STAR TREK
THE OFFICIAL STARSHIPS COLLECTION

BORG SPHERE

ACTIVE: 24th C
SPEED: TRANSWARP
DIAMETER: 600 METRES
CREW: 11,000 DRONES
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Stand assembly:

The stand for the Borg Sphere simply fits into the bottom of the model. It doesn’t matter which way up the ship is.

Final position

EAGLEMOSS COLLECTIONS

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Development Director: Maggie Calmels

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**BORG SPHERE**

**SPECIFICATION**

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Encountering a Borg Sphere was a chilling experience as it meant almost certain assimilation into the Borg Collective.
The Borg Sphere, as it was designated by Starfleet, was a ball-shaped vessel that the Borg used primarily as a long-range tactical vessel or scout ship. During the Battle of Sector 001 in 2373, a Borg Sphere was also deployed as a ‘lifeboat’ vessel when it was launched through an aperture on a Borg Cube shortly before the Cube was destroyed. This Sphere was then able to travel back in time by emitting chronometric particles to create a temporal vortex.

At approximately 600m in diameter and with a crew complement of roughly 11,000 drones, a Borg Sphere was much smaller than the more common Borg Cube, but it possessed many of the same attributes and technology. The outer hull of a Borg Sphere was made largely from polytrinic and tritanium alloys, while the interior was a mixture of organic and mechanical elements that gave it an appearance almost like that of arteries and organs entwined around circuitry.

Borg Spheres were armed with powerful projectile and energy weapons, which had rapidly adjustable frequencies, meaning they could quickly penetrate a ship’s shields.

The Borg’s preferred method of attack, however, was to hold a target vessel in a powerful tractor beam and render it defenseless by draining its shields. A high-energy cutting beam would then be used to slice into the ship and remove entire sections of it. The reason for this was because the Borg wanted to assess and assimilate new technologies and they could not do this if they completely destroyed the ship.

**ADAPTIVE DEFENCES**

Borg Spheres were protected by ablative hull plating and multi-regenerative shields that constantly remodulated their frequency and adapted to resist enemy fire. Once Borg shields had adapted, standard phasers and photon torpedoes on Starfleet vessels had almost no effect on them, but just a few quantum torpedoes could be enough to destroy a Borg Sphere.

Like Borg Cubes, the Spheres were highly decentralized in structure with no specific command centre or engineering sections. All vital systems had multiple redundant power sources spread throughout the ship, meaning the Sphere could keep functioning even if some of its components were destroyed.

The Borg Sphere may have been spherical, but the outer surface was far from regular and smooth. It had raised and inset sections interspersed with streaks of luminescent green that glowed between the myriad conduits, paneling and pipes covering the exterior.

Data Feed

Not unsurprisingly, as a relentlessly efficient and logical race the Borg do not give their individual ships names, but refer to them by number, such as Sphere 634 or Sphere 878.

During the Battle of Sector 001 a Borg Sphere was ejected from a Borg Cube as a kind of “lifeboat” when the Cube was on the point of destruction. This is the only time Starfleet has recorded a Sphere being used like this. Normally, the Borg operated the Spheres as independent, long-range tactical vessels.
**Bel** was highly resistant to damage and systems failures. It was estimated that a Borg ship could continue to function when as much as 78 per cent of it was inoperable. Even if a vital system was damaged, the drones on board could work collectively to repair it at an astonishing rate.

The atmospheric conditions inside a Borg Sphere were optimized for the drones with temperature set precisely at 39.1 degrees, 92 per cent humidity and atmospheric pressure at two kilopascals.

Most of the interior of a Borg Sphere was taken up with row upon row of regeneration alcoves, where the drones ‘recharged’ or were ‘stored’ before they were activated for a specific task. When the drones were in an alcove they did not register on Starfleet sensors as an individual life form. This was partly because at the heart of each Borg ship was a processing device called a vinculum that used a transneural matrix to connect all the minds of the drones, eliminating individual thoughts and disseminating information throughout the Collective. Likewise, the central plexus was a device on all Borg vessels that linked it to every other Borg ship.

