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ENTERPRISE
NX-01

NX CLASS

LAUNCHED: 2151

LENGTH: 225 METRES

NUMBER OF DECKS: 7

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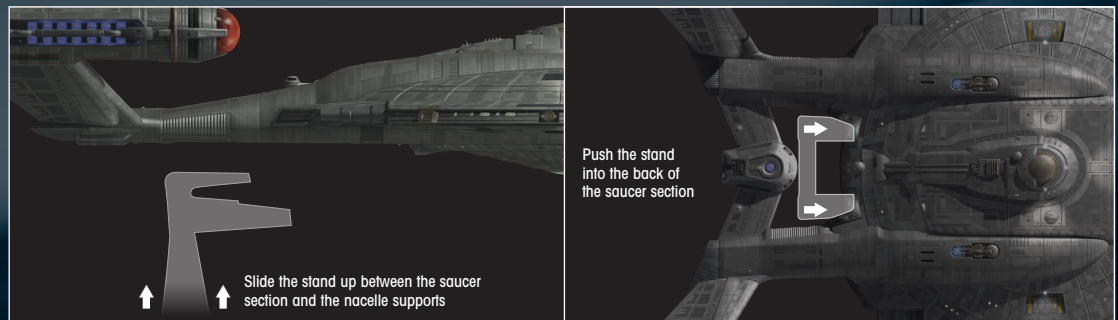
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ENTERPRISE
NX-01

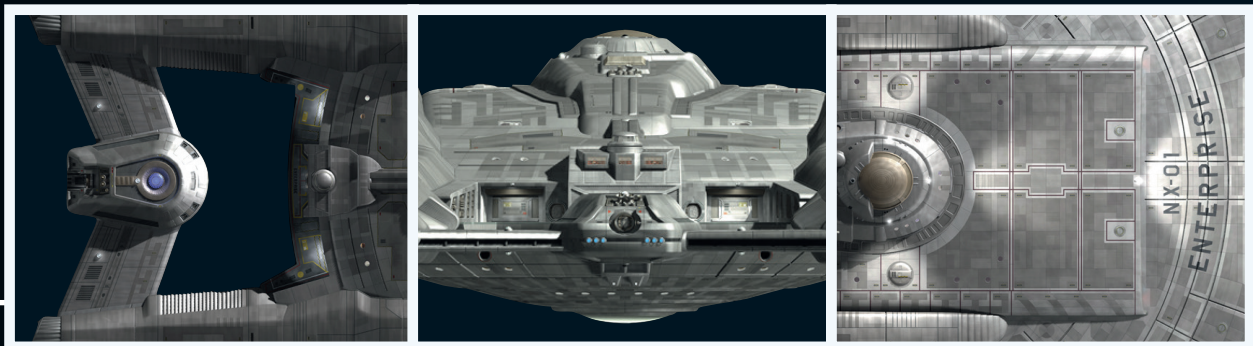
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ENTERPRISE NX-01

SPECIFICATION



OPERATED BY:	STARFLEET
CLASS:	NX-01
LENGTH:	225 METRES
DECKS:	7
CREW:	83 (STANDARD)
LAUNCHED	APRIL 2151
TOP SPEED:	WARP 5 (2151)
WEAPONRY:	PHASE CANNONS
	NUCLEAR TORPEDOES (2151)
	PHOTONIC TORPEDOES (2153)



DATA FEED

The *Enterprise* NX-01 was the first starship to bear the famous name. She retired intact in 2161 and became a museum ship. There wasn't another *Enterprise* until 2245 when the *U.S.S. Enterprise* NCC-1701 was launched.



ENTERPRISE NX-01

The *Enterprise* NX-01 was a major technological breakthrough that changed the course of history

The *Enterprise* NX-01 was one of the most significant ships in history. Launched in April 2151, it was by far the most advanced human vessel ever built and the first Earth ship to be fitted with an engine capable of reaching warp 5. This finally made deep-space exploration a practical reality enabling humans to become more involved in interstellar affairs. This had a major impact on the shape of the Alpha Quadrant since actions taken by her crew made it clear that Earth, Vulcan, Andoria and other planets shared a common goal, and this directly led to the foundation of the United Federation of Planets.

As with later Federation warp-capable spacecraft, the engines of the NX-01 were based around a primary warp coil that generated a matter/antimatter reaction, which was focused through dilithium crystals. The NX class also established the design, which was to become the norm for Starfleet vessels, of a forward saucer section housing the bridge and living quarters, and a secondary hull located in the rear.

With seven decks, the NX-01 had a crew of over 80, including a MACO (Military Assault COmmando)

unit. Decks were labelled A through to G, with the bridge located on deck A and the sensor array on deck G. Two half decks were located between D and E.

STATE OF THE ART

Deck A was almost filled by the bridge, which was served by a turbolift. The captain's ready room could be accessed through a doorway on the starboard of the bridge. A command chair dominated the centre of the room and a variety of stations dedicated to communications, science, engineering and tactical ran along the outside, while a situation room with a tabletop display tied to stellar cartography and the ship's library computer and monitoring the engineering systems was located at the rear.

The tactical station provided the bridge with control of the ship's arsenal of weapons, which initially only consisted of rocket-propelled torpedoes using explosive charges. The ship was also designed to carry three phase cannons mounted outside on the hull, although these were not fitted at the time the NX-01 set out on its first mission. After a hostile

▲ The *ENTERPRISE* NX-01 in orbit around Earth shortly after its launch from Earth Spacedock in April 2151.



◀ Space exploration was a very dangerous business and the NX-01 was often damaged. In one of the most serious incidents the ship hit a mine, which was later concluded to be of Romulan design.

▶ Although the NX-01 had transporters they weren't often used. The ship normally docked with other vessels using the airlocks on either side of the saucer section. Airlocks were also used at spacestations.



▲ The ENTERPRISE relied on grapple hooks to catch her shuttlepods and to reel them into the docking bays on the underside of the saucer section. Flying a shuttlepod in manually was too dangerous.

encounter in August 2151, however, the decision was taken to begin installing two forward phase canons.

Rather than head to the nearest space station, alterations began mid journey. During the installation it was calculated that if they were tied into the ship's impulse engines the cannons could take a greater load than they were designed for. Unfortunately, the initial test caused a plasma recoil in the power systems, but this was later solved by redirecting energy through the gravity plating, which was then polarised to absorb the recoil. Excess energy was sent to the structural integrity field, which had the added advantage of making the ship more resistant to damage.

