selection of Vulcan artifacts, including some ornate candle holders and other objects, such as his Kal-toh game.

Located on the opposite wall, adjacent to the entrance into Tuvok's quarters, was a single, low-backed black chair with distinctive downward curving legs. This could be pulled up to the glass table in order to face anyone seated on the opposite sofa. To the right of this informal meeting area was a second table, higher than the first, on which could be found further personal items. Directly behind it, on the wall beside the entrance, a Vulcan tapestry of woven gold and black material was suspended from a gold-colored rod. This hung above a console table upon which Tuvok often displayed his favorite orchids.

Tuvok's black lounge chair was upholstered in a lush, gold fabric, with a side table within easy reach. The chair was usually located opposite a beige couch.

One corner of this main section was occupied by a sculptured couch covered in a luxurious golden fabric, adding a richness of color that complemented the other materials used within the quarters. The overall effect was of a calm and ordered personal space ideally suited to the Vulcan way of life.

MEDITATIVE SURROUNDINGS

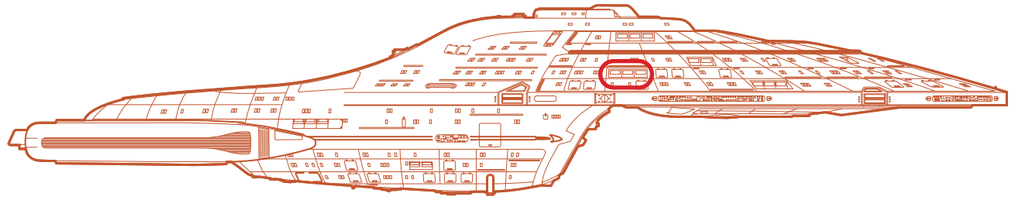
Most of the floor space could be cleared of objects, and, through the use of variable uplighters built into the bulkheads, the entire room's lighting could be reduced to a dim cast, aiding the Vulcan in his meditation and reflection when alone, or when working with others in mind-control techniques.

Tuvok's sleeping area was usually open to the main living area, creating an impression of a much greater space, although a sliding panel could be used to enclose the comfortable bedroom section if required. Located at the head of the bed was a further viewing port, with low shelves on either side upon which a set of candle sticks and other personal items were arranged. Tuvok's private bathing facility was in a separate room from the main living and sleeping area, along with storage units for clothing and other personal belongings.

A vase of Tuvok's favored orchids and an ornate container were displayed on a table underneath a Vulcan tapestry, close to the entrance to his quarters.

UNWELCOME GUEST

Tuvok's quarters were usually his private sanctuary, but on at least one occasion he found himself playing involuntary host. When *Voyager* offered refuge to a Klingon community found in the Delta Quadrant, Tuvok was required to share his quarters with Neelix, who had surrendered his own rooms to a large family. Tuvok tolerated the intrusion until he was locked out of his own quarters by Neelix, who had been engaging in inter-species copulation with a lusty Klingon woman, causing immense damage to the living area and its furniture. Tuvok curtly ejected his colleague, and set about restoring the peaceful atmosphere he had so carefully created.



ROOM LOCATOR

THE MESS HALL

Designed both for functionality and relaxation, the *U.S.S. Voyager*'s mess hall was equipped to host anything from diplomatic receptions to cultural and social gatherings.

The mess hall hosted Captain Janeway's funeral when the crew believed her to be dead during 2373.

The mess hall was more than just an eating area, since it also gave crewmembers a place where they could relax together.

The mess hall on the *U.S.S. Voyager* was a focal point for crew interaction. Situated on deck 2, Section 13, it was tended by the ship's resident guide and cook, Neelix. The layout of the mess hall was similar to that found on most Federation starships, but the nature of *Voyager*'s solo journey through the Delta Quadrant led to the area serving a more flexible function than would normally be required of such a space. In addition to a dining room, it was often called upon to act as a briefing room for the entire crew, an area in which to host official functions, or as a party area for crew birthdays and other informal celebrations.

Decorative lights fitted into the mess hall's bulkheads supplied more intimate accent illumination for occasions where the bright main lights were dimmed.

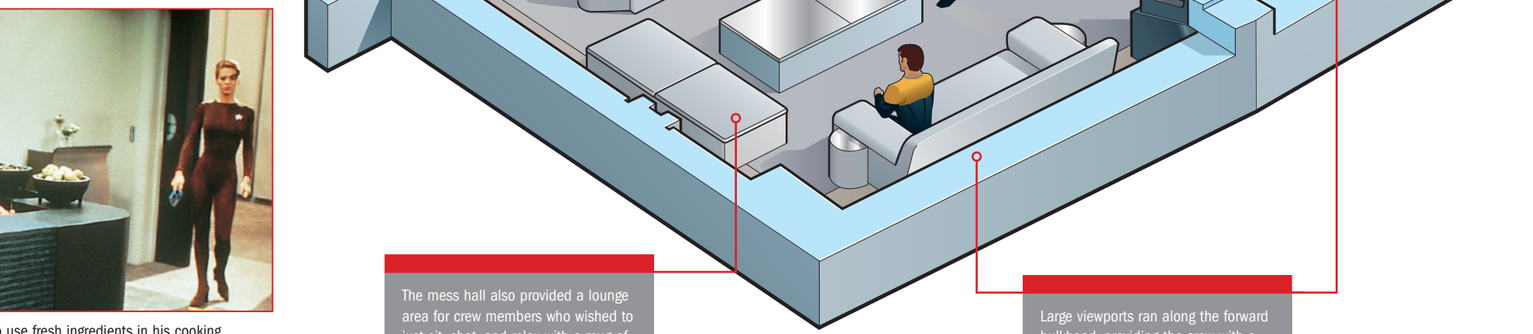
Among other dishes, the replicators aboard the *U.S.S. Voyager* could make 14 different varieties of tomato soup, including one with rice, another containing vegetables, and a Bolian style soup.

Neelix had a large variety of pots and pans in which to undertake his culinary experiments.

The galley area contained extensive storage space for fresh foodstuffs from which Neelix prepared his dishes.

The mess hall was designed to provide plenty of standing room, allowing it to be used for events such as parties and formal receptions.

Entry to the hall was through large double doors, each featuring a porthole window.



The dining tables were designed to accommodate two crewmembers, one on each side, but they could be pushed closer together to accommodate larger groups. The bigger tables situated under the windows sat up to eight people.

Replicators were provided in the mess hall, but Neelix preferred to use fresh ingredients in his cooking. However, he was sometimes forced to replicate produce when the yield in hydroponics was low.

The mess hall also provided a lounge area for crew members who wished to just sit, chat, and relax with a mug of their chosen beverage.

Large viewports ran along the forward bulkhead, providing the crew with a pleasant view of the stars beyond.

During the early months of *Voyager*'s journey through the Delta Quadrant, the Maquis crewmembers preferred not to socialize with the Starfleet crew.

NEELIX'S GALLEY

Neelix was never happier than when he was cooking. His traditional methods provided nutritious meals and helped save *Voyager*'s precious replicator energy.

Captain Janeway's private dining room was converted into a galley, where freshly cooked meals replaced replicated food.

When replicators were introduced to starships, galleys were all but eliminated, with chefs and cooks – along with the natural ingredients they cooked with – consigned to the history books. Instead, crews could get meals and beverages at the push of a button or a verbal command, making cooking implements such as ovens, hotplates, and saucepans surplus to requirements. However, when the *U.S.S. Voyager* was thrown across the galaxy and into the Delta Quadrant, adjustments had to be made to various systems and practices to preserve power for the long journey home. With starship replicators consuming a significant amount of energy, rationing the usage of the replicators installed in *Voyager*'s mess hall was an effective first step, and a back-to-basics solution was implemented.

New crewmember Neelix, a Talaxian native of the Delta Quadrant, appointed himself chef, and converted what had originally been the captain's private dining room into an old-fashioned galley.

Traditional cooking implements may have looked out of place on a 24th-century starship,but the back-to-basics approach served the *Voyager* crew well.

PRIMITIVE EQUIPMENT

Cooking utensils, and even galleys themselves, were a relatively uncommon sight on Federation starships of this period, and Neelix had to collect, trade, or replicate the wide variety of pots, pans, and burners he utilized. Few of these implements met Starfleet safety standards, but Neelix avoided any serious accidents.

Neelix employed numerous exotic devices with which to prepare and serve food to the *Voyager* crew. These fought for shelf space in the small galley area.

Many of the dishes prepared by Neelix came from Delta Quadrant cultures, with unusual ingredients that were often unfamiliar to the crew of *Voyager*.

TRADITIONAL METHODS

The new galley was outfitted with several traditional fire-heat-cook stoves, where chef Neelix usually had several pots boiling, as well as a cold-storage space and other appliances. The cooking utensils the Talaxian used were remarkably similar to those used by many other cultures, and included a low, wide pan similar to the Chinese wok commonly found on Earth.

Replicators were so common in the 24th century that cooking had become almost a lost art. The growing of foodstuffs on a starship, harvesting, and then undertaking the laborious process of food preparation, was considered too labor-intensive by all but enthusiasts. Luckily, Neelix was such an enthusiast, and had a genuine love for the work. The Talaxian particularly enjoyed preparing dishes from different cultures and experimenting with recipes of his own devising, using foodstuffs gathered from the planets *Voyager* visited or harvested from the ship's hydroponic gardens, located in cargo bay 2.

UNFAMILIAR RECIPES

During mealtimes, Neelix usually stood behind the counter, to dish out his freshly prepared meals to the crew. He had a habit of relating the history of each dish as he served it, and although many of the dishes were unfamiliar to the primarily human crew – and had an acquired taste – his efforts were mostly appreciated. Between meals, the serving counter contained bowls of similarly exotic fruit and other nutritious snacks from the Delta Quadrant.

Janeway recognized the contribution that the galley and mess hall made to crew morale. No matter what the problem, a cup of coffee would always help.

MAINTAINING MORALE

Beyond its regular remit, the mess hall served a vital role in maintaining the wellbeing of the crew, who used it as an area in which to relax, unwind, and socialize. Neelix put a great deal of effort into his role as morale officer, creating a space where the crew could forget how far from home they were, at least for a short while. Despite some initial misgivings, Captain Janeway recognized that losing her private dining room was a small sacrifice to make when compared to the enormous advantages the galley offered.

The galley and mess hall were Neelix's domain. He was head chef, chef de partie, and maître d' rolled into one. The Talaxian went to great lengths to make sure that mealtimes were as enjoyable as possible for his crewmates. Unfortunately, his passion for experimentation was not always to everyone's taste.

HOLODECK PROGRAMS

Despite being a drain on *Voyager*'s power resources, the ship's holodeck continued to serve as a source of crew entertainment and reminder of home.

Tom Paris created a holographic program of Chez Sandrine, a tavern near Marseilles in France that became popular with the crew.

The holodeck system on the *U.S.S. Voyager* deviated from standard Starfleet design philosophy, which favored centrally-powered, interconnected systems. *Voyager*'s holodeck wasn't connected to the primary power grid, and instead drew power from a dedicated reactor that wasn't compatible with other shipboard systems.

On a relatively small ship like *Voyager*, removing the energy-intensive holodeck system from the central warp and impulse power loop had numerous benefits, not least of which were improved engine performance and faster cycling times for the ship's weapon systems.

FUN FOR ALL

The holodeck was the crew's main source of entertainment, with many bespoke programs providing a link with home. Tom Paris' 'Paris-3' program recreated his favorite tavern in Marseilles, France – Chez Sandrine – where he had spent much of his time as a cadet. His holographic recreation was extremely popular with crewmembers.

Neelix created a holographic version of Paxau, but it was rather sedate. The program became more 'lively', and popular, after his friends reprogammed its parameters.

ALIEN INFLUENCE

In Neelix's Paxau beachside resort program, Harry Kim fell madly in love with Marayna, whom he assumed to be a holodeck character. Even Tuvok found her "compelling". However, Marayna was an alien who had hacked into the holodeck systems to interact with *Voyager*'s crew.

For the most part, holodeck characters were slightly unconvincing recreations of real or fictitious characters, lacking intuition or the ability to interact with others.

Marayna used Neelix's Paxau Resort holoprogram to communicate with *Voyager*'s crew, and took steps to prevent the crew from disengaging her program.

UNUSUAL APPLICATIONS

Before obtaining his mobile holo-emitter, the EMH utilized the holodeck to experience environments other than sickbay, and found several somewhat esoteric uses for it. These included throwing a party for Socrates, Madame Curie, Gandhi, T'Pau of Vulcan, and Lord Byron, in the hope of softening his bedside manner.

The Doctor created holographic representations of famous figures from history, hoping to integrate elements of their personality traits into his own program.

The Doctor tried to help Ensign Vorik through his pon farr by creating T'Pera, a Vulcan female, believing that mating with her would purge Vorik's 'blood fever'.

Holonovels were another holodeck pastime, in which the user was cast as the central character in an interactive holographic story which was unconnected with their real lives. In 'Janeway Lambda-1', the captain played out the fantasy of a Gothic romance as a governess in the employ of handsome and lonely widower, Lord Burleigh. Harry Kim became a legendary warrior in a holonovel based on the ancient epic poem 'Beowulf'.

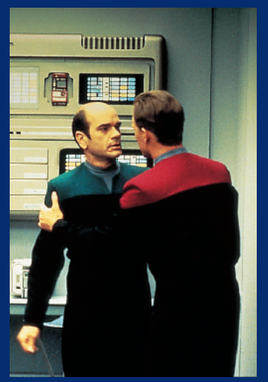
The most popular holodeck program of all was created by Neelix and modified by Tom Paris, Harry Kim, and B'Elanna Torres. The program began as a recreation of the exclusive Paxau beachside resort on Talax, but numerous additions resulted in a program that appealed to all tastes.

The holodeck was also used for practical applications beyond leisure pursuits. Tuvok created a simulation of the *Voyager* bridge in order to train the ship's new Maquis crew, and taught Kes how to pilot a shuttlecraft. On another occasion, the Vulcan was able to protect the crew after a mind-meld with Betazoid crewmember and psychopathic murderer Ensign Lon Suder left him experiencing a growing compulsion to kill. Tuvok used the holodeck to satisfy these urges until his suppression systems recovered.

ANOTHER WORLD

The holodeck offered almost infinite opportunities for self-expression, entertainment, and diversion, within simulated worlds that felt as real as reality itself. Programs allowed users to define the parameters of their experience in holonovels, historical recreations, or more personal virtual spaces.

The holographic Doctor was sent into Harry Kim's Beowulf program to retrieve three missing crewmembers.