**CHAMBER OF HORROR**

Other areas of a Borg Sphere included assimilation chambers where captured individuals were assimilated into the Borg Collective. This brutal procedure involved the victim being stabbed by assimilation tubules and pumped full of Borg nanoprobes, before being laid out on a platform where various limbs and organs were amputated and replaced with Borg prosthetics.
Also on board Borg Spheres were transwarp chambers which contained several transwarp coils. These transwarp coils were the key component that allowed Borg vessels to travel at speeds at least 20 times greater than were possible with a standard warp drive. These coils were able to open an artificially-created conduit, or corridor, in a realm of subspace known as transwarp space, which the ship could then travel through at incredible speeds.

By 2373, the Borg had created six structures known as transwarp hubs that linked thousands of transwarp conduits whose exits were in every quadrant of the galaxy. One such transwarp hub was hidden within a nebula in the Delta Quadrant and allowed Borg vessels to travel almost anywhere in the galaxy in a matter of minutes.

In 2378, the crew of the U.S.S. Voyager NCC-74656 discovered a Borg transwarp hub hidden inside a nebula in the Delta Quadrant. This hub connected a network of transwarp conduits that had exits throughout the galaxy. By using these hubs, Borg vessels could travel tens of thousands of light years in a matter of minutes, far faster than any ship travelling at conventional warp.

DATA FEED
One of the most important devices on board a Borg vessel was the vinculum. This was a processing device containing a transneural matrix that linked all the minds of the drones on the ship so that all information was shared and allowed them to act as one. It was also responsible for purging any memories of individuality that drones might retain from their former lives before they were assimilated. The vinculum was heavily shielded deep within the Sphere in order to protect it and prevent its deactivation.
Captain Jean-Luc Picard said of the Borg, “In their collective state the Borg are utterly without mercy, driven by one goal alone, the will to conquer. They are beyond redemption, beyond reason.”

What prompted Picard’s words, and what makes the Borg so terrifying, is that they have only one goal: to forcibly assimilate new races and their technology into the Collective in the pursuit of perfection.

Why and how the Borg started this imperialistic mission of assimilation and their quest for perfection remains a mystery. What is certain, though, is that they are literally single-minded and utterly relentless in their pursuit of adding the biological and technological distinctiveness of other species to their own. They cannot be bargained or reasoned with; they deem everything else to be irrelevant.

**BARBARIC SUFFERING**

The actual process of assimilation was a horrific ordeal for an individual and the worst kind of torture. The victim had limbs sliced off, eyes gouged out and various other organs removed, all to be replaced with cybernetic implants. The procedure was performed in the most efficient way possible and no consideration was given to the extremes of agony and terror the victim went through – to the Borg, this is irrelevant.

Assimilation normally began with an individual drone injecting millions of nanoprobes into the victim’s neck from a pair of needle-like tubules that extend out of the skin from the back of one of their hands.

The victim would instantly convulse in agony as the nanoprobes – microscopic robotic devices – surged through their
bloodstream and latched onto their red blood cells, taking over their functions. Within moments, the nanoprobes would spread throughout the body, turning the subject’s skin an ashen-grey, mottled with black marks.

**EATEN FROM THE INSIDE**
The nanoprobes also appeared to be responsible for some cybernetic implants being grown internally inside the victim and they soon burst through the flesh as if they were being eaten alive from the inside by a virulent plague. At this point the victim still retained their individuality, although they became much more acquiescent and the drones were able to lead them through to an assimilation chamber where surgical alterations were made.

One of the first and most important pieces of technology to be fitted to the subject was a neural transceiver, which was inserted in the upper spinal column. This device allowed the Borg to tap directly into the victim’s mind via a complex subspace communication network so that the victim could telepathically ‘hear’ the combined Collective’s voice. It was the primary means by which all drones were connected, allowing them to act as one ‘hive’ mind.

Several more cybernetic devices were implanted into the victim, helping

△ Once the victim had been injected with nanoprobes, their skin turned ashen and spidery-black veins appeared all over them. They were aware of everything that was happening to them, but appeared powerless to resist.
to turn them from an individual into a drone. These included inserting a cortical array into the brain and a cortical node just above the eyebrow. Together they improved mental functions and controlled all the other cybernetic implants.