The targeting scanners were controlled from the ship's armory on Deck F. From here the torpedoes were loaded into fore and aft tubes. While the phase cannons were mounted on the outside of

the ship, their frequencies were set and modulated from the armory. In addition to torpedoes and phase cannons, dotted throughout the ship there were also 14 weapons lockers that were stocked with an assortment of small arms.

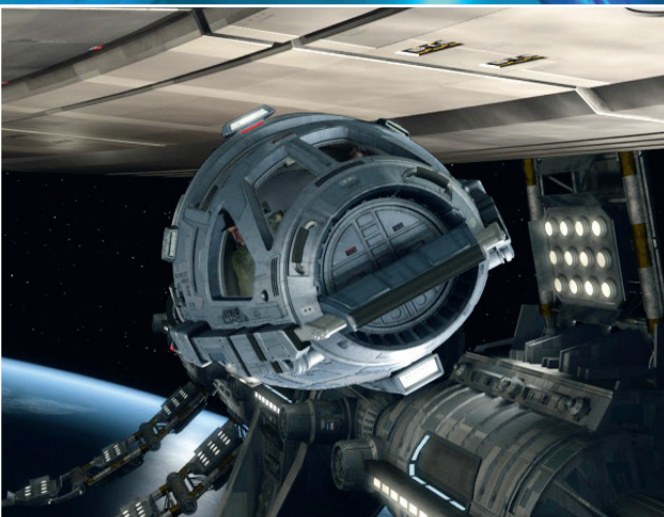
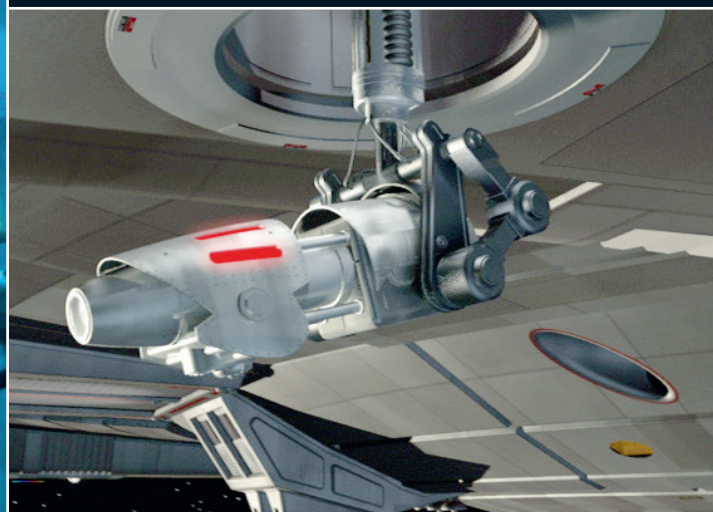
Prisoners were held in the Brig on deck E, which was designed to hold two people but could handle more in an emergency. Sickbay, also on deck E, was a state-of-the-art medical-research facility.

CREW FACILITIES

Most of the crew quarters were on deck D, although crewmembers were also quartered on decks B, C and E. Guests were housed in VIP quarters on deck G. Senior staff had individual quarters on deck B. Typically these were divided into two distinct areas for living and sleeping and enjoyed their own en-suite bathrooms. Junior crewmembers shared



▼ The NX-01 was always intended to carry phase cannons, but they were only fitted several months after she was launched.



◀ Unlike later Starfleet ships, the NX-01 needed regular maintenance from the outside and carried an inspection pod that was used to carry out repairs to the hull.

▶ In an extremely difficult manoeuvre the ENTERPRISE and her sister ship, COLUMBIA NX-02, flew in close formation to allow a crew member to be transferred between the two ships at warp speed.



quarters designed for two with bunk beds fitted into the bulkhead.

Meals were taken in the mess hall on Deck E with food prepared in the nearby galley by the ship's chef. Although the ship carried a supply of real food, which was kept in cryogenic storage, most of the foodstuff was re-sequenced protein that could be prepared to resemble almost any dish. The mess hall also served as a recreation area where crewmembers could gather to socialise and watch movies. They could also work out in the fully fitted gym located on deck C.

The NX-01 was also one of the first Starfleet ships to be fitted with a matter transporter advanced enough for use by living beings. Found on deck D, it had a range of only 2,000 kilometers. However, crews still relied on shuttlepods, housed on decks D and E, to travel to the surface of planets.



DATA FEED

The *Enterprise* NX-01 was commanded by Captain Jonathan Archer, whose father had been responsible for the design of its warp engines. Archer's achievements are legendary: he made first contact with countless species and established friendly relations with major species including the Andorians and Tellarites. He changed the course of Vulcan politics, saved Earth from the Xindi and laid the groundwork for the foundation of the Federation.



▼ The scenes of the new ENTERPRISE in spacedock were designed to show a more primitive but equally beautiful version of the technology that fans had seen before.