A malfunction on the holodeck made the Doctor delusional, and he began to doubt the nature of his existence.

Captain Janeway enjoyed her role in a holonovel that was loosely based on *The Turn of the Screw* and *Jane Eyre*.

The Doctor first began to explore his new-found sentience in the Sandrine's holodeck program.

STANDARD EQUIPMENT

Familiar and adaptable Starfleet equipment was vital to maintaining the effective operational capacity of the *U.S.S. Voyager* during the ship's forced exile in the Delta Quadrant.

PADDs varied in size and configuration, from palm-sized units to larger devices, and each was designed with a focus on portability.

PADD

The Personal Access Display Device – PADD – was a small hand-held unit utilized by Starfleet personnel to assist them in their official duties, or for more recreational pursuits. Operated using the standard LCARS interface via a touchscreen, these versatile devices came in numerous convenient sizes and shapes and were a commonplace device. It was not unusual to find a crew member using several PADDs of different configurations while working through a complex task.

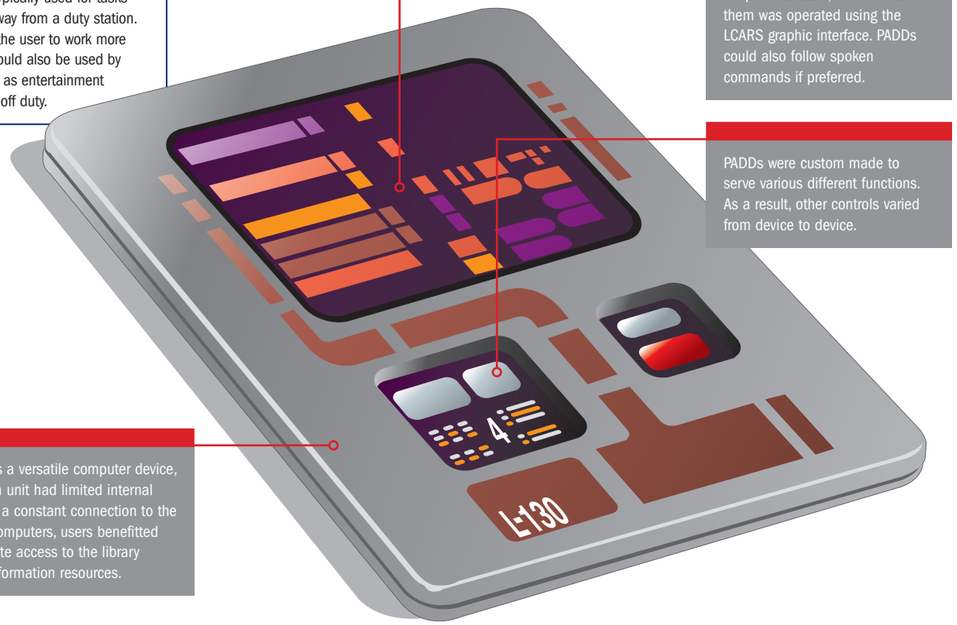
Each device was directly linked to the ship's main library computer, and could be used for a variety of tasks, such as recording personal logs, carrying out research, or compiling reports. In many instances, a PADD served as a mobile extension of a duty console, allowing a crew member to undertake operational procedures with greater flexibility. The units could also be linked to the ship's systems and used to remotely control primary ship functions, such as operation of the transporter.

At the heart of each PADD were three interchangeable elements: an isolinear memory chip; a subspace transceiver array; and a sarium power cell, which provided 16 hours of operational time when fully charged. The memory capacity of the device's isolinear chip was 4.3 kiloquads, and the contents of its memory could be uploaded to the main computer in less than a second. The subspace transceiver array maintained an always-on data link to the ship's computer, with the same range as a communicator.

FUNCTIONALITY
PADDs were typically used for tasks undertaken away from a duty station. They allowed the user to work more flexibly, and could also be used by crewmembers as entertainment devices when off duty.

PADDs came in many different shapes and sizes, but each of them was operated using the LCARS graphic interface. PADDs could also follow spoken commands if preferred.

PADDs were custom made to serve various different functions. As a result, other controls varied from device to device.



The PADD was a versatile computer device, although each unit had limited internal memory. With a constant connection to the ship's main computers, users benefitted from immediate access to the library computer's information resources.

TRICORDER

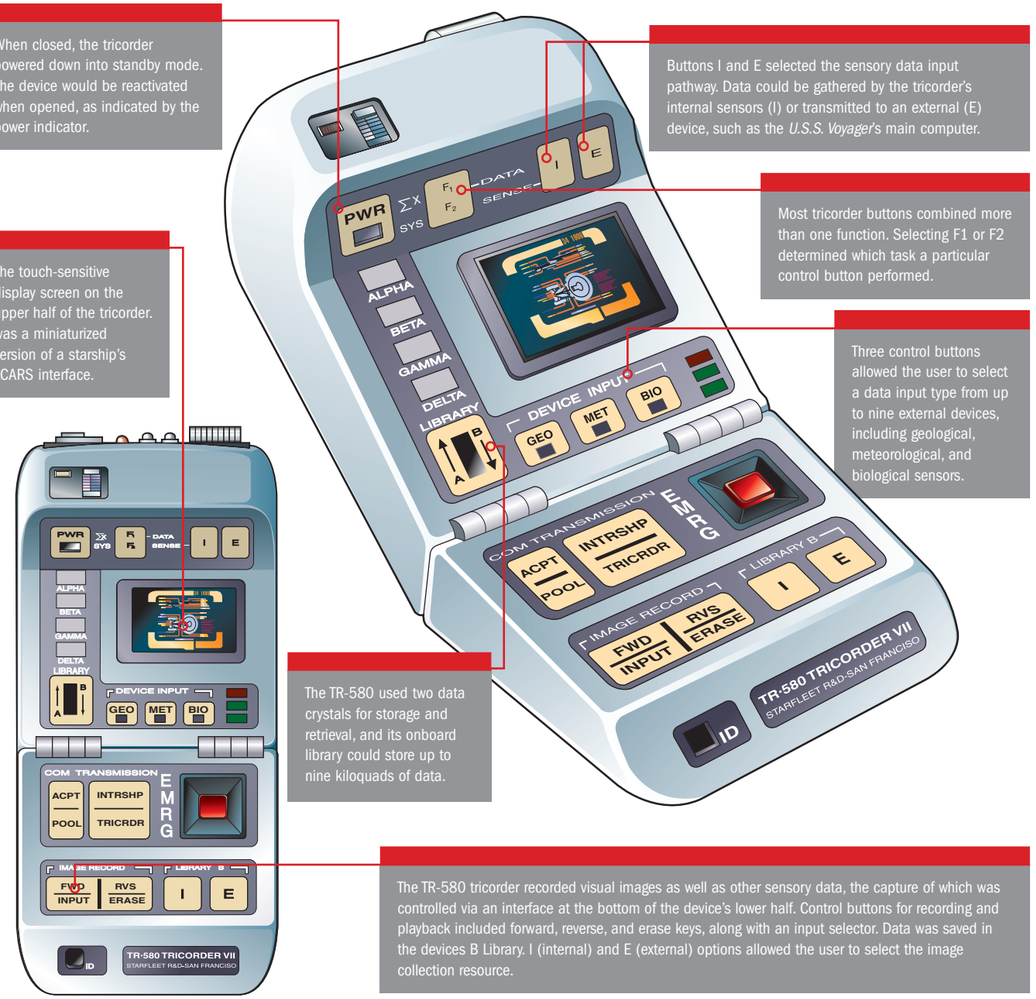
When closed, the tricorder powered down into standby mode. The device would be reactivated when opened, as indicated by the power indicator.

Buttons I and E selected the sensory data input pathway. Data could be gathered by the tricorder's internal sensors (I) or transmitted to an external (E) device, such as the *U.S.S. Voyager*'s main computer.

Most tricorder buttons combined more than one function. Selecting F1 or F2 determined which task a particular control button performed.

The touch-sensitive display screen on the upper half of the tricorder. was a miniaturized version of a starship's LCARS interface.

Three control buttons allowed the user to select a data input type from up to nine external devices, including geological, meteorological, and biological sensors.



The TR-580 used two data crystals for storage and retrieval, and its onboard library could store up to nine kiloquads of data.

The TR-580 tricorder recorded visual images as well as other sensory data, the capture of which was controlled via an interface at the bottom of the device's lower half. Control buttons for recording and playback included forward, reverse, and erase keys, along with an input selector. Data was saved in the devices B Library. I (internal) and E (external) options allowed the user to select the image collection resource.

The "Tri-function recorder," more commonly referred to as the tricorder, was a tried and tested item of Starfleet equipment used by engineers, scientists, and medical personnel in all aspects of their daily duties. The *U.S.S. Voyager* was issued with TR-580 Tricorder VII units, although the ship also carried the device's successor – the TR-590 Tricorder X – which was not widely pressed into Starfleet service until a year after *Voyager* became lost in the Delta Quadrant.

Both versions incorporated the familiar clam-shell design, which had been standard since the introduction of the TR-560 tricorder in the early 2360s. When closed, the tricorder became its own protective case, only revealing its comprehensive control interface when fully opened. An LCARS display screen was the device's most prominent feature, around which an array of multifunction switches and indicators were used to operate the unit.

INCREASED FUNCTIONALITY

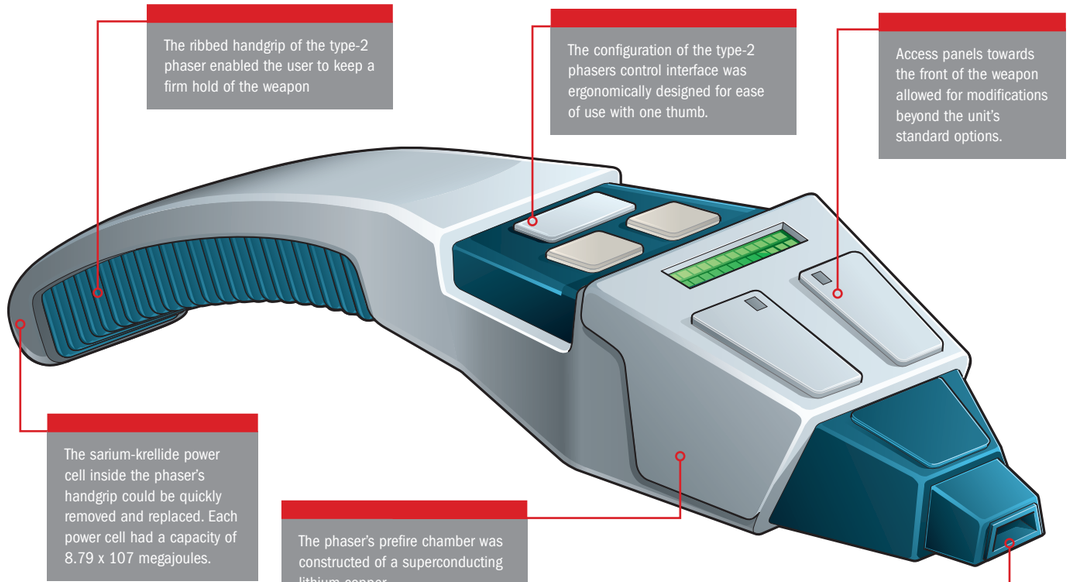
The tricorder could perform a wide range of additional functions in addition to its primary role as a scanning device, recording instrument, and information resource. The sensor arrays built into the clam-shell housing could be reconfigured so that the standard unit could operate as a medical tricorder, and several devices could be networked together if increased processing power was required. The latter device was somewhat hardier than its predecessors, and could continue to function even after being exposed to temperatures as extreme as 500 Kelvin, or submerged in water.

TYPE-2 PHASER

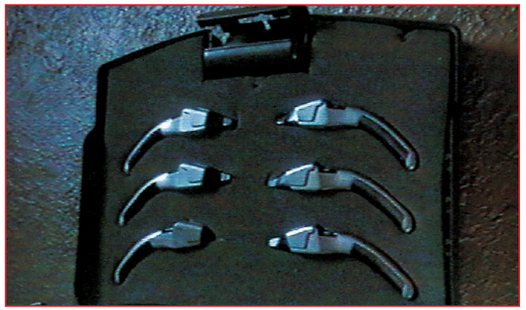
The crew of the *U.S.S. Voyager* faced many threats during their encounters with other species in the Delta Quadrant, and often found themselves in combat situations beyond the protective confines of the starship. During such encounters, where the use of force was unavoidable, the ever-reliable type-2 phaser came into its own as a weapon of defense.

The standard Starfleet sidearm issued to *Voyager* crew members was the same as the weapon available to crews across the fleet. It featured 16 power level settings, ranging from stun to vaporize. The weapon could kill a biological life form at setting 10, so for crew safety and security a phaser would be stored with its power level set to 1. As a further safety protocol, each phaser had an internal system relaying its power setting to the ship's main computer, via a subspace transceiver assembly. This constrained a phaser's power to level 3, which only authorized personnel could override.

Phasers were stowed in secure storage racks placed in strategic positions throughout the ship, giving crew members quick access to a weapon if the vessel became the subject of an enemy incursion.



A control panel on the upper face of the phaser was used to adjust the weapon's power setting, indicated by two rows of lights. A thumb trigger fired the weapon.



For safety, hand phasers were generally stowed in lockable storage racks, ensuring they were not too easily accessible to unauthorized personnel.

PHASER BEAM

The type-2 phaser emitted a concentrated beam of energy that could be adjusted to fire in a narrow or wide field, enabling the officer wielding the sidearm to target aggressors across a variable arc. The beam could be further adjusted to fire a sweeping beam or a spread of multiple beams simultaneously. In addition to stun and kill settings, the phaser beam could be set at levels useful outside of combat situations, and it could be used to heat an object, for example, or to slice through hull plating and even solid rock.

The beam's resonance frequency could be modulated to increase its effect upon a specific target. This variable was particularly useful against the Borg, whose shields could adapt instantaneously to attack. The phaser's dispersion frequency could also be adjusted to disrupt a holographic matrix, or hit objects and beings that were interphased.

A power cell within the phaser's handle generated plasma, which was then converted in the weapon's prefire chamber and fed to the emitter at the front of the phaser. The resulting beam was composed of artificially-generated nadion particles. Such particles left a residual trace where a weapon had been discharged. The phaser's power cell was interchangeable, and could be replaced in the field when its charge was depleted.

Phasers were often kept in key locations aboard a starship. During a macrovirus infestation, Captain Janeway accessed the armory cupboard in main engineering.

