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STARFLEET

RUNABOUT