First Flight

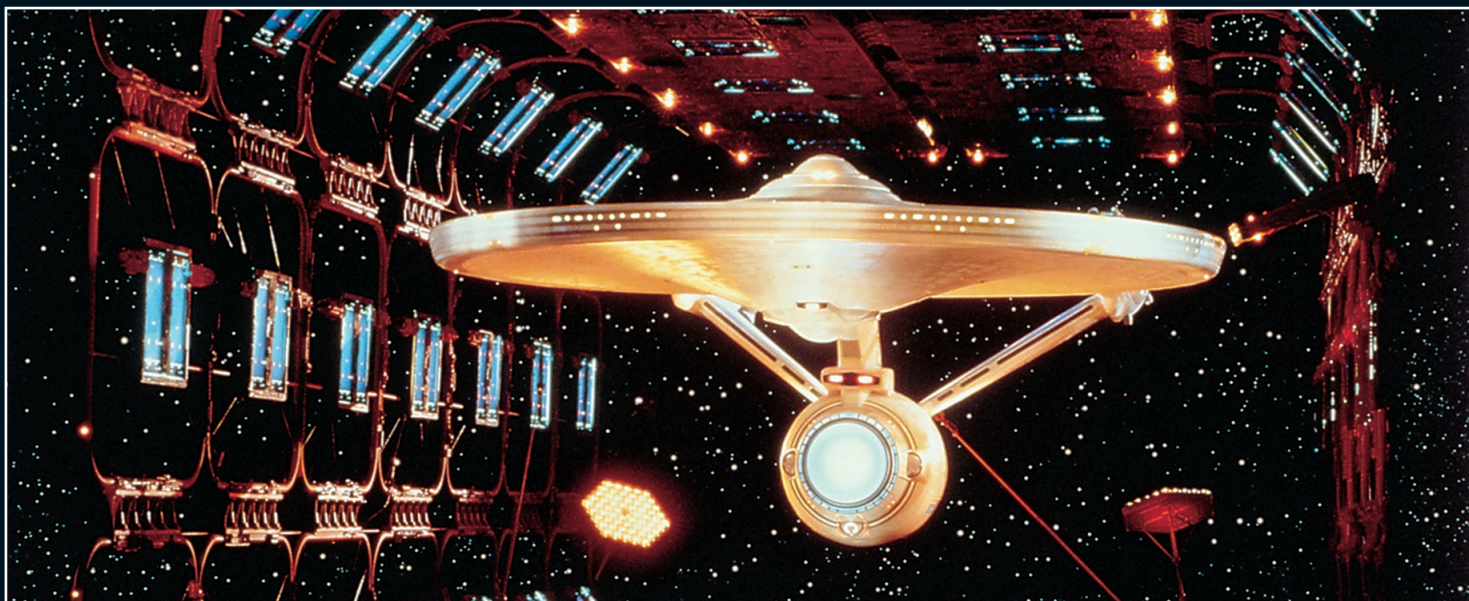
DATA FEED

The *Enterprise* NX-01 is the only major *STAR TREK* ship from a TV series where the audience has been lucky enough to see the launch. Movies have been different where we have now seen the launch of both the 1701 and the 1701-B.

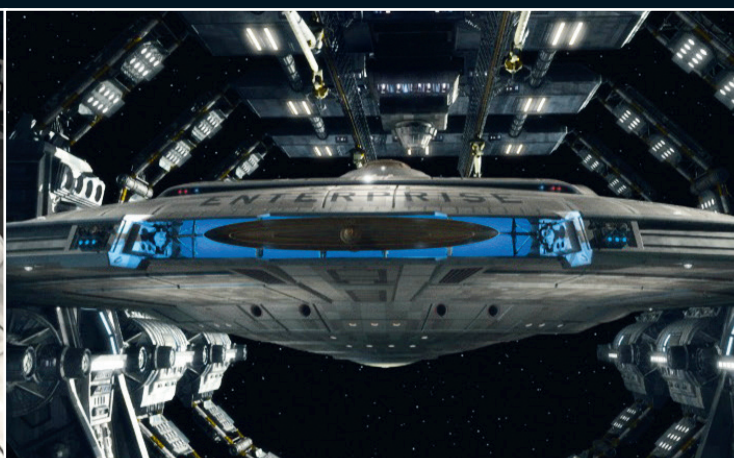
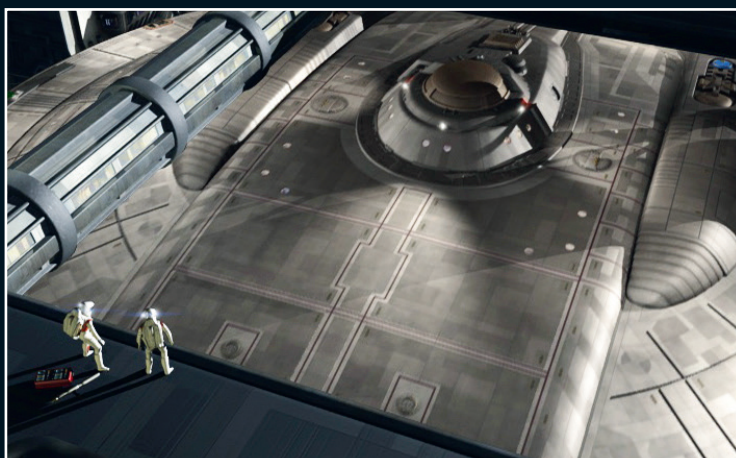
The *Enterprise* NX-01 was launched in April 2151, three weeks before she was due to leave spacedock. The ship was rushed into service after a Klingon warrior crashed on Earth, and she headed off on her historic mission despite the objections of the Vulcan High Command who felt humanity wasn't ready to become involved in interstellar politics.

In a conscious echo of the scenes in *STAR TREK: THE MOTION PICTURE*, we first see the new *Enterprise* when the NX-01's Captain, Jonathan Archer, flies around his new ship in an inspection pod. Like Kirk's ship, the *Enterprise* is in spacedock orbiting Earth and, just like her famous 'descendant', she will play a huge role in the history of the galaxy.