COMBADGE

Combadges served a dual purpose as a communications and translation device, and as an indicator of an individual's affiliation to Starfleet.

To initiate a communication, the wearer would tap the combadge. The EMH had a holographic combadge with operated in the same way.

While other items of standard issue equipment were pressed into service as and when required, the Starfleet insignia-shaped combadge was a permanent and ever-present element of a crew member's uniform in the 24th century.

Worn on the left breast of a uniform, each combadge could only be activated by the crew member to whom it had been issued. A simple touch with the tip of a finger – confirming the user's biometric credentials – triggered the device's primary functions and allowed for instant communication with other personnel, whether on board the *U.S.S. Voyager* or on an away mission. The combadge would also signal the wearer's identity to a duty console, authorizing them to make use of it.

SAFETY FIRST

Given the fragile nature of the *Voyager* crew's predicament in the Delta Quadrant, the combadge was a vital tool in ensuring the safety of each individual crew member.

Beyond their main functions as a communicator and universal translator, combadges acted as a locator beacon, not only providing a lock-on point between personnel and the ship's transporter, but also monitoring their location aboard the ship. In emergency situations they could be modified into a sub-space distress beacon, and if a combadge were to be damaged, it would automatically emit an emergency distress signal.

Constructed from a crystalline composite, the combadge had a signal range restricted to approximately 500 kilometers when beyond the range of a starship. However, when linked with a starship's communications systems, a combadge was capable of making contact with a vessel traveling at warp speed.

PHASER RIFLES: 2370s

Voyager's weapons inventory included phaser rifles. These firearms were reserved for crewmembers in conflict situations, where they served as the last line of defense against powerful aggressors.

The compression phaser rifles issued to the *U.S.S. Voyager* were the latest in a century-long evolution of the Starfleet firearm, most often employed as a last resort against overwhelming odds. Numerous iterations had refined the characteristics of the weapon, but it remained less widely used than the capable and adaptable type-2 hand phaser.

The *Voyager* crew benefited from enhancements to the phaser rifle added after Starfleet's early encounters with the Borg, with whom they found themselves in conflict on several occasions. The rifle's beam frequency could be easily modulated, thereby circumventing the problem of Borg shields adapting in order to repel the phaser beam.

Light enough to carry in one hand, the phaser rifle could be fired like a pistol, but could also be used with a two-handed grip which, along with the sight, made it particularly suitable for long-range fire. The power levels and destructive abilities were similar to those of the smaller hand phaser, but the rifle had 50 percent more energy reserves.

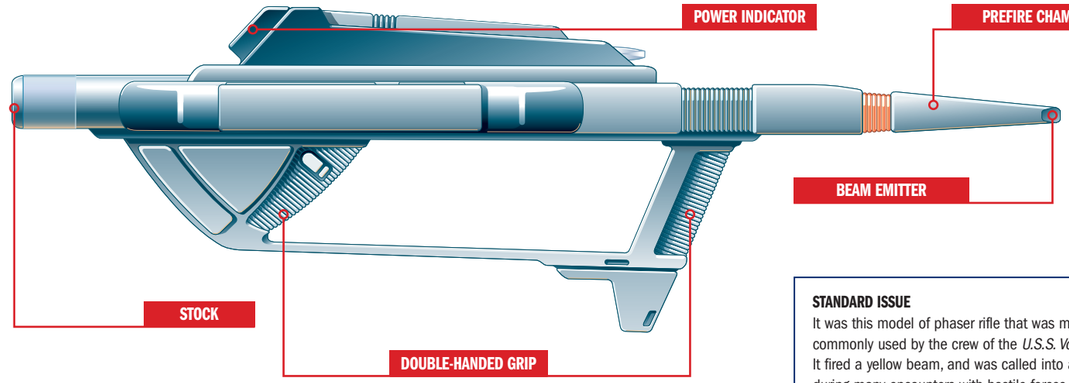
During the first few years of *Voyager*'s time in the Delta Quadrant, the compression rifle was the standard weapon employed when heavy weaponry was required. However, as time went by, and with dwindling resources, *Voyager*'s crew also began to use two variants of the type-3 phaser rifle.

The compression phaser rifle incorporated technology that had been developed to counteract the Borg's ability to adapt and shield themselves against phaser fire.

Type-3 phaser rifles came into regular usage during the latter part of *Voyager*'s journey through the Delta Quadrant.

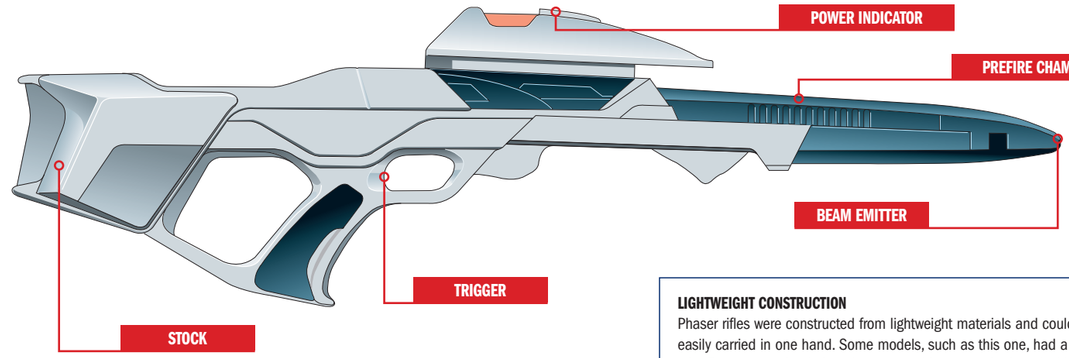
Seven of Nine defended herself with a type-3 phaser, which had 50 percent more engery reserves to call upon than the standard, type-2 phaser pistol.

COMPRESSION PHASER RIFLE



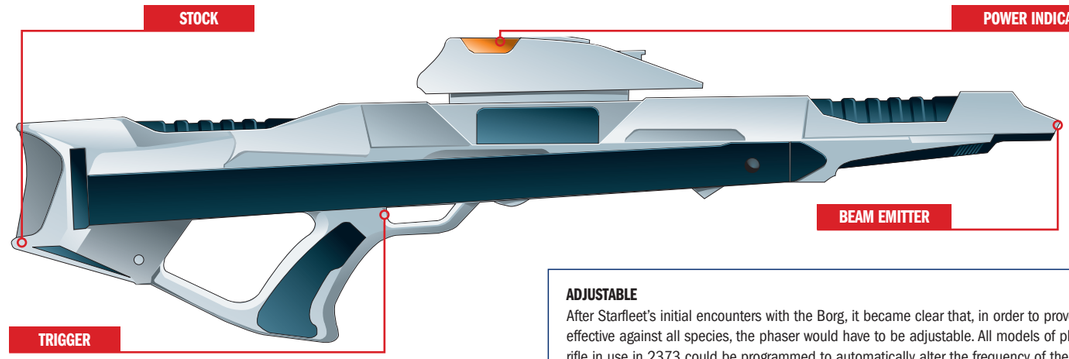
STANDARD ISSUE
It was this model of phaser rifle that was most commonly used by the crew of the *U.S.S. Voyager*. It fired a yellow beam, and was called into action during many encounters with hostile forces.

TYPE-3 PHASER RIFLE



LIGHTWEIGHT CONSTRUCTION
Phaser rifles were constructed from lightweight materials and could be easily carried in one hand. Some models, such as this one, had a single grip. For accuracy in aiming, the user could support the barrel with his or her free hand without danger of injury.

TYPE-3 PHASER RIFLE



ADJUSTABLE
After Starfleet's initial encounters with the Borg, it became clear that, in order to prove effective against all species, the phaser would have to be adjustable. All models of phaser rifle in use in 2373 could be programmed to automatically alter the frequency of the beam, making it harder for an opponent to generate effective shields.

LOCATOR BEACON

In case of emergencies, every Starfleet vessel – including shuttlecraft – was fitted with a locator beacon, broadcasting a ship's coordinates in the event of a disaster.

During the 24th century, Starfleet ships benefited from numerous safety backups that ensured their shields, environmental systems, and structural intensity fields were not compromised in the event of damage. However, unforeseen circumstances could result in a dire situation where a vessel could no longer sustain the life and well-being of its crew. Whether it left them drifting in space without power or crash-landed on a planet, sometimes a crew needed to send out a call for help.

Locator beacons were developed by Starfleet to fulfil just this need, and were installed an all vessels, from small shuttles to *Sovereign*-class behemoths. Designed to transmit vital information across long distances – such as a distressed ship's unique Starfleet registry number, its precise spatial coordinates, and current operational status – on many occasions they proved to be the only means of detecting and locating a vessel feared lost.

The *U.S.S. Voyager*'s sheer distance from Federation space rendered its own locator beacon redundant, but devices carried aboard its shuttlecraft proved vital in ensuring the survival of various members of the crew.

BEACON DEPLOYMENT

A standard locator beacon could be deployed in several ways: it could be launched into space, where it would maintain a position relative to the location from which it had been launched, or alternatively it could be carried by a crew member as part of emergency field equipment on the surface of a planet. Lightweight, extremely tough, and built to survive the harshest of landings, locator beacons were also portable enough to be packed into a container pod and transported to an optimum broadcast point.

DISTRESS SIGNAL

A beacon would be launched if a shuttlecraft was lost in space, extensively damaged, or in danger of crashing, and would immediately begin broadcasting a distress signal on a variety of bandwidths. Even if a damaged ship continued to travel some distance beyond the position of the beacon, it would relay enough information for a rescue ship to thoroughly scan the area to locate the stricken vessel.

A beacon operated at maximum efficiency in areas free of atmospheric disturbances or the magnetic interference of a planetary body. When used on a planet's surface, it was best to position the device on high ground. While its primary purpose was to relay positional information to a rescue ship, a locator beacon also acted as an amplifying relay for communications signals to a stranded party. This two-way function was particularly useful when emergency transport was required.

While locator beacons came in a variety of form factors, they were generally small enough to be held in the hand. The average emitter device stood at around 38 centimeters and included a light on top that pulsed to indicate it was transmitting. Simple controls to activate and monitor the beacon were located at the top ring of the central column.

LOCATOR BEACON CONFIGURATION

A fully functional locator beacon was sometimes the only hope of survival for Starfleet officers trapped in hostile environments.

LOST AND FOUND

Following a crashlanding on a desert planet, *Voyager* officers Lt. Commander Tuvok and Lt. Tom Paris had to survive in a deadly environment while awaiting rescue. A multi-spacial probe launched from the *U.S.S. Voyager* into a gravimetric shear was eventually able to detect their shuttlecraft's locator beacon.

Tuvok, Tom Paris, and The Doctor became stranded when their shuttle crashed in a temporarily-distorted area of space.

Trapped within a gravity well, a locator beacon salvaged from their shuttlecraft offered Tuvok and Paris some hope of rescue.

The locator beacon was used to enhance the signal and reach of a transporter beam. However, the stranded crewmembers had to be within a two-meter radius of the device to be transported.

CARGO BAY 2

The arrival of Borg drones aboard the *U.S.S. Voyager* in 2374 led to several modifications to cargo bay 2, which had previously functioned as the ship's hydroponics bay.

A highly advanced Borg drone was one of a series of Borg to take up residence in the modified cargo bay 2.

The storage area known as cargo bay 2 was subjected to considerable alteration and repurposing after *Voyager* began its journey through the Delta Quadrant. Initially, the place served simply as an area to store a plethora of Starfleet equipment, but it was converted into a hydroponics garden in order to provide vital sustenance for the crew once the ship found itself stranded and replicator rationing was imposed.

BORG ADAPTATIONS

At the beginning of 2374, cargo bay 2 became the focus of a Borg attempt to assimilate the *U.S.S. Voyager* when a section of a Borg cube was transported there. The invasion attempt failed, but a lone Borg drone, Seven of Nine, survived. When Captain Janeway decided to integrate the ex-drone into the crew, cargo bay 2 was therefore the natural choice for her accommodation.

Salvaged Borg technology, including several regeneration alcoves capable of sustaining a drone, were fitted into the cargo bay. This facility became fully employed when it unexpectedly became a nursery in 2376, following the arrival of four Borg children.

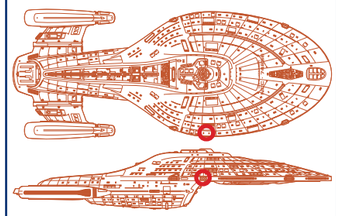
Four regeneration alcoves kept Borg drones, including Seven of Nine, functioning at optimum efficiency.

Cargo bay 2 was initially used for storage, and some of the racks that held miscellaneous items were retained.

Several Borg systems were integrated into the cargo bay. These served to regulate the regeneration alcoves used by the Borg drones that came to call *Voyager* home.

A freestanding console occupied a central position in the cargo bay. The console's primary purpose was to track the bay's inventory, but it was more often employed by Seven of Nine in the execution of her duties.

The deck of the cargo bay was kept clear so that stored materials could be easily moved across it.



ROOM LOCATOR

SPARTAN FURNISHINGS

Seven of Nine's skills did not extend to interior design, but the barely furnished cargo bay was adequate for her purposes. She required only the regeneration alcoves for sleep, and the central console to execute her duties. The fact that the room was filled with stored equipment and illuminated largely by Borg technology rather than standard lighting was irrelevant to her.

Cargo bay 2 was adapted to meet the needs of the Borg drones occupying it. The systems that were installed remained in place to accommodate Seven of Nine's unique physiology.

Commissioned as a science and research vessel, the function of the *Intrepid*-class dictated the inclusion of a number of large cargo storage areas onboard for use during its missions. The *U.S.S. Voyager*'s relocation to the Delta Quadrant lead to a number of these areas being adapted in order to sustain the crew during periods of replicator rationing, with cargo bay 2 on deck 8 converted into a hydroponics garden.

The cargo bay continued in this function for over a year, until the vessel encountered Species 8472, and formed an uneasy alliance with the Borg collective to combat them. At the beginning of 2374, the Borg cube on which Lt. Commander Tuvok and Captain Kathryn Janeway were working with Seven of Nine on a defense against Species 8472 was destroyed, and the away team were beamed into cargo bay 2, along with Seven of Nine and several other drones. The transportation of the surrounding section of the Borg cube was fortuitous in that it saved the lives of the captain and chief of security, but it also gave the Borg a foothold aboard *Voyager* that proved problematic.