**Blocking Emotions**

Every cortical node also contained a fail-safe mechanism that shut down higher brain functions if the newly created drone started to regain their emotions or a sense of individuality.

There was also a neural processor that was inserted just below the ribcage and this contained a memory chip that stored all the information the drone received from the Collective.

Other modifications were made at the cellular level. These included the installation of biosynthetic glands and micro-circuit fibres. The DNA was at least partially rewritten, and there were structural changes made to the brain’s motor pathways.

Finally, surgical modifications were made. In many ways this was the most brutal part of the assimilation for the victim as they still retained some sense of individuality at this point and most definitely could still feel pain.

Many body parts were replaced or covered with armoured exoskeletons that on the skull alone could have more than three million microconnectors.

In most cases an eye would be removed and replaced with an eyepiece that used a holographic imaging system to give them advanced visual acuity. Some eyepieces also emitted low-intensity laser beams.

Also, an arm would normally be amputated and replaced with a prosthetic that could have any number of attachments, depending on the function the drone was assigned. In tactical drones a weapon would be included and drones that carried out surgical assimilations would have cutting tools, while most other drones would have interface devices for power and computer units.

**Few Needs**

Once fully assimilated, a drone could function for extended periods without food, water or even air. Their advanced cybernetic technology allowed them to operate in environments that would be deadly to most life forms, including the vacuum of space.

A drone’s only requirement was that it
Once fully assimilated, a drone would be covered in armoured exoplating, while some were fitted with a servo-armature that functioned as a weapon. By this point, the drone was equipped with so many cybernetic implants that it no longer needed food or water and it could exist in environments normally harmful to humanoids.

For the final part of the barbaric procedure, victims were taken to an assimilation chamber where changes were made to the brain’s motor pathways, eyepieces inserted and limbs replaced with prosthetics. A drone received regular infusions of power from a regeneration alcove to maintain its functions. A drone could go roughly 200 hours without regenerating before it started to malfunction and a typical regeneration cycle took six hours for it to become fully “charged”.

Once assimilation had been completed, a drone lost all memory of its former life and sense of individuality; it had no personality, no feelings and no mind of its own. To become a Borg was to experience a kind of living death as they were merely automatons, mindlessly carrying out the duties they were assigned.

Captain Picard, who was temporarily assimilated by the Borg in 2366 during their first incursion into Federation space, certainly believed that it was preferable to put a fully assimilated victim out of their misery rather than let them continue to exist as a drone.

For the Borg nothing could be further from the truth. For them assimilation is the path to perfection. To their hive mind, they are constantly improving themselves as a species by incorporating the best traits of the thousands of species they have assimilated.

The assimilation process was so traumatic that Captain Picard was haunted by the experience and had nightmares that it was happening to him all over again. He knew that the Borg were without mercy and that to be drone could be a fate worse than death.
DESIGNING THE BORG SPHERE

For STAR TREK: FIRST CONTACT, the filmmakers really wanted the visual impact of a brand new type of Borg vessel. The Borg Cube had been seen several times during the run of THE NEXT GENERATION so it made sense that if the Borg had other ships, they would also be geometrical shapes. It was decided that a spherical-shaped ship was the way to go, but that it would have that much more impact when it emerged.

Concept artist John Eaves, who also came up with the design of the U.S.S. Enterprise NCC-1701-E, was the man charged with working out exactly what this new Borg Sphere might look like. At first there were worries that it might seem too much like the ‘Death Star’ from ‘Star Wars’, and as production designer Herman Zimmerman recalled, making the Borg Sphere look unique was “our biggest challenge.”

Zimmerman and producer Rick Berman felt that the surface detail should look really irregular with no mathematical patterns. Keeping this in mind, Eaves explored several designs by making the detailing on the hull really random and having deep gaps between the panelling.

Eaves worked through several ideas, including one that incorporated a large weapons platform represented by a series of rings, but it was felt that this was too reminiscent of the ‘Death Star’.

After further refinement, Eaves came up with a colourized illustration that met with everyone’s approval. It was felt that this design perfectly encapsulated the Borg’s nightmarish mechanistic nature as it looked as if scavenged parts had been plumbed into the Sphere as they assimilated new technologies. It was a design where aesthetics were irrelevant, and ultimately a design that could only have come from the Borg.
Once it had been decided that the new Borg ship should be spherical in shape, illustrator John Eaves began experimenting with different looks. This early rough sketch introduced the idea of a patchwork of panels over the surface.