TRIBUTE TO A CLASSIC MOMENT



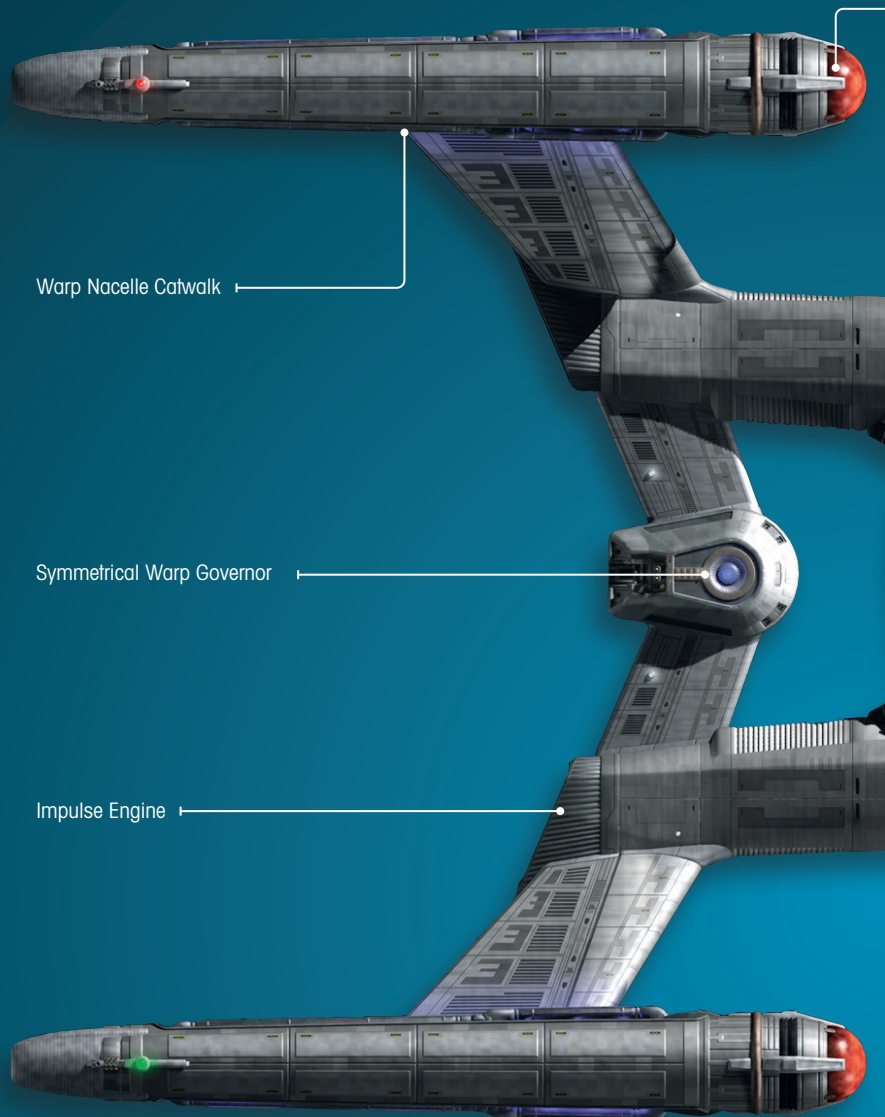
▲ The links between the scenes in *STAR TREK: THE MOTION PICTURE* and the pilot for *STAR TREK ENTERPRISE* are clear. The design of spacedock was carefully echoed and Archer uses the same words as Kirk to send the ship on her way, "Take her out... Straight and steady."



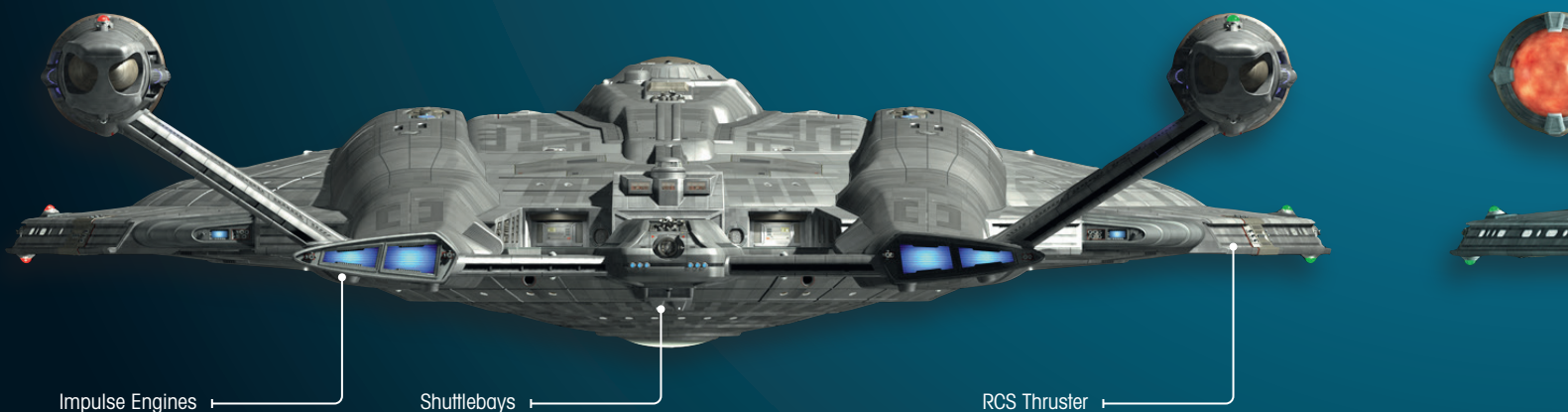
▲ After Archer has completed his inspection of the ship, he is called to Earth where he is told to take his new ship into deep space for the first time to return the Klingon Klaang to the Klingon homeland. He returns to the NX-01 and orders the crew to take her out of spacedock.

EXTERIOR CHANGES

One of the biggest technical problems faced by the *Enterprise* NX-01 was maintaining the symmetry of the twin warp fields generated by the nacelles. This was as important as it was dangerous since an imbalanced warp field could either collapse or tear the ship apart. The solution was the Symmetrical Warp Governor, which was positioned on the strut between the nacelles. This generated a low-yield subspace field that 'bent' the warp bubble into a more acceptable configuration for high-warp velocities.

**DATA FEED**

The reactor in the *Enterprise's* warp engine contained enough antimatter to run the ship for a month without refilling. The ship carried 2,000 liters of deuterium that were used to refuel it.