Prior to its assimilation by the Borg, cargo bay 2 was a single-level storage facility linked to deck 8's main corridor via a set of automatic double doors that protected the rest of the vessel when the cargo bay was depressurized. Following an attempt by the Borg to assimilate *Voyager* from the cargo bay, another set of doors built into the outer hull of the deck were opened, and a majority of the drones were flushed into space; only Seven of Nine survived this procedure, due to her infiltration of the low level Jefferies Tube built into the interior bulkhead of the cargo bay.

HOME TO THE BORG

Once Seven of Nine's continued presence aboard *Voyager* was decided upon by Captain Janeway, over a period of two weeks the majority of the Borg equipment beamed into the cargo bay was removed, although improvements to several secondary power couplings on deck 8 were retained.

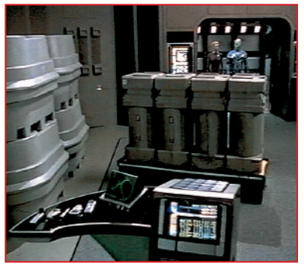
The presence of the highly advanced Borg drone One brought a fresh importance to the Borg systems within cargo bay 2. Information was downloaded into Borg data nodes directly from the cargo bay, ready for One to assimilate.

Cargo bay 2 was officially designated as Seven of Nine's quarters around Stardate 51003.7. In order for Seven to survive aboard *Voyager*, one section of the Borg ship was retained, as it contained four fully functional regeneration alcoves, and a number of control interfaces. The section was located on the right side of the cargo bay as seen from the main entrance doors, and ran to the rear of the room, with Seven's alcove being the only one active until the recovery of four Borg children in 2376. These children faced a similar dilemma to Seven as they, too, had been removed from the Collective, so required the activation of the remaining three alcoves in order to regenerate, despite a significant reduction in their reliance on Borg implants.

Unlike the rest of the crew quarters, Seven's habitat featured no personal items or furnishings. The cargo bay's functional interior remained exactly as it had before her occupation, although some of the bulkhead plates were reinforced, particularly around the main entrance hatch.

The cargo bay was accessed via a large set of double doors. Large racks holding storage containers flanked the entrance.

An intricate Borg interface panel was positioned next to the regeneration alcoves. This unit could interact with the ship's LCARS systems.



A freestanding console, located opposite the regeneration alcoves, was used to update the inventory of the cargo bay's contents.

FUNCTIONAL SPACE

Cargo bay 2 did not require extensive control interfaces, as its primary function was one of storage. However, there were two illuminated touch-sensitive panels located to the left and right of the main entrance hatch. Manual controls to the doors and the bay's environmental controls were built into these units, but if the panel was inoperative it was possible to release the doors manually via controls set into a small floor hatch in the left corner of the room, as seen from the doorway. A hinged panel could be opened to expose a series of illuminated conduits and controls, which allowed the double doors to be partially released. Apart from the panel covering the entrance to the floor-level Jefferies tube, the only other controls within Seven's cargo bay were those built into the curved Borg control panels and alcoves, and the single workstation from which Seven could attend to her duties.

The deck was kept clear, allowing for the free movement of cargo into storage bays or for transportation to other parts of the ship. Lighting was kept at a relatively low level, and was supplied by a series of suspended lights built into the storage racking to the rear of the bay, as well as panels built into the high ceiling.

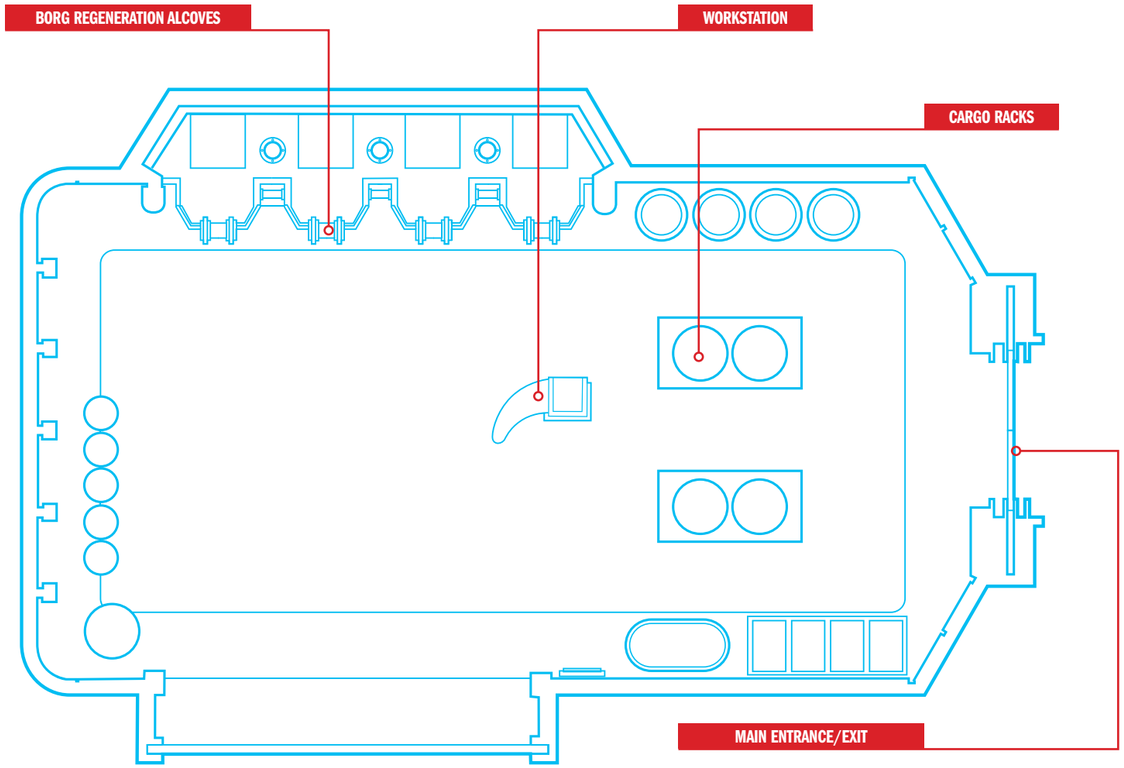
DUTY STATION

Seven of Nine's workstation was positioned so that it faced the main doors directly in front of her alcove. Constructed from a dark gray material, the console was comprised of a curved section to the left, and a large monitor to the right. Two small rectangular data displays and banks of touch-sensitive Starfleet interface controls occupied the curved panel, allowing Seven to reconfigure the workstation for a number of functions. No provision was made for seating at the console, but this was no problem for the former drone.

Located directly behind the workstation there were two tiers of storage racks, generally used to house more cumbersome canisters and equipment. Smaller barrels and stand-alone cases were often stacked along the cargo bay wall, but larger containers and other objects were held within these racks. Standard modular Starfleet containers could be easily stacked on top of each other, and higher racks could be accessed via an integrated ladder.

Seven of Nine had no objection to the storage of equipment in her quarters, as she required only her Borg alcove and the cargo bay workstation to carry out her duties and maintain her well-being.

CARGO BAY 2 ADAPTATIONS



MICRO-PROBES & TEST CYLINDERS

Hopes that the *U.S.S. Voyager* had found the means of contacting home were raised when the crew discovered a micro-wormhole leading to the Alpha Quadrant. Various scientific devices were employed to test the possibilities.

On stardate 48579, the *Voyager* crew discovered evidence of a wormhole, potentially offering a fast track back to the Alpha Quadrant. Changing course to investigate further, the crew were disappointed to find that, at just 30 centimeters wide, this micro-wormhole was too small for *Voyager* to enter. However, the crew elected to fire a microprobe into it anyway, in the interests of research.

Such microprobes were designed to enable investigation of phenomena inaccessible to a starship's main sensors, and would return telemetry to the ship remotely from within the confines of the object being scanned. In this instance, the microprobe became caught in a gravitational eddy, but this difficulty led to an unexpected opportunity.

IMPROVISED INVESTIGATIONS

The crew realized that the micro-probe was being scanned by someone at the other end of the wormhole, and sent a signal via subspace carrier wave to hail them. The scans confirmed that the micro-wormhole provided a link between the Delta and Alpha Quadrants, and was capable of carrying compressed data transmissions, opening up the possibility of messages being sent over 70,000 light years in a matter of minutes. Contact with a Romulan science ship was established, and its captain, Telek R'Mor, agreed to relay messages from the crew to the Federation.

Voyager's chief engineer, B'Elanna Torres, had more ambitious plans, however. She suggested that the micro-probe could be used as a transmitter relay in conjunction with the transporter, in order to beam the entire crew directly to the Alpha Quadrant via the wormhole. Captain Janeway gave Torres permission to explore the feasibility of her idea, and a test cylinder was prepared to beam to the Romulan ship.

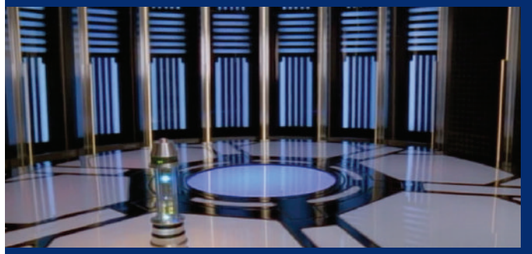
TESTING THE TRANSPORTER

Test cylinders allowed Starfleet scientists and engineers to simulate the molecular matrix of any organic or non-organic compound, using a cylinder to test how they might react to external influences. Torres prepared a cylinder to mimic humanoid biology and beamed it to the Romulan ship. The test was successful, and Janeway suggested beaming a crewmember as a further test, but R'Mor was reluctant to compromise Romulan security, fearing reprisals from his superiors. Instead, he offered to be the test case, and was beamed aboard *Voyager*.

Having technically proven the theory that the entire crew could be transported back to the Alpha Quadrant using this method, interference experienced during the test was found to be due to a 20-year temporal misalignment within the wormhole, connecting R'Mor's ship in the year 2351 with *Voyager* in 2371. The danger of polluting the timeline prevented the crew from making use of this chance to return home. Instead, R'Mor returned to his ship with messages for their friends and families, and a promise to wait 20 years before delivering those messages.

INCREDIBLE JOURNEY

Despite the often hostile relationship between his race and the Federation, Romulan scientist Telek R'Mor was willing to help the stranded crew of the *U.S.S. Voyager*, agreeing to be beamed from his ship to *Voyager* via the micro-wormhole. However, it transpired that this wormhole stretched across both space *and* time.

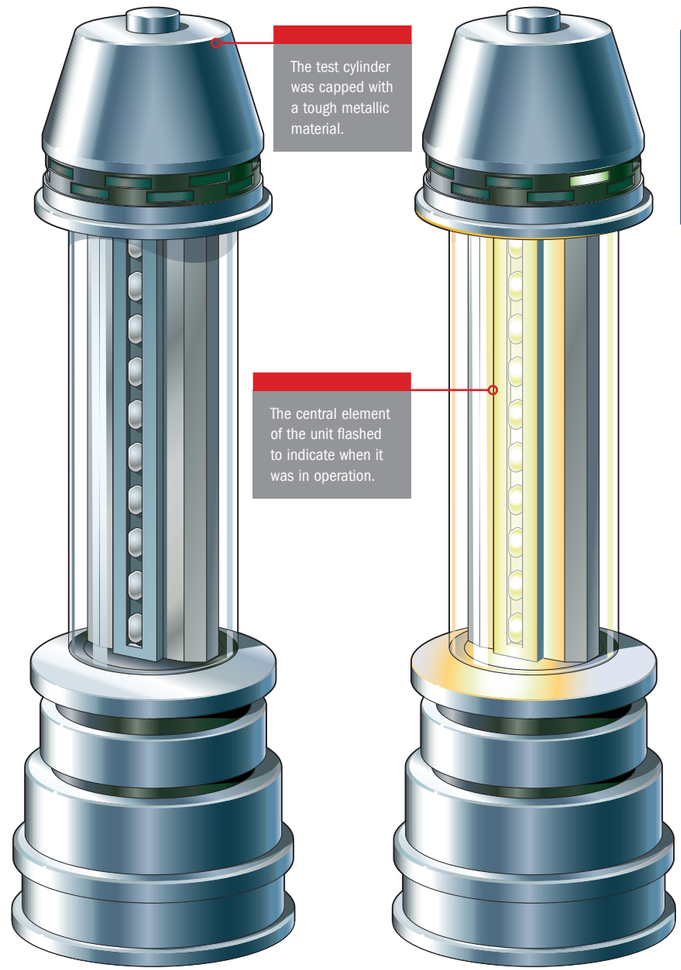


A standard Starfleet test cylinder was used to test B'Elanna's theory that transporter signals could be relayed through the mired micro-probe.

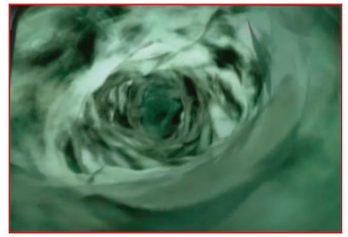
The cylinder successfully appeared on R'Mor's ship. The Romulan was genuinely impressed that the plan had worked.

After 20 trial runs, it appeared safe to go ahead and transport a living being through the micro-wormhole, so R'Mor beamed aboard *Voyager*.

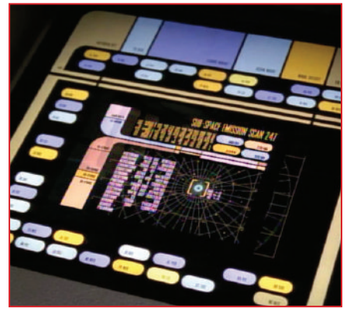
STEPPING STONE TO HOME



FUNCTION
The test cylinder was a standard Starfleet mechanism with a varietal molecular matrix. It simulated most organic and non-organic compounds, allowing the *U.S.S. Voyager* crew to establish whether or not it was safe for them to transport.



The crew of *Voyager* discovered a rare phenomenon – a micro-wormhole connected to the Alpha Quadrant.



At a mere 30 centimeters in diameter, a micro-probe was needed to investigate the micro-wormhole.

STARFLEET RANK INSIGNIA

When *Voyager* became lost in the Delta Quadrant, all contact with Starfleet was interrupted. However, Captain Janeway decided that Starfleet standards would be maintained, including the formal system of ranks.

When the *U.S.S. Voyager* was abducted by the entity known as the Caretaker, and became stranded in the Delta Quadrant, the crew were wearing the Starfleet duty uniforms that had been introduced in the late 2360s. When Captain Janeway incorporated the crew of the Maquis vessel *Val Jean* into *Voyager*'s crew, the Maquis were also required to wear Starfleet uniforms.