This illustration of the Borg Sphere was the one that was signed off by the producers and writers. It built on the design direction from the earlier concepts, incorporating a maze of exposed piping and irregular surfaces, which gave the impression that newly assimilated technology was continuously being added to it.

This later design had more pronounced and irregular panelling, but it was felt that the weapon represented by the series of rings in the middle of the Sphere was too similar to the ‘Death Star’ from ‘Star Wars’.
The overall look of the Borg Queen was a collaborative effort between concept artists, costume designers and make-up artists.

Once it had been decided that the Borg Queen’s entrance would involve her being assembled from separate body pieces, illustrator John Eaves and visual effects art director Alex Jaeger worked up some designs of exactly how this would happen. This storyboard by Jaeger shows the finished result of their efforts.
**STAR TREK: FIRST CONTACT** saw the introduction of the Borg Queen as a talking, disembodied head and shoulders being lowered down on conduits into her waiting body. Her metallic spinal column hung from beneath her upper torso and wiggled around in the air until it descended into her slender, black-clad body. The Queen appeared to shiver with sensual delight at being reunited with her physical body once again.

This hypnotic scene, at once both fascinating and repellent, marked the first time the Borg Queen had been seen and was perhaps the most memorable introduction of any **STAR TREK** villain. Surprisingly, in an early draft of the screenplay, when the film was called 'Star Trek: Resurrection', there was no Borg Queen at all.

**NEED FOR A QUEEN**

This early screenplay was given generally positive feedback, but one studio executive pointed out a fundamental flaw: the Borg were “basically zombies” and they gave the regular cast very little scope to verbally interact with them.

As **STAR TREK: FIRST CONTACT** writer Ronald D. Moore explained, “The Borg Queen was born out of the need to have a specific villain to deal with. One of the problems as a writer when you’re doing the Borg is that their hive mind is a collective consciousness. That’s kind of hard to do scenes with because there’s no person to focus on; there’s not a true antagonist. The Borg Queen seemed like a natural extension of what had been built in their backstory.”

**LEADER OF THE COLLECTIVE**

This meant the writers created a figurehead for the Collective, and in a logical extension of the Borg being analogous to an insect colony, they made this figurehead the Queen – the being at the apex of the hive.

The Queen was deliberately written as mysterious and enigmatic, but she appeared to be the central locus of the Collective, choreographing their thoughts and actions and providing a common direction. She was more than just simply in charge of the Borg, however, as she told Data, “I am the beginning. The end. The one who is many. I am the Borg.”

This illustration is one of the early design concepts Alex Jaeger came up with for the look of the Borg Queen. One of his colleagues at Industrial Light & Magic helped him out by modelling for him.
The task of envisioning how this extraordinary villain might look was given to several people simultaneously. Illustrator John Eaves, who had been a permanent member of the STAR TREK staff since the fourth season of DEEP SPACE NINE, began working on some designs for the Borg Queen, while Alex Jaeger, a 22-year-old visual art director at Industrial Light & Magic, independently worked on his own look for her. In addition, costume designer Deborah Everton was asked to give her take on the Borg Queen, while freelance illustrator Ricardo Delgado was also asked to visualize how the Queen might look.

In an early design meeting, it was suggested that they could look towards surrealist painter H.R. Giger’s ‘Spider Queen’ and the depiction of Anjelica Huston’s evil queen from the movie ‘Captain EO’ (1986) for inspiration.

**SELF-ASSEMBLY**

Working from this brief, Eaves, Jaeger, Everton and Delgado all contributed to the Borg Queen’s final look, but it was Delgado’s idea that she should come together from several, separate parts.

Eaves and Jaeger then refined this idea further with Eaves producing an illustration that depicted a huge mechanical rig lowering the Queen’s upper torso down onto the body with numerous heavy cables. This was felt to be going in the right direction, but the rig and the cables were overshadowing the Queen, so Jaeger streamlined the design by cutting down the number of...
Actress Susanna Thompson (pictured far left on the opposite page) took over the role of the Borg Queen for several episodes of STAR TREK: VOYAGER. The look of the Borg Queen remained essentially unchanged, and Thompson even wore the same Borg Queen suit that Alice Krige had done.