→ Bussard Ramscoop



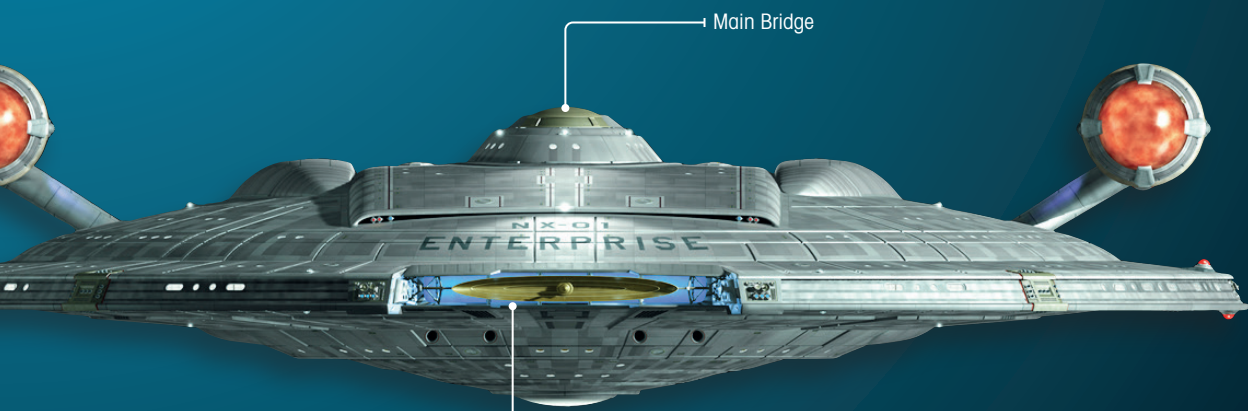
→ Cargo Bay Doors

→ Main Bridge

→ Cargo Bay Doors

Navigation Light

→ Saucer Section



→ Main Bridge

→ Navigational Deflector

ARMOR PLATING

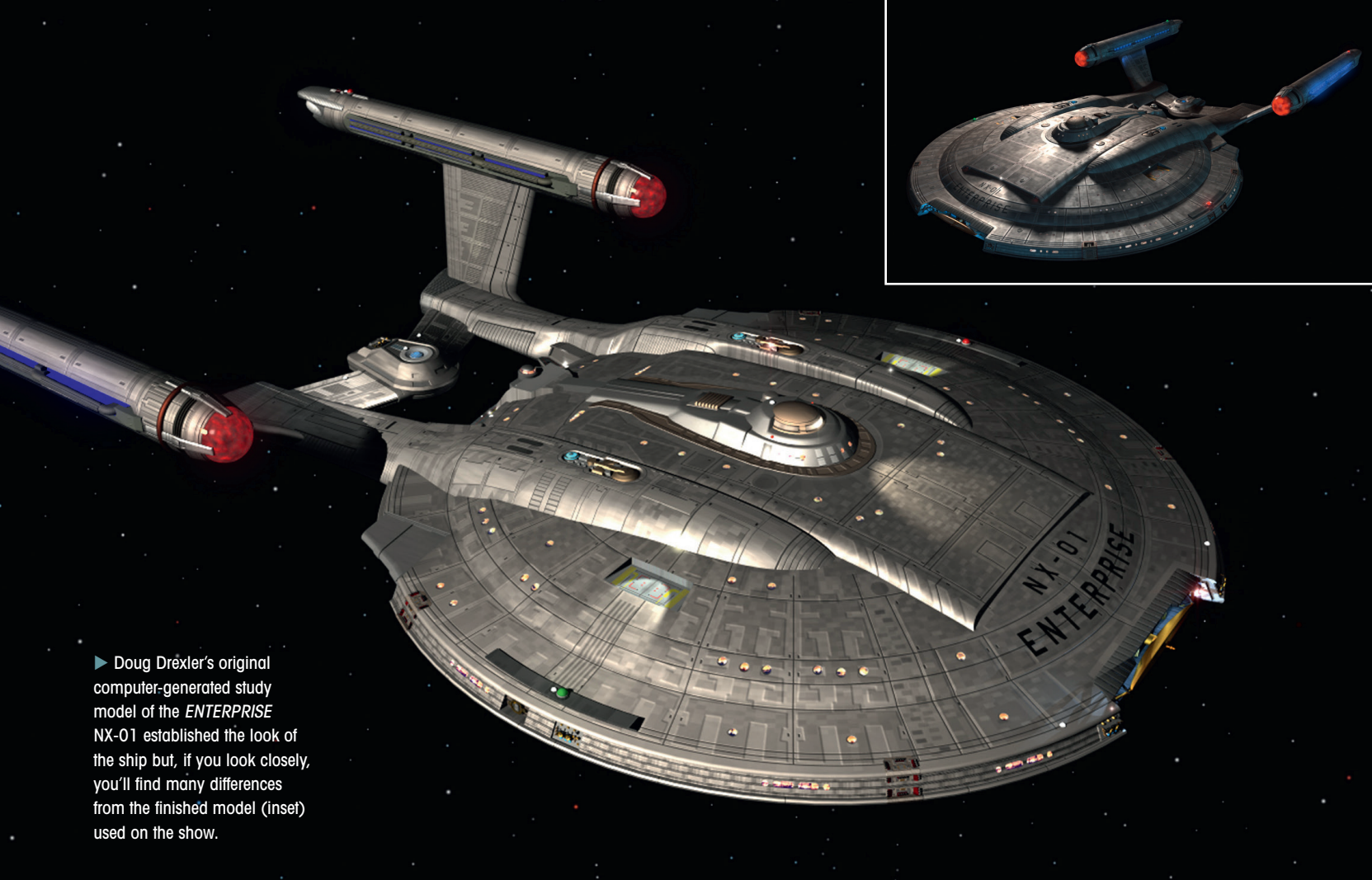
Shield technology was in its infancy when the ENTERPRISE NX-01 was launched so the ship relied on polarisation to strengthen the hull if it was attacked. This worked by sending an electromagnetic charge through the hull plating to make it stronger.

IMPULSE ENGINES

The twin impulse engines that were used at sublight speeds were basically large rockets. They were powered by nuclear fusion reactors and used superheated plasma that was vented from the rear of the ship.

CARGO BAYS

The twin cargo bays doors on the top of the saucer are mirrored by ones on the underside. The cargo bays actually run through the entire height of the saucer section so if the top and bottom doors were open you could fly straight through the ship.



► Doug Dröxler's original computer-generated study model of the *ENTERPRISE* NX-01 established the look of the ship but, if you look closely, you'll find many differences from the finished model (inset) used on the show.

DESIGNING THE



Enterprise NX-01

The latest *Enterprise* would be the 'oldest' that fans had seen, and this mix of old and new gave the designers headaches.

Designing Captain Archer's *Enterprise* presented the *STAR TREK* art department with one of the greatest challenges it had faced. The new *Enterprise*, the NX-01, had to be a very old *Enterprise*. In fact, it had to be Earth's first true starship.