Starfleet's duty uniforms were updated in 2373. However, Voyager's crew continued to wear their original 2360s uniform until their return to the Alpha Quadrant in 2378.

The system for denoting the rank of each *Voyager* crewmember followed what had been in use since the mid-24th century – a series of small circular pips, each just one centimeter in diameter, worn on the right-hand side of each crewmember's collar. The pips were gold in color, or black and ringed by a metallic circumference. The number and arrangement of these pips provided an immediate visual reference to the rank of the wearer.

The black pips are the equivalent of a 'half pip', indicating a lower rank, than a solid gold pip. A single black pip would denote a chief warrant officer, the highest rank for a non-commissioned officer. The lowest officer rank is Ensign, such as Harry Kim, who wore a single gold pip.

A gold pip accompanied by a black pip denotes a lieutenant junior grade. Prior to his dismissal from Starfleet, Paris had reached this rank, and after *Voyager* was transported to the Delta Quadrant, and Paris proved his worth, Captain Janeway reinstated his rank. However, in 2375, after disobeying orders, Paris was demoted to Ensign, but he later redeemed himself and was once again promoted to lieutenant junior grade in 2377.

A full lieutenant is indicated by two solid gold pips. An additional black pip is worn by officers who have attained the rank of lieutenant commander. On *Voyager*, Tuvok was promoted to lieutenant commander by Captain Janeway for his outstanding service as the ship's chief tactical officer. A full commander would have three solid gold pips.

The most senior officer aboard *Voyager* was Captain Janeway, her status indicated by four gold pips, there being no intermediary ranks between commander and captain. All ranks above captain are referred to as admirals, although there are still five separate ranks in this category, with fleet admiral being the most senior. The lowest-ranking admirals wear a single metal pip, but unlike that of an ensign, it is placed on a black background and surrounded by a metal border. As the importance of the admiral increases, more pips are added inside the border. Admirals wear their rank pips on both sides of the uniform collar, and some uniform variants incorporate the rank bands on the outside of the tunic cuffs as well.

Janeway was the senior ranking officer on *Voyager*, though she and her crew did interact with Tom Paris' father, Admiral Owen Paris, when communications with Starfleet were re-established. Admiral Paris had four pips on the bar on his collar. After successfully returning *Voyager* and her crew to the Alpha Quadrant, Janeway was herself promoted to the position of Admiral.

When the Maquis rebels were incorporated into *Voyager*'s crew, they were given ranks appropriate to their skills and experience. In some cases, those that had previously been Starfleet officers, such as Chakotay, were given the rank that they had previously held. As these ranks were only provisional, awarded due to unique circumstances, the ranks of the Maquis officers were displayed as gold metal bars. The system remained the same as the pips, with gold and black diagonal strikes across the bar showing rank. First officer Chakotay was a commander, with three gold strikes, and B'Elanna Torres had one gold strike and one black one, indicating her rank of lieutenant junior grade.

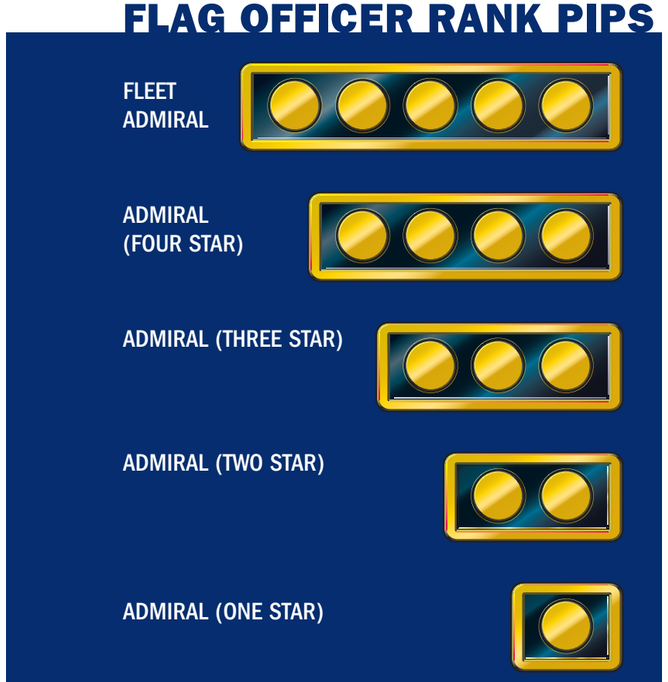
Captain Janeway made an early decision to maintain the Starfleet system of ranks whilst *Voyager* was stranded in the Delta Quadrant. This played a significant part in maintaining discipline and order and enabled the crew to work together and ultimately return home.

COMMAND (Duty Color Red)
As worn by Captain Janeway.

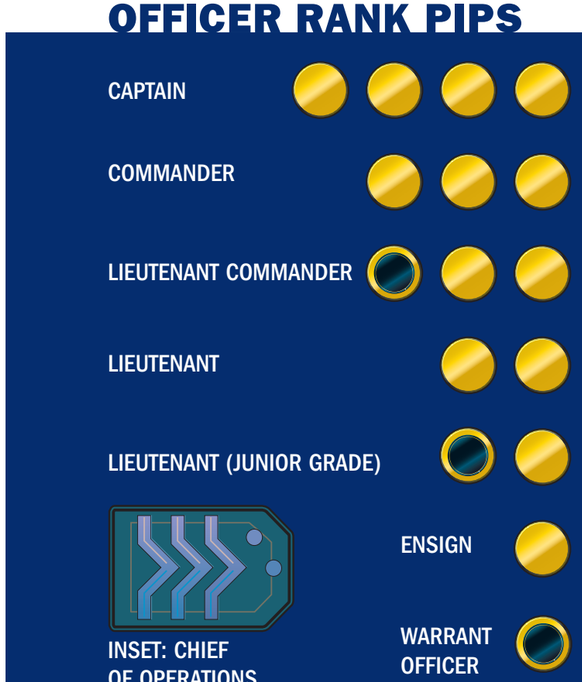
OPERATIONS (Duty Color Gold)
As worn by B'Elanna Torres.

SCIENCE (Duty Color Blue)
As worn by Samantha Wildman.

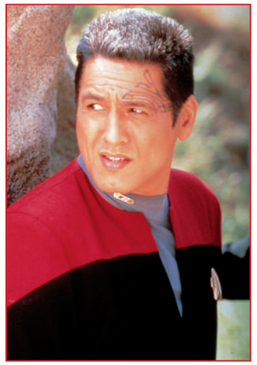
FLAG OFFICER RANK PIPS



OFFICER RANK PIPS



Captain Janeway has four solid gold pips on her collar, indicating her senior position.



Commander Chakotay's rank is provisional, a distinction made by the bar, rather than pips, on his collar.

Tuvok's outstanding service as tactical officer was recognized by a promotion to lieutenant commander.

As a newly graduated ensign, Harry Kim had a single, solid pip. This was the lowest commissioned rank.

DUTY UNIFORM (COMMAND)

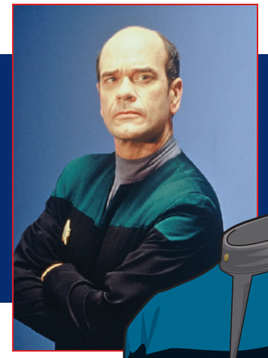
Red Shoulders:

as worn by the captain

DUTY UNIFORM (OPERATIONS)

Gold Shoulders:

as worn by the chief engineer



DUTY UNIFORM (SCIENCES)

Blue Shoulders:

as worn by medical staff

DRESS UNIFORM (COMMAND)

Red Tunic:

captain's variant shown

RACING UNIFORMS

The standard Starfleet uniform received a bespoke redesign that was worn by the race crew of the *Delta Flyer* when the ship was entered into the Antarian Trans-stellar Rally.

Chief Engineer B'Elanna Torres and Lt. Tom Paris wore a racing uniform that had been specially designed for the space rally.

A number of variations on the single-piece Starfleet jumpsuit were introduced during the late 2360's, including the standard coverall duty uniform worn by the crew of the *U.S.S. Voyager* when they became lost in the Delta Quadrant in 2371. No significant changes were made to the design during *Voyager*'s journey through this distant region of space, although a singular variation on the standard uniform was created for a specific use in 2377, when Lt. Tom Paris, Ensign Harry Kim, and Chief Engineer B'Elanna Torres entered the *Delta Flyer* into the Antarian Trans-stellar Rally.

PRESENTING RALLY COLORS

While the standard Starfleet uniform would have been eminently suited to be worn by the crew undertaking the race, it was decided that something special was required for the prestigious event and a new uniform was designed to represent the crew as a racing team.

First worn during a gathering of competitors aboard *Voyager* prior to the commencement of the rally, Harry Kim and Tom Paris cut a dash in their new garb, and the sharp lines of their uniforms distinguished them from the other Starfleet officers attending the ceremonies. The officers continued to wear the racing kit during their preparations for the rally, and Kim's subsequent replacement by B'Elanna Torres showed that the uniform was perfectly suited for use by both female and male competitors.

SHARP LINES

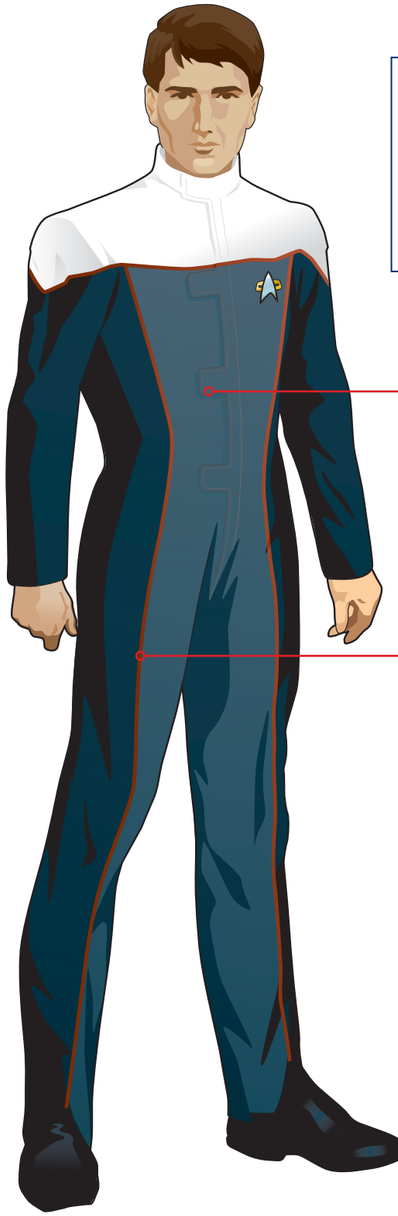
The race uniform differed in a number of ways from the standard Starfleet jumpsuit, exhibiting a series of details that were not present in the normal day-to-day duty uniform. The garment was still a single piece outfit with fastenings running along the center of the front, but the use of color and materials were employed to far more striking effect. The shoulder section eschewed the use of a department color, replacing the usual gold, red, or blue with a brilliant shade of white, and the main body employed a two-tone mix of dark fabrics. Further distinguishing the design from the regular uniform was a narrow bead of red piping which ran along the seams of the uniform, adding a dapper dash of swagger to its racing pedigree.

PROTECTIVE FASTENING

The neck section of the race uniform had a wraparound design featuring a tab concealing a fastening mechanism. This high neckline was designed to protect the wearer's skin more effectively against possible burns than the standard undergarment of the regular uniform. Identical fastenings ran vertically along the front of the uniform, securing the hardwearing garment closed. Unusually, the racing uniform did not display pips denoting an officer's rank, creating the image of an egalitarian team with no hierarchy, working together as a seamless unit in order to win the race.

Despite ongoing relationship issues, B'Elanna Torres and Lt. Tom Paris worked together in an attempt to win the Antarian Trans-stellar Rally in the *Delta Flyer*.

Rally contenders Harry Kim and Tom Paris chatted to fellow competitor Irina at the pre-race party hosted aboard the *U.S.S. Voyager*.

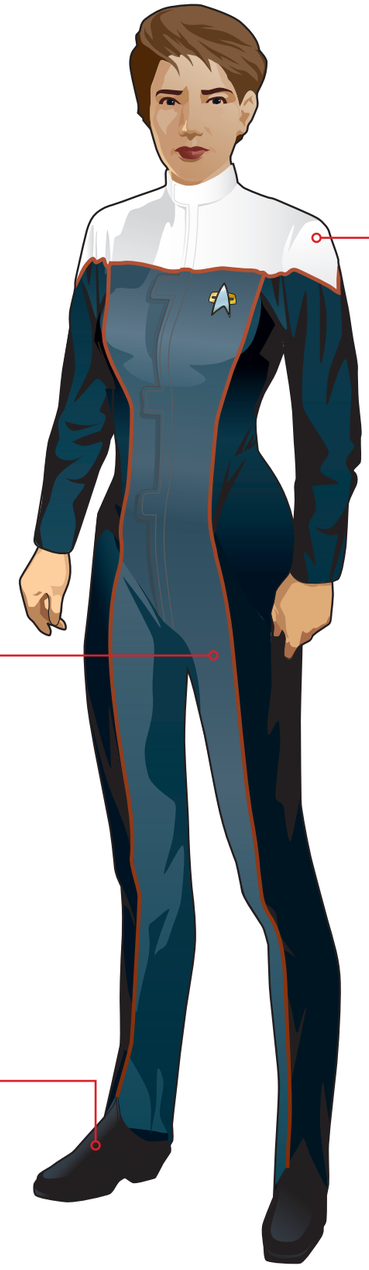


UNIFORM VARIATION
The racing uniform was a departure from the standard Starfleet duty uniform design, although it retained stylistic elements and had a similar cut. The uniform incorporated the standard shoulder section and comm badge placement, but featured fastenings sealing the front of the garment, and a protective collar.

The fastenings along the front of the uniforms were made from the same material, and fit over the main body of the uniform to form a secure binding.

Additional detailing unique to the racing uniform included red piping aloing the seams.

A universal white shoulder section replaced the usual colored panel that denoted the crew member's Starfleet department, and was specific to the crew of the *Delta Flyer*.



The grey paneling on the front of the uniform, which ran along the inside leg to the ankles, was made of a non-reflective, hard-wearing fabric that provided additional protection to the wearer. The side panels were consrtucted from the same material used in the standard Starfleet duty uniforms, which was known for its resilience to heat, atmospheric changes, and general damage. Such characteristics were essential during dangerous away missions, and were therefore ideally suited to the dangerous race conditions the crew were about to face.

The footwear of the racing uniform was the standard Starfleet-issue boot. The lower leg of the uniform fitted over the footwear by including a slight incision at the upper ankle.