The Borg Collective was cold, implacable and totally without emotion, but the Borg Queen was different. She appeared to revel in the sensuality of her body and was prepared to use any means at her disposal to get what she wanted, including trying to seduce Captain Picard and offering Data the chance to experience the pleasures of having human flesh.

The program was also pushing the limits of the special effects, loading the makeup cables to just three, allowing the floating head and torso to take centre stage. Meanwhile, it was decided that costume designer Deborah Everton’s design for the Borg Queen’s suit should be used. This had the advantage that they would not be relying on special effects to complete the look for every scene and it was felt it would help Alice Krige, the actress playing the Queen.

As it was, Krige had extremely long days, starting in the middle of the night so she could have the make-up applied and be glued into the skin-tight suit ready for the day’s filming. Even then, a bathroom break could take 45 minutes as it took that long to be freed from the suit and be put back in it again.

The overall design of the Borg Queen, together with Alice Krige compelling performance, made an indelible, but disquieting impression. Director Jonathan Frakes and the writing team of Ronald D. Moore and Brannon Braga would later comment on the uneasy sexiness of the Borg Queen despite her evil behaviour and grotesque appearance. This was a villain that was sinister, seductive and sadistic and quite unlike any seen before. She scares and scintillates, frightens and fascinates.

EMPOWERING LOOK
Certainly actress Alice Krige believed that the look of the Borg Queen greatly added to the power of the character and also helped her performance. After she was fully made up as the Borg Queen for the first time she remembers her appearance shocking the crew who saw her. "I heard a collective gasp from everyone," said Krige, "I realized, ‘Oh my God, they’re frightened. They created her and they are scared.’ All of a sudden I got this incredible rush of power. It was the wildest sensation. I feel that the costume and the mask were extraordinary gifts to me in that when I got into them it was like going through the looking glass. It was no longer me, but the Borg Queen."
In 2378, Sphere 634 was one of the few ships the Borg Queen managed to stay in contact with after she had been infected with Admiral Janeway’s neurolytic pathogen. She ordered the Sphere to pursue the U.S.S. Voyager through a transwarp conduit towards the Alpha Quadrant and once it had caught up, it opened a hatch and engulfed Voyager. As it emerged from the conduit, the Sphere was destroyed from within by a transphasic torpedo, leaving Voyager to fly free, safely back in the Alpha Quadrant.

Seven of Nine’s full Borg name was Seven of Nine, Tertiary Adjunct of Unimatrix 01. This subsection of the Collective operated in close association with the Borg Queen.

The Borg Queen’s costume worn by actress Alice Krige was made out of hard rubber and was so tight that it gave her blisters. A second, soft foam suit had to be made overnight, although she still had to wear painful silver contact lenses that could only be worn for four minutes at a time.

The day Captain Picard has been dreading for six years has finally arrived as Starfleet’s most formidable enemy, the Borg, are detected heading directly for Earth. After his previous traumatic experience with the Borg, Picard is ordered not to interfere, but as a Borg Cube decimates the fleet sent to intercept it, he orders the U.S.S. Enterprise NCC-1701-E into battle. They manage to destroy the Borg Cube, but not before it launches a Sphere, which travels back in time in an effort to assimilate Earth by preventing mankind’s first contact with the Vulcans.

The crew of the U.S.S. Voyager NCC-74656 launch an audacious plan to steal a transwarp coil from a damaged Borg Sphere. They hope to integrate this key component of Borg faster-than-light technology into Voyager’s warp systems and travel thousands of light years in a few days, taking years off their journey home. Unfortunately, the Borg Queen learns of this plan and uses this knowledge in an attempt to return Seven of Nine to the Borg by issuing her an ultimatum: rejoin the Collective or watch as Voyager is assimilated.
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- In-depth profile of the U.S.S. Reliant NCC-1864, the Miranda-class ship that was hijacked by Khan
- The story behind the design of the U.S.S. Reliant
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