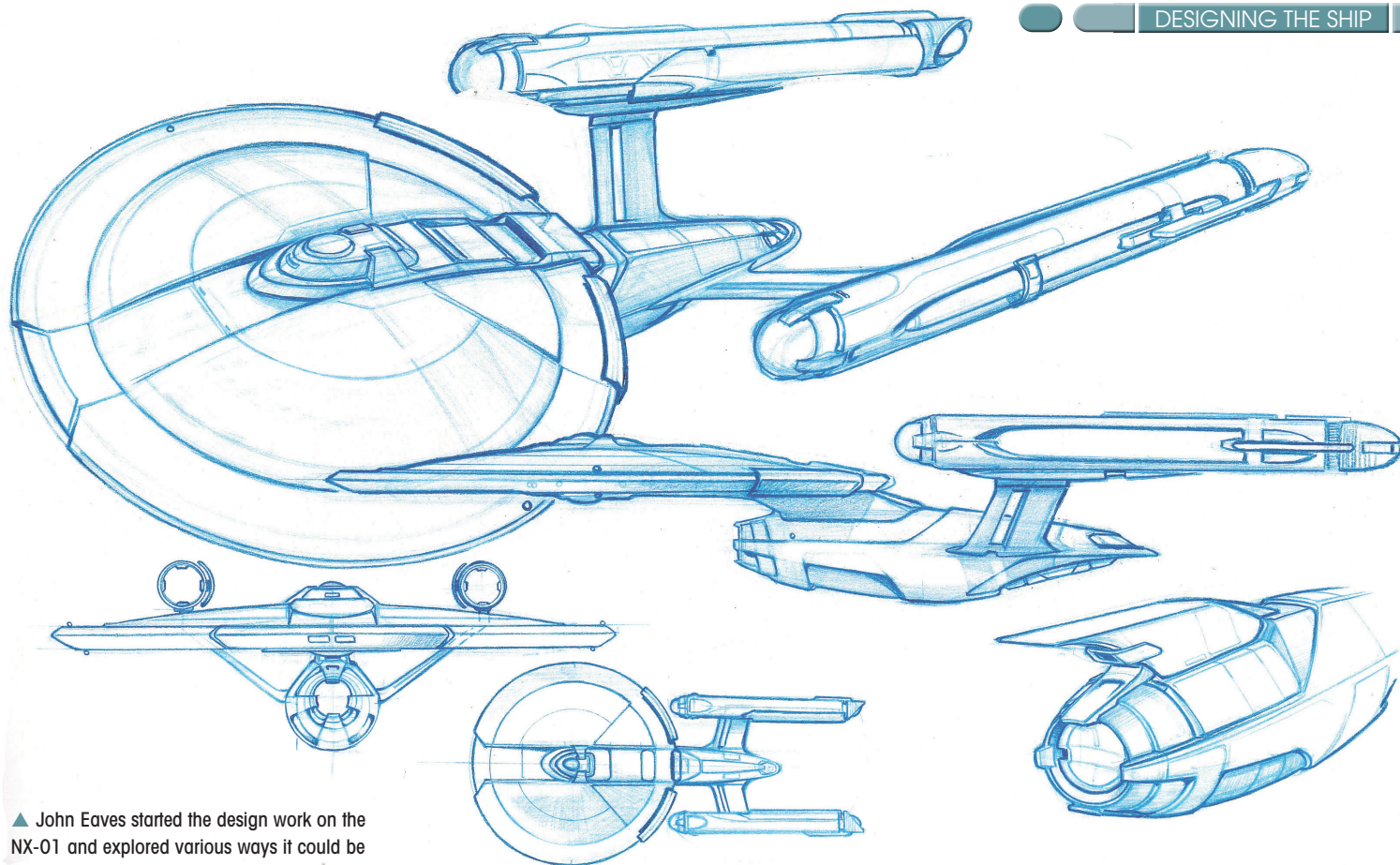
Production designer Herman Zimmerman and the producers began by having concept artist John Eaves produce some drawings but, while his designs were beautiful, the feeling was

that they were too close to Matt Jefferies' design for Kirk's original ship. It was also clear that 21st-century viewers expected the ship to look rather more detailed than the version that had become famous in the 1960s.

Eaves produced dozens of drawings but nobody could settle on the best approach for the new ship. There was also a lot of work for him to do helping to conceptualise the ship's interiors. So Zimmerman turned to a former member

of his team, Doug Drexler, who was working as a computer modeler at one of *STAR TREK*'s visual effects houses, Foundation Imaging.

Drexler couldn't leave Foundation at once so, every evening, Zimmerman would come to Drexler's house and they would fire up his computer. Together they would throw ideas around, with Drexler creating 3D models while Zimmerman looked over his shoulder and made suggestions.



▲ John Eaves started the design work on the NX-01 and explored various ways it could be made to look like an earlier version of Kirk's ship.

“ (Designing the NX-01) was scary and fantastic all at the same time. Hair raising and wonderful. ”

Doug Drexler

▼ Alex Jaeger's design for the AKIRA class provided some early inspiration and a design direction for the NX-01, although Drexler and Zimmerman made significant changes so that their ship would have more in common with the original series.

BACK TO THE BEGINNING

Drexler, who is an expert on *STAR TREK*'s history, initially suggested they revisit Matt Jefferies' original rejected designs and make the ship spherical, but no one was willing to lose the familiar saucer, so he and Zimmerman kept looking at different ways of handling the familiar elements. Eventually they had an approach they thought might work but ultimately it was decided that it just looked too much like Kirk's *Enterprise*.

The producers decided that this earliest version *Enterprise* should be smaller and more primitive. In fact, they wanted to base it on a background



► The NX-01 had all the important details you'd find on any *ENTERPRISE*. The deflector dish is the original version from Kirk's ship, which has been distorted to fit in the saucer section.

ship, the *Akira*, which ILM's Alex Jaeger, had designed for *STAR TREK: FIRST CONTACT*. This ship had the familiar saucer and warp nacelles but barely any engineering hull.

Drexler says that taking the *Akira* and somehow twisting it into Matt Jefferies' original design was a frustrating but ultimately exhilarating process. He drew inspiration from industrial designer Raymond Lovey who specialised in taking long-standing designs and restyling them. Drexler's CG model went through enormous changes as he worked on it, he describes it as being "pulled, stretched, cut and pounded" before the shape was finally approved.

FILLING IN THE DETAILS

Once the NX-01 reached this stage, Drexler started to really enjoy himself, going over the surface of the ship adding details and deciding exactly how everything would work. No detail was too small for him. There was, however, one problem - the producers didn't want to tie the writers hands by establishing too much at this early stage. They wanted to leave lots of details vague in case they needed them for a story point some time in the future. Drexler's solution was ingenious - he hid everything behind doors and hatches and wrote up notes 'suggesting' what was behind them.

He covered the surface of the ship with these hatches so equipment could appear from almost anywhere. His idea was that behind each hatch there was a rotating drum with cylinders like a revolver. Each cylinder housed a

► Doug Drexler and Mike Okuda prepared documents for the writers showing where important parts of the ship such as the engine room and crew quarters were located.