NEW LOOK
While the uniform was primarily composed of the same material as the standard Starfleet jumpsuit, the additional paneling covering the neck, shoulders, and front of the crew member was made from an enhanced fabric that offered increased protection.

STARFLEET SPACESUITS

The *U.S.S. Voyager* crew experienced all kinds of hostile environments during their travels. Fortunately, the ship had been issued with the latest in spacesuit technology.

The spacesuits of the 2370s were simple to get into, and offered effective protection in numerous hazardous conditions.

In any vacuum, whether in open space or on a damaged starship, most humanoids can only survive with the help of a protective suit that is designed to maintain optimum life support conditions for their species.

The spacesuit issued to the crew of the *U.S.S. Voyager* offered the latest in protective technology, giving the wearer the confidence to carry out their duties whatever external conditions they faced. Constructed from a non-porous, lightweight material, the suits were flexible enough for the wearer to move almost naturally, whether in space, in an enclosed environment, or on the surface of a hostile world.

SECURE BY DESIGN

Each of the spacesuits main components – comprised of magnetic boots, a jumpsuit, a jacket, an environmental unit, gloves and a helmet – had an airtight seal at every join and was secured in place, and to each other, by strong clamps. The gloves allowed the practiced wearer to manipulate electronic controls or carry out repairs with ease, and to operate a phaser rifle if the mission required.

The helmet had two separate viewing panels: a large one in front of the wearer's face, and a smaller one across the top of the helmet to provide a line of sight upward. It fitted closely around the head of the wearer, extending down to a collar unit which protected the neck, shoulders, chest, and back. This unit incorporated the suit's life support system, along with breach monitoring equipment to warn the wearer of physical damage to the suit.

A panel on the left wrist of the spacesuit contained a communicator and controls for adjusting the suit's internal environment and life support functions.

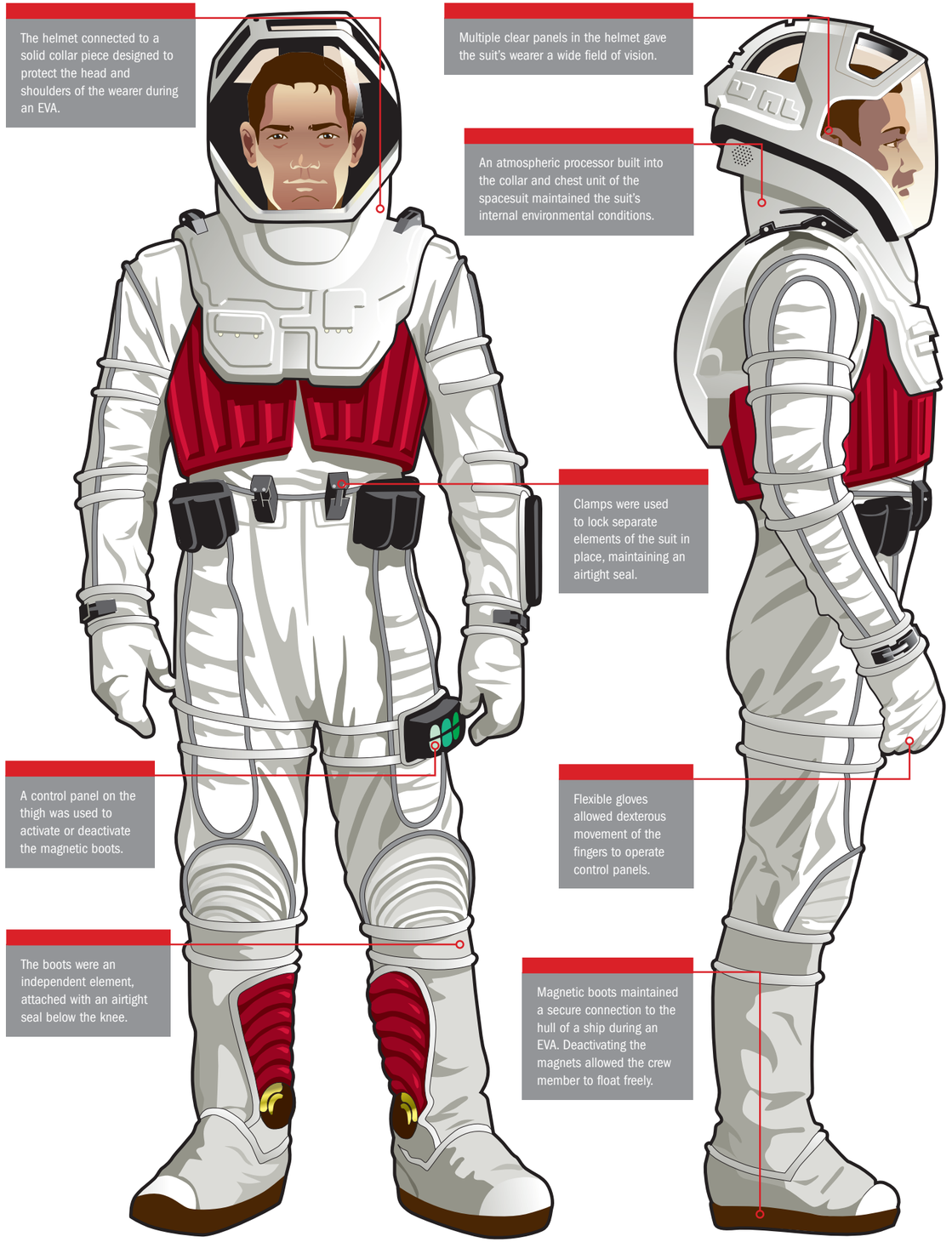
MAGNETIC BOOTS

Cables tethering personnel to a ship's hull during EVAs had been a preferred safety precaution for generations, since the very first spacewalks by early astronauts and cosmonauts. The solution in the 24th century involved boots with built-in magnetic generators.

A control terminal on the hip of the spacesuit engaged the generators, allowing the crewmember to adjust the level of magnetic force being applied. By switching them off entirely, personnel could move more quickly from one part of the hull to another, using handholds built into the hull plating to guide their way. However, as this model of spacesuit was not fitted with thrusters, use of a tether during such maneuvers was strongly advised.

The spacesuit was flexible and tough, allowing the wearer to use a phaser rifle or operate computer controls, whether on board *Voyager* or in space.

The helmet gave the wearer a wide field of vision through its large, clear faceplate. Further clear panels in the top of the helmet added even greater visibility.



NYGEAN PRISON QUARTERS

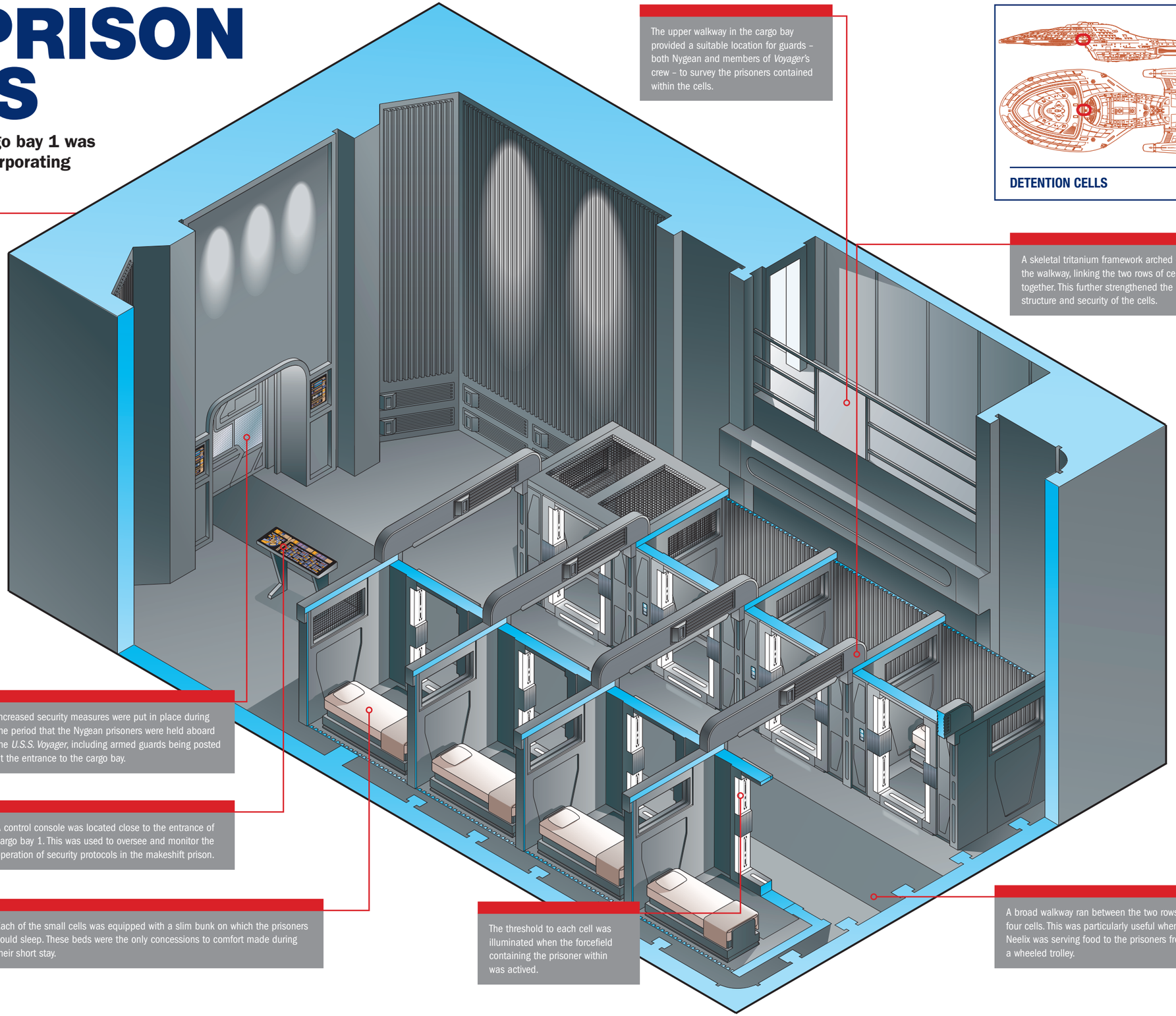
To safely house a group of alien criminals, cargo bay 1 was converted into a temporary prison facility, incorporating several compact and secure detention cells.

The *Voyager* crew offered aid and shelter to several visitors during the ship's long journey, including the controversial transportation of a group of Nygean criminals to their homeworld, where they were scheduled for execution. This necessitated alteration to cargo bay 1, which was converted into a temporary prison block for the duration of the trip.

Initially unaware of the extremely dangerous nature of the Nygean convicts, Captain Kathryn Janeway and her crew soon had to deal with both a hostage situation and the demands of the Nygean prison wardens. The idea of transporting these violent criminals to their deaths sat uneasily with her crew, but in staunch observation of the Prime Directive Janeway elected to accede to Nygean law, despite her personal feelings on the matter.

A construction team quickly converted the cargo bay into a high security holding area for the eight convicts, with impenetrable forcefields sealing the entrances to each cell and tritanium bulkheads forming their main framework. The prisoners were guarded by three Nygean wardens and two members of *Voyager* security. Two further officers were posted at the entrance to the cargo bay. The cells were arranged along the cargo bay in units of four, with the inmates facing in on each other across a central access corridor. The cells included a full-length bunk for the prisoners to both sit and sleep on as they awaited their eventual transfer to a second Nygean prison ship – and a final journey to their execution.

The temporary prison cells were constructed to such a high standard that they could withstand inmates' violent attempts to compromise their structure and escape.



The upper walkway in the cargo bay provided a suitable location for guards – both Nygean and members of *Voyager*'s crew – to survey the prisoners contained within the cells.

DETENTION CELLS

A skeletal tritanium framework arched over the walkway, linking the two rows of cells together. This further strengthened the structure and security of the cells.

Increased security measures were put in place during the period that the Nygean prisoners were held aboard the *U.S.S. Voyager*, including armed guards being posted at the entrance to the cargo bay.

A control console was located close to the entrance of cargo bay 1. This was used to oversee and monitor the operation of security protocols in the makeshift prison.

Each of the small cells was equipped with a slim bunk on which the prisoners could sleep. These beds were the only concessions to comfort made during their short stay.

The threshold to each cell was illuminated when the forcefield containing the prisoner within was actived.

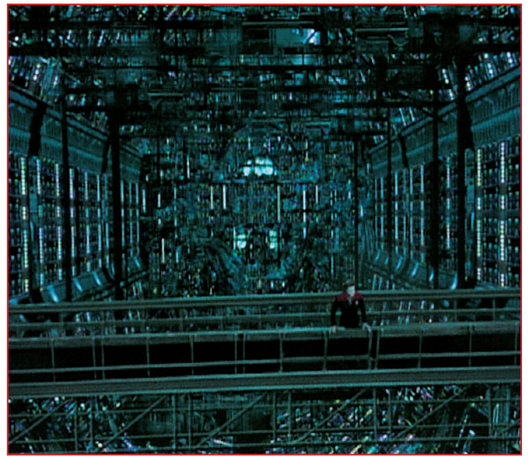
A broad walkway ran between the two rows of four cells. This was particularly useful when Neelix was serving food to the prisoners from a wheeled trolley.

BORG ENHANCEMENTS

Isolated from Starfleet's shipyards and repair facilities, the *U.S.S. Voyager* often had to rely on several surprising and unexpected resources when modifications were required, including the addition of Borg technology.

In late 2373, Captain Kathryn Janeway entered into an uneasy alliance with the Borg collective in order to combat the threat posed by Species 8472. This lead to a permanent addition to the *U.S.S. Voyager* crew in the form of Borg drone Seven of Nine. While still under the control of the Collective, Seven made a number of modifications to the Starfleet vessel in order to increase its chances of surviving a direct encounter with the alien species' powerful bio-ships, and to deliver a weapon designed to neutralize the threat they posed to the Delta Quadrant.

Following the defeat of Species 8472, Seven of Nine remained aboard *Voyager*, bringing with her an enormous knowledge of countless technologies attained throughout her 18 years as a drone.