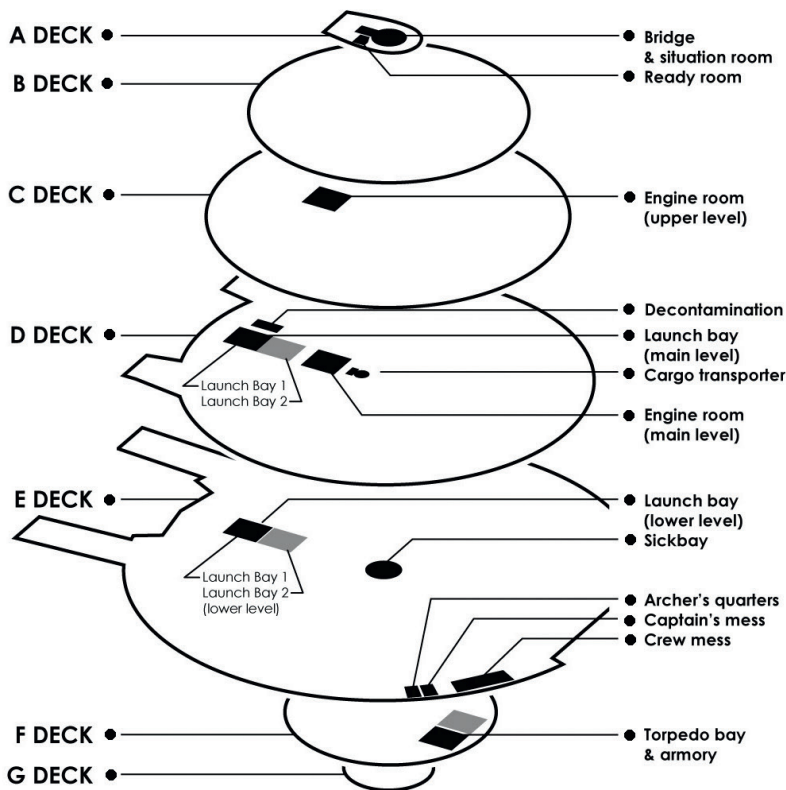
WHAT'S INSIDE ENTERPRISE

Locations of some key sets inside the saucer

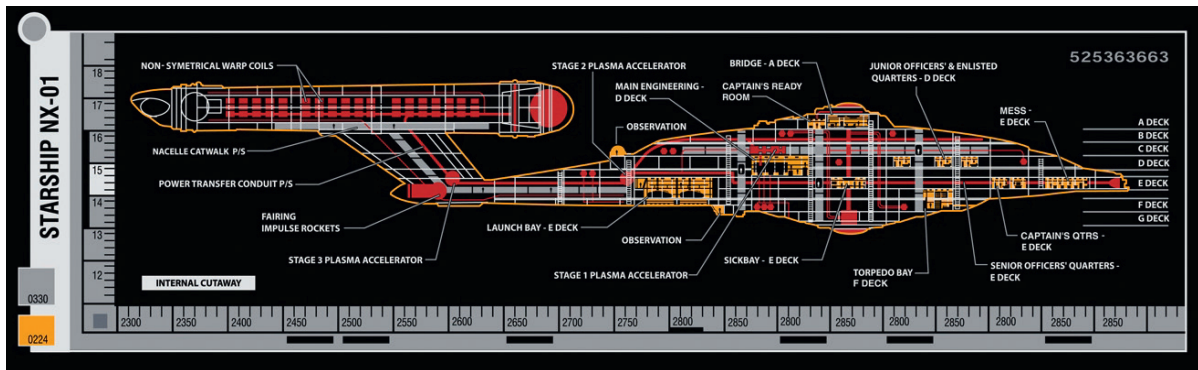


The saucer section of *Starship Enterprise* is 438-feet in diameter and seven decks thick at the center. (It's only one deck thick at the rim.) The command bridge is on top of the saucer (A Deck), while the main level of the engine room is on D Deck. Sickbay is at the center of E Deck. Also on E Deck is Archer's quarters, along with the mess hall.

There are two shuttlecraft launch bays (D Deck), with bomb bay-style doors that open under the saucer. Also on the underside of the saucer are the two torpedo bays.



Version of August 3, 2001. Not for distribution.
Minor revision: October 11, 2004



different piece of equipment – phase cannons, antennas, communication relays, probes, in short, anything the writers might come up with. When it was needed, the cylinder would rotate allowing the suitable piece of kit to appear wherever it was required.

The exterior has features that are a tip of the hat to the original TV series. For example, the sensor bars and navigation beacons are a deliberate echo of the ones the ship has in the first TV pilot, 'The Cage', when a subtly different version of the *Enterprise* was commanded by Captain Pike, rather than Captain Kirk.

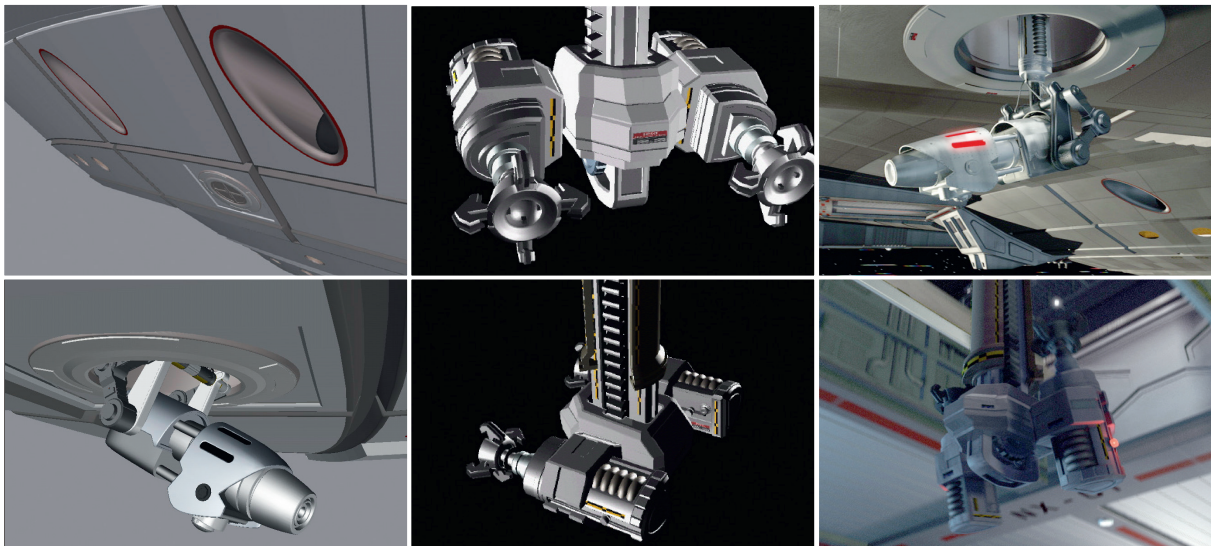
OLD AND NEW

The NX-01 also took inspiration from the real-world space programme. *STAR TREK* scenic artist Mike Okuda chipped in with the design of the airlocks which were closely modelled on the ones used on the International Space Station.