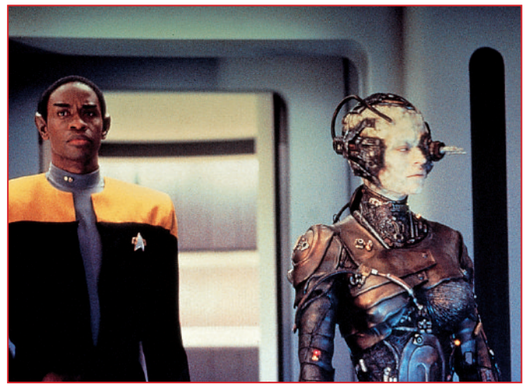


The structure and mechanics of a Borg cube were very different from those of a Starfleet vessel, yet surprisingly many of their systems were compatible.

ADAPTATIONS AND ENHANCEMENTS

The offensive, defensive, and drive systems augmented by Borg technology produced significant increases in efficiency and power to all areas. One of the first enhancements completed was to *Voyager*'s torpedo launchers, remodeled to accommodate 13 reconfigured photon torpedoes and one Class-10 missile, armed with a high-yield nanoprobe warhead. Mounted on the port side and stern of the vessel, the launchers could project multiple torpedoes carrying biomolecular warheads more quickly and with greater accuracy than standard Starfleet designs. These proved to be devastating against Species 8472.

Further adjustments were made to the primary shield matrix, while the secondary hull armor was reconstructed to reinforce the structural integrity of the vessel. External units were fitted to the upper section of the primary hull and along the port and starboard sides of the ship, which emanated the green glow of Borg technology when active.



Borg drone Seven of Nine was assigned to *Voyager* to act as an intermediary with the Starfleet vessel's crew as they combined forces against Species 8472.

Seven made numerous modifications to *Voyager*'s systems to prepare the ship for the fight with Species 8472, and the crew kept a close eye on her at all times.

SAFE REMOVAL

With Species 8472 vanquished and the alliance with the Borg dissolved, the crew set about retrofitting the ship to its previous operational status, although it took several weeks to remove the Borg enhancements, and several difficult problems had to be resolved along the way.

While enhancements made on deck 8 appeared to improve systems and were retained, blockages resulting from Borg-designed matter in plasma intake manifolds 11 and 13 prevented the re-initialization of the matter-antimatter reaction within the ship's warp core, and had to be restored to normal. Seven of Nine used her expertise to direct Chief Engineer B'Elanna Torres in successfully removing many of the modifications, including autonomous regeneration sequencers installed by the Borg in order to counteract any attempt to remove their technology.

PERMANENT ADDITIONS

Two permanent additions to *Voyager*'s facilities were made possible by the creative adaptation of Borg technology. Of particular benefit to new crewmember Seven of Nine, cargo bay 2 made use of a bank of Borg regeneration alcoves when it was converted into permanent quarters for the former Borg drone, and later for several Borg children who became residents of the ship.

Voyager also gained an advanced astrometrics laboratory in 2374, developed by Seven and Ensign Kim, and utilizing a seamless combination of Borg and Starfleet technology. Seven of Nine was able to adapt the LCARS interfaces to read data from Borg data nodes, improving the resources available to *Voyager*'s navigational systems enormously. The improved astrometric sensors were able to detect the radiative flux of up to three billion stars at the same time, allowing a far more accurate calculation of the vessel's position in relation to the center of the galaxy. Having increased accuracy by a factor of 10, Seven of Nine was able to plot a new course toward the Alpha Quadrant that took five years off the vessel's projected journey time.

Borg technology salvaged from a crashed Borg cube included a functional medical repair drone's servoarmature, complete with an all-in-one laser scalpel, biomolecular scanner, and micro-suture, all of which proved useful to the Doctor.

NEW TECHNOLOGY

Further blending of Borg technology with Starfleet systems benefited *Voyager* later in its journey. In 2375, Captain Janeway stole a Borg transwarp coil in order to enhance her ship's warp drive and shorten its journey through the Delta Quadrant. Despite propelling the ship some 20,000 light years towards home, the coil proved incompatible for long-term use with *Voyager*'s more powerful engines.

PERSONAL SPACE

Some of the Borg modifications made to the *U.S.S. Voyager* were for the comfort of Seven of Nine, rather than to enhance the ship's systems. Every effort was made to restore the former drone's humanity, but Seven still had to regenerate in a Borg alcove rather than sleep in a bed, and an entire cargo bay was adapted to serve as her personal quarters.

Converted into quarters for Seven, cargo bay 2 took on the appearance of the interior of a Borg cube, replete with a bank of Borg regeneration alcoves.

The most valuable Borg addition to the *U.S.S. Voyager* was Seven of Nine herself, who was able to improve many Starfleet systems with her Borg knowledge.

Seven's primary role aboard *Voyager* was enhancing the astrometrics lab, the operational capabilities of which she constantly improved upon.

THE BIO-DAMPENER

Magnus Hansen's bio-dampener allowed him undetected access to the Borg collective over the course of a three-year research project. Its protective field rendered its wearer undetectable to the drones being observed.

The bio-dampener was a small, portable device that created a transparent field around the body of the wearer which simulated the exact physiometric conditions found within a Borg vessel. This electronically generated field provided an impenetrable camouflage, as Borg sensors could not detect the wearer's lifesigns through the frequency of the bio-dampener.

The bio-dampener's impressive design not only allowed the wearer to beam on and off of a Borg cube without detection, it also allowed them to breathe within the atmosphere of a Borg vessel, and permitted direct two-way communication with *Voyager*. The dampening field also extended to equipment carried by an away team, including phasers and tricorders, preventing the Borg from detecting their electronic signatures.

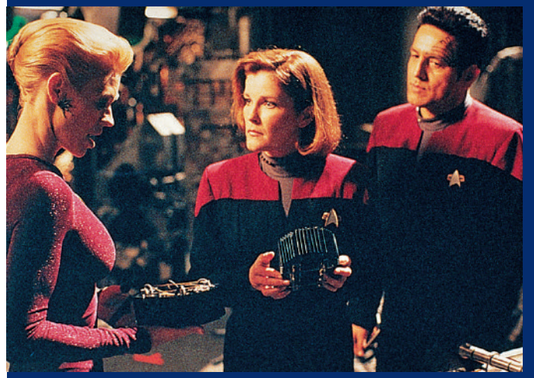
RESEARCH MISSION

The bio-dampener technology was developed by Magnus and Erin Hansen, a duo of exobiologists who received permission from the Federation Council on Exobiology to proceed with a proposed mission to observe and study the Borg. The Hansens spent months aboard the *U.S.S. Raven* searching for Borg to study, accompanied by their six-year-old daughter, Annika. After eight months of frustration, they finally detected a Borg transwarp signature, and followed a Borg cube into the Delta Quadrant. Over the course of the next three years, the Hansens examined the cube at close quarters, thanks to a number of innovations developed by the scientists, including multi-adaptive shielding to mask their ship, a narrow focus transporter beam to penetrate Borg shields, and the bio-dampener units that enabled the Hansens to operate without restriction or fear of detection inside the huge Borg vessel.

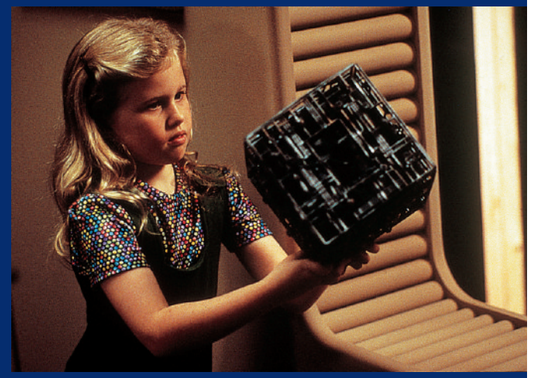
Former Borg drone Seven of Nine discovered the full schematics for the bio-dampener from the wreckage of the *Raven* after *Voyager* found its wreckage in 2374, and the EMH was able to replicate four units to allow an away team to carry out a thorough investigation of a Borg cube.

CHILDHOOD LOST

The *U.S.S Voyager* encountered the wreckage of the *U.S.S. Raven* in B'Omar space in 2374, and Seven of Nine was assigned to log research data found aboard. Seven learned more about her childhood as the daughter of Magnus and Erin, inventors of the bio-dampener and premier exobiologists.



Seven of Nine expressed her resentment toward her parents as she, Janeway, and Chakotay investigated the wreckage of the Borg sphere.



Annika Hansen, holding a model of a Borg cube given to her by her parents. She led a solitary childhood aboard the *S.S. Raven* as her parents worked.

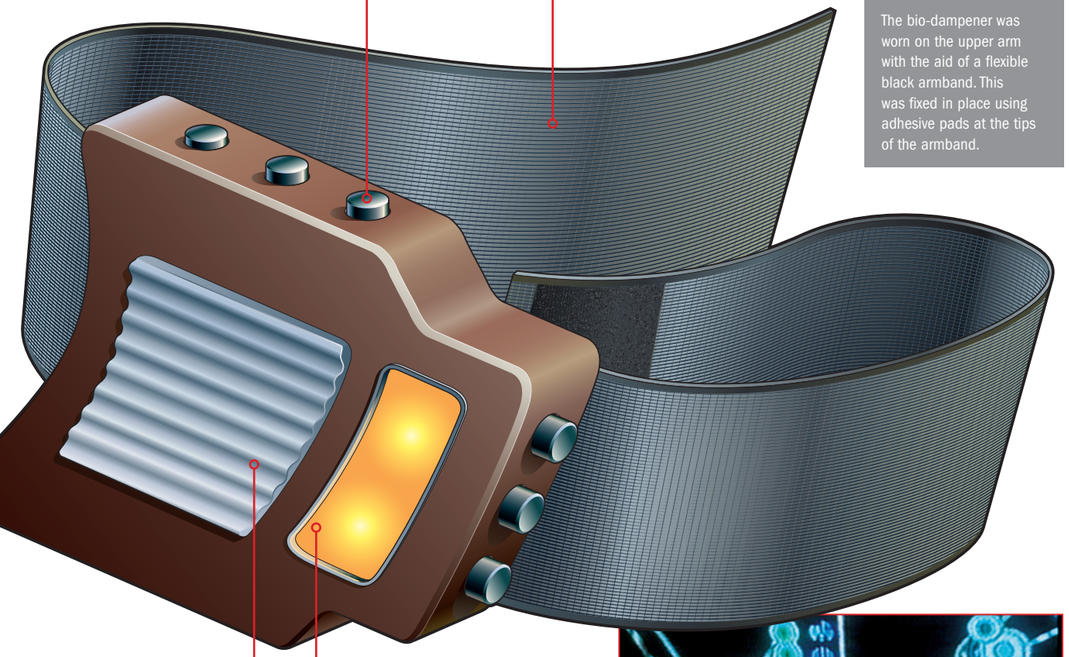
BIO-DAMPENER CONFIGURATION

CONSTRUCTION
The bio-dampener was comprised of two main parts: the unit itself and an armband. The body was a small, sturdy brown unit with two sets of controls, a yellow indicator light, and an emitter panel. The armband was made from a flexible synthetic material.

The device was manually controlled with two sets of buttons: the first set of three runs across the top edge, and the second set of three runs down the shortest side.

Tuvok and Kim were equipped with bio-dampeners to protect them from detection on the Borg sphere.

The bio-dampener was worn on the upper arm with the aid of a flexible black armband. This was fixed in place using adhesive pads at the tips of the armband.



The dampening field was emitted from a grill on the device. When its power source ran low, a warning signal was received by a monitoring system on the user's vessel, and the individual was transported to safety.

If the bio-dampener ran low on power, the wearer was warned by the yellow indicator light changing to blue.

FITTING
Magnus Hansen's bio-dampener was worn on the upper arm. Each device was configured to match and mask the wearer's individual bio-signature.

The bio-dampener created a transparent field, rendering the user undetectable.

This diagnostic display reveals how the bio-dampener worked with an individual's physiology to generate the masking effect.

FUTURE TECHNOLOGY

The *U.S.S. Voyager*'s eventual return to the Alpha Quadrant in 2377 was only made possible by the installation of advanced shield technology borrowed from the future.

The Borg Queen monitored *Voyager*'s progress as it headed towards a Borg transwarp hub hidden inside a nebula, and initiated an attack.

Throughout its hazardous seven-year journey, the *U.S.S. Voyager* survived an extraordinary range of hostile environments and external threats. The discovery of a Borg transwarp hub hidden at the center of a nebula offered Janeway and her crew the chance of a swift return to the Alpha Quadrant, but the hub was heavily protected, and the captain was forced to conclude that her ship would not survive a direct encounter with these Borg forces.

That situation changed with the unexpected arrival of Admiral Kathryn Janeway from the future, who had traveled back through time using a stolen Klingon chrono-deflector aboard a highly advanced Starfleet shuttlecraft. Her one-way mission was simple – to adapt the advanced technology she had brought with her to improve *Voyager*'s capabilities in order to take on the Borg defenses and use the transwarp hub to travel home, 16 years ahead of the date established in her timeline.

Under orders from Captain Janeway, the offensive and defensive systems installed aboard her future self's shuttlecraft were analyzed and appraised for authenticity and adaptability. This revealed that while the shuttle's cloaking technology was incompatible with *Voyager*'s systems, its highly advanced armor and sophisticated weaponry could be retrofitted to the larger vessel.

The shuttlecraft had a single primary shield generator incorporated into its upper hull that initiated deployment

Ablative armor generators were installed across *Voyager*'s hull, based on technology borrowed from Admiral Janeway's shuttle.

The advanced ablative armor that protected *Voyager* was able to repel Borg attacks that would have previously badly damaged – or even destroyed – the starship.

of ablative armor. This armor enveloped the small vessel, providing far more powerful protection than the *U.S.S. Voyager*'s shields could muster. Scaling the system up for use on the larger ship required a series of networked emitters to be constructed and installed at key points on *Voyager*'s outer hull, while engineering teams carried out major modifications to additional offensive and defensive systems throughout the interior of the vessel.

The shield emitters were positioned between existing outer hull features, allowing the ship's existing systems to continue to function correctly. Three emitters were positioned on the forward port and starboard surfaces of *Voyager*'s primary hull, with individual emitters located along the sides of the ship, between the forward phaser banks and the bridge, and at the rear of the primary hull.