When it came to the overall look of the ship, Drexler figured that it would need constant maintenance. Again, he took inspiration from Matt Jefferies' original designs, but made them heavier and added access hatches. Jefferies had been clear that in Kirk's era maintenance would be done inside the ship, but Drexler reasoned that this would be a refinement that came later. At this point in time he says, "The NX was maintenance intensive, and took a hardy breed of engineers to run." So he left the nacelles open so you could see the warp field grilles and there were tracks that ran between the hull panels, which were designed for repair cars to run along.

Although Drexler describes the design process as "painful and hair raising" he was delighted with the finished ship. "There isn't a frivolous line on it," he says, "Every bit of it has a purpose and is thought out."

▲ Almost every vessel has a Master Systems Display graphic that shows the internal layout of the ship. This one prepared for the NX-01 reveals some fascinating details. Note the human figures inside the nacelle and the observation room.



◀ Drexler's initial lo-res computer designs for various hatches and some of the equipment behind them, and the final versions that were created at Foundation Imaging and Eden FX.



BECOMING THE ENTERPRISE NX-01.5

The *Enterprise* NX-01's designer, Doug Drexler, had an idea that would have left the ship looking very different at the end of the series than it did at its beginning. In his dreams the NX-01 would be constantly refitted, so, eventually, she would look much closer to Kirk's *Enterprise*.

The NX-01 did get a partial refit at the end of the second season when it returned to Earth to be equipped with upgraded weapons, but the realities of TV production meant that more significant changes were out of the question. Substantially altering the look of the model would have stopped the

VFX team from re-using the shots they had already made, and re-creating them would have blown the budget out of the water.

Although Drexler didn't get a chance to put his ideas into action on the series, he did continue to think about them. He had always intended the ship to have



a modular design where certain elements could be replaced. This was something Matt Jefferies, the designer of Kirk's original *Starship Enterprise*, had always advocated, so Drexler couldn't have had a better guide.

For the refit, Drexler's idea was the warp nacelles would be replaced with upgraded versions. Significantly, he figured the NX-01 would eventually gain a full-sized secondary hull. The original Warp Field Regulator would simply slide out and a new engineering hull would slide into place. This would leave the original part of the NX-01 effectively sitting on top of a new section of ship.

For the secondary hull Drexler wanted to echo – but not directly replicate – Jefferies' original design. The deflector dish at the front would have been the same basic design as the version on Kirk's ship, but the secondary hull would have been much more scooped out at the back, giving it a shape much more like the *Enterprise-C* or the *Excelsior*.

Although the refit version of the *Enterprise NX-01* never actually made it to television screens, it has appeared in other *STAR TREK* media. Drexler produced drawings for Pierre Drolet, who built the original filming CG model

of the NX-01 that was used on the show. Working from these drawings Drolet created a fully-realised CG version of the refit ship, which he and Drexler informally dubbed the NX-01.5.

This refit ship was featured in the 2011 'Ships of the Line' calendar and has appeared on Drexler's own blog, *Drex Files*. As such it's the closest possible thing to an official *STAR TREK* ship that has never appeared on the TV series. For Doug Drexler it also made it feel as if his ship had finally come of age, "It finally looks like a senior," he says, "I'm fulfilled to see it evolving toward the original 1701."

ON SCREEN



TRIVIA

Although space exploration was considered to be particularly dangerous in the 22nd century, Archer didn't lose a single member of his crew in the first season of *STAR TREK: ENTERPRISE*. When Trip Tucker dies in the final episode he is only the second regular cast member of any *STAR TREK* series to be killed off on TV (and stay dead). The first was *STAR TREK: THE NEXT GENERATION*'s Tasha Yar.



Technically *ENTERPRISE NX-01* is a Starfleet vessel but not a Federation one. This explains why the dedication plaque for the *ENTERPRISE-D* describes Picard's ship as the "fifth starship to bear the name".



Two of the major races to feature in *STAR TREK: ENTERPRISE* (the Andorians and the Tellarites) first appeared in the original *STAR TREK* series episode 'Journey to Babel'. Apart from the most fleeting appearances for the Andorians, neither species had featured in the *THE NEXT GENERATION*-era series.

- FIRST APPEARANCE:** *STAR TREK: ENTERPRISE 'BROKEN BOW'*
- MOVIE APPEARANCES:** NONE
- FINAL APPEARANCE:** *STAR TREK: ENTERPRISE 'THESE ARE THE VOYAGES'*
- DESIGNED BY:** Doug Drexler

KEY APPEARANCES

STAR TREK: ENTERPRISE 'THE EXPANSE'

Following a devastating and unprovoked attack on Florida, killing millions, the *Enterprise NX-01* is recalled to Earth. After fighting off an ambush from the crew of a Klingon *Bird-of-Prey*, Archer and his crew learn that the attack on Florida was launched by the Xindi from an area of space called the Delphic Expanse, dangerous to anyone who dares enter it. Archer learns that the Xindi plan to attack again, so *Enterprise* is fitted with improved weapons and given a new mission: stop the Xindi and save Earth!

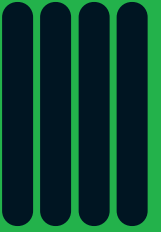
STAR TREK: ENTERPRISE

'THESE ARE THE VOYAGES'

The final episode of the series is set aboard the *U.S.S. Enterprise NCC-1701-D* where Commander Riker is using the holodeck to look at *Enterprise's* final mission before it is decommissioned after ten years' service. Riker is hoping to learn how to cope with orders he doesn't approve of and, through his eyes, we see how things changed for the crew of the NX-01, and how they became legendary figures who were ultimately responsible for the foundation of the Federation.

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