ACTIVATING ARMOR

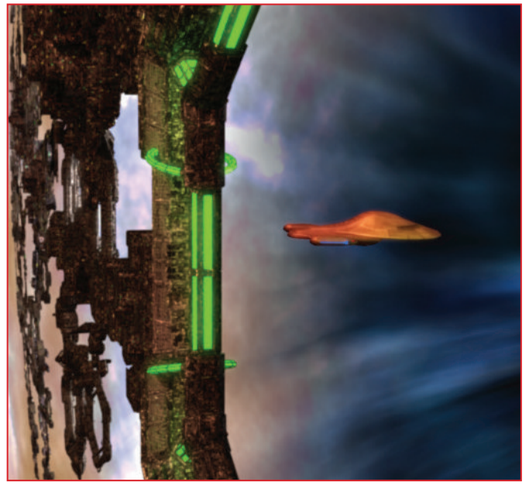
Given the complexity of the newly fitted defensive system, and the integration of numerous related modifications to the ship, deployment of the ablative armor was initiated and monitored from main engineering rather than the bridge. Once activated, it took a few moments before the actual ablative armor began to form between each of the emitters. The sectional plating then projected in a sequence from the bow of the ship to the stern, and completely enclosed the exterior of *Voyager*'s hull within two seconds. A louvered baffle covered the warp nacelles so as to allow full function of the propulsion system.

SECRET WEAPON

With the new defense system installed and operational, *Voyager* reversed course and headed back to the nebula in which the Borg transwarp hub was hidden. It didn't take long before the extraordinary power of the ablative armor was proven when the Borg Queen directed a sustained attack against the Starfleet ship.

Multiple blasts from a Borg cube at close proximity reduced the armor's integrity to 97 percent, which fell to 90 percent when *Voyager* was subjected to a barrage of torpedoes and directed energy weapons. The armor continued to hold at that level until the Borg changed tactics, scanning *Voyager*'s armor in an effort to adapt to the futuristic technology, and changed the frequency of their weapons. Another sustained attack brought the armor integrity down to 50 percent, then taking out another 10 percent – but Admiral Janeway had brought along another revolutionary technology, this time with offensive capability, in the form of transphasic torpedoes.

A section of ablative plating on the upper rear spine of *Voyager*'s hull was disengaged, revealing twin, rear-facing torpedo launchers. Two torpedoes were fired in rapid succession, targeting and destroying the Borg cube. The destruction of a second cube with a single torpedo forced the Borg Queen to call off her attack, allowing *Voyager* to enter the transwarp hub and finally return home.



The future technology of Admiral Janeway's shuttle allowed the *U.S.S. Voyager* to consider utilizing the Borg transwarp hub as a direct route back to Earth.

THE ADMIRAL'S SHUTTLE

The small, sleek shuttlecraft that Admiral Kathryn Janeway made use of during her mission to expedite the *U.S.S. Voyager*'s return to the Alpha Quadrant employed advanced technology that made it a formidable vessel despite its compact size.

Starfleet's policy of continually developing new and improved systems into its starships continued into the 25th century, as illustrated by SC-4, the small personal shuttlecraft employed by Admiral Kathryn Janeway from an alternate future timeline in her attempt to rescue the crew of the *U.S.S. Voyager* from the Delta Quadrant in 2377. Modifications to Admiral Janeway's sleek and agile vessel were made in order to enable her to supply items of future technology to her past self that would help her to successfully navigate a Borg transwarp hub back to the Alpha Quadrant. The ship included a defensive shield that was virtually impenetrable to both Klingon and Borg weapons, an offensive capability that included transphasic torpedoes, and a revolutionary control system based on a synaptic transceiver implanted within the pilot's brain.

ABLATIVE ARMOR

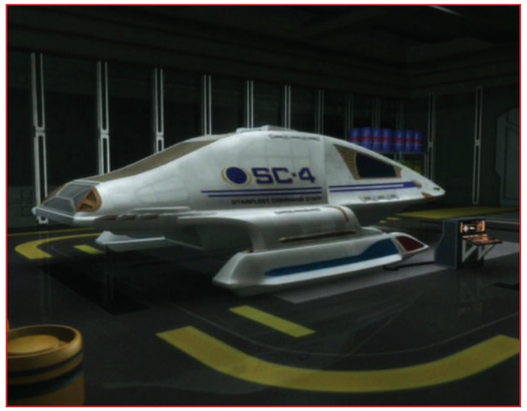
Stationed at Starfleet Command's Oakland Shipyard on Earth, the shuttlecraft was capable of both atmospheric and deep space flight. The configuration of the shuttlecraft was an evolution from previous designs, featuring the same single hull and twin warp nacelle arrangement that had proved so reliable and robust over Starfleet's long history. The outer styling of the ship was considerably sleeker than many earlier shuttlecraft designs, however, and although its lines cosmetically echoed those of the type-9 (Class 2) shuttle, the ship incorporated many technological advancements.

One of these was the shuttlecraft's ablative armor which, when deployed via a powerful shield generator located directly behind the forward viewport, enveloped the entire vessel within an impregnable shell. The ablative armor enabled SC-4 to withstand prolonged attack while operating entirely within normal parameters. The shuttle also had an advanced transporter system, operable by a single occupant. Admiral Janeway employed an automatic transportation sequence during her theft of an experimental chrono-deflector from the Klingon Koroth, illustrating the flexibility of the system and its high degree of automation.

NEURAL INTERFACE

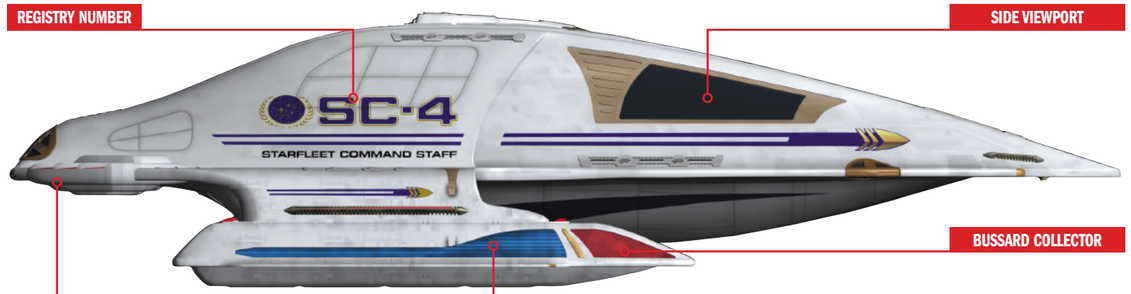
The shuttlecraft's advanced navigation and propulsion systems meant that most helm functions were carried out automatically by the ship's computer system. While a degree of manual control was also required, the majority of the ship's functions were activated via commands from the single crew member who was also linked to the vessel's computer via a neural interface. Invented by a future version of *Voyager*'s Doctor, this established a connection that enabled the crew member to pilot the shuttle via thought alone.

With its ablative armor deployed, Admiral Kathryn Janeway's shuttlecraft was resilient enough to withstand a barrage of disruptor fire from an attacking Klingon ship.



The admiral's shuttlecraft in *U.S.S. Voyager*'s shuttlebay. *Voyager*'s defensive capability was upgraded with the installation of the shuttle's ablative armor technology.

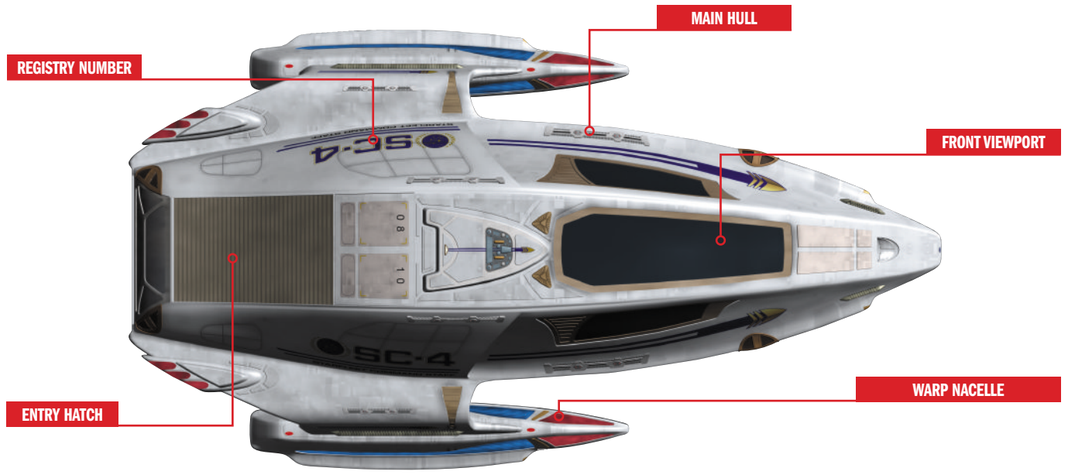
STARBOARD VIEW



FORE VIEW

AFT VIEW

DORSAL VIEW



The advanced 25th-century shuttlecraft piloted by Admiral Janeway was the next logical step in Starfleet's design lineage, with a refined interior and sophisticated control interface providing fast, precise systems access.

The 25th-century shuttle piloted by Janeway took inspiration from its predecessor, the Class 2, incorporating details from the earlier ship.

A large storage area was located at the rear of the cockpit. As with the Class 2 shuttlecraft, this area was separated from the forward section by a bulkhead.

When enaged, the shuttle's ablative armor totally obscured the forward observation viewport and the pilot had to fly by instruments alone.

The control consoles took the form of gently-curving panels displaying the latest iteration of the familiar LCARS interface.

The pilot and copilot were provided with comfortable, heavily-padded command chairs. The shuttlecraft's main control panels were located directly infront of these positions.

Admiral Janeway's shuttle featured enhanced and refined impulse engines in its warp nacelle supports.

Hull markings indicated that the shuttlecraft was part of Starfleet Command's complement of auxiliary vessels rather than assigned to an individual starship.

Despite the shuttlecraft having a copilot station, the control interface allowed Admiral Kathryn Janeway to pilot the vehicle alone.

ABLATIVE ARMOR – 2404 TIMELINE

In an alternate timeline, ablative armor generators were developed by Captain Janeway and her crew as a defense against the Borg during their long journey home to the Alpha Quadrant.

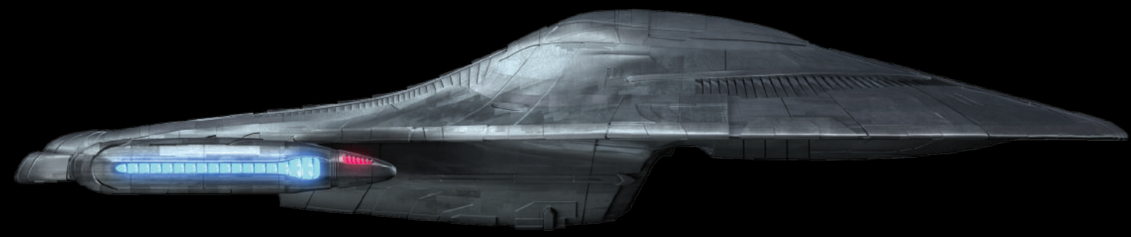
In 2378, Captain Janeway gave the order that *Voyager* should investigate a nebula which showed all the signs of containing multiple wormholes – one of which might lead back to the Alpha Quadrant. However, it was soon discovered that the nebula also hid a great many Borg vessels. Despite the tempting possibility of being able to take a short-cut home via a wormhole, Janeway decided to play it safe and instructed that they should by-pass the nebula and continue on their original course.

A short time later, *Voyager* received a visitor from the future – an older Janeway, now an Admiral, who had traveled back in time from 2404. Her intention was to change history. She confirmed that one of the wormholes in the nebula would indeed take them home, and she had brought with her technology that would allow *Voyager* to survive a Borg attack long enough to reach the entrance to the wormhole, cutting their journey short by 16 years.

Admiral Janeway's shuttlecraft was fitted with an ablative armor generator which, when activated, cocooned the entire vessel in an almost impenetrable layer of armor. Seven of Nine confirmed that it appeared to have been specifically designed as a defense against the Borg.

Guided by Admiral Janeway, ablative generators were manufactured and installed on *Voyager*. Returning to the nebula and heading for the wormhole, *Voyager* came under intense attack from the Borg. However, the ablative shielding proved effective and enabled the ship and its crew to return home.

STARBOARD VIEW



FORE VIEW

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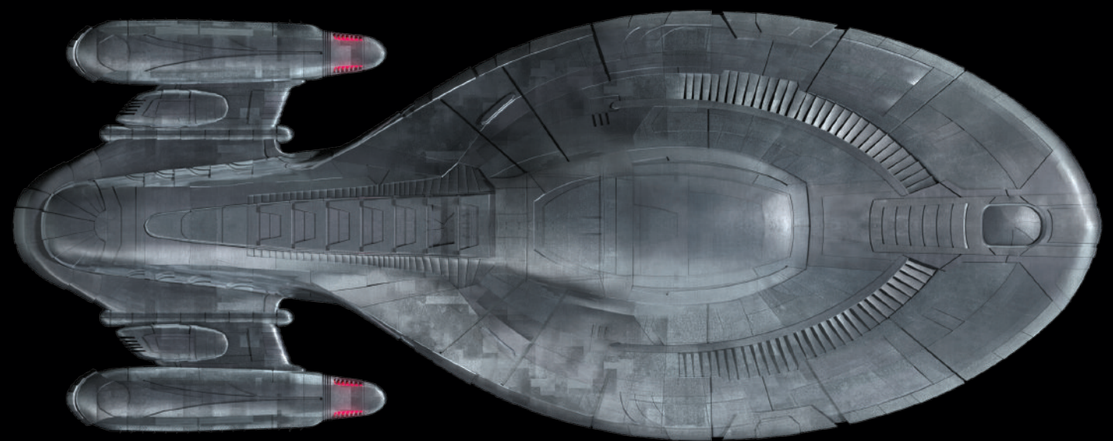

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CREDITS

General Editor: Ben Robinson

Project Manager: Jo Bourne

Editor: Christopher Cooper

Sub-Editor: Alice Peebles

Writers: Jenny Cole, Tim Gaskill, Tim Leng, Marcus Riley and Ben Robinson, and the writers of the *STAR TREK™ Fact Files*, with additional material by Christopher Cooper and John Ainsworth

Illustrators: Ian Fulwood, Rob Garrard, Peter Harper, and Stuart Wagland

CG Illustrators: Robert Bonchune, Ed Giddings, Adam 'Mojo' Lebowitz, and Fabio Passaro

Jacket Designer: Stephen Scanlan

Designer: Katy Everett

With thanks to Aune Butt, Ian Chaddock, Joe Hawkes, James King, Terry Sambridge, and Colin Williams

Most of the text and Illustrations featured in this volume were originally published in *The Official STAR TREK™ Fact Files* 1997-2002

Published by **Hero Collector Books**, a division of Eaglemoss Ltd. 2020

1st Floor, Beaumont House, Kensington Village, Avonmore Road,

W14 8TS, London, UK.

www.herocollector.com

ISBN 978-1-85875-612-7

Printed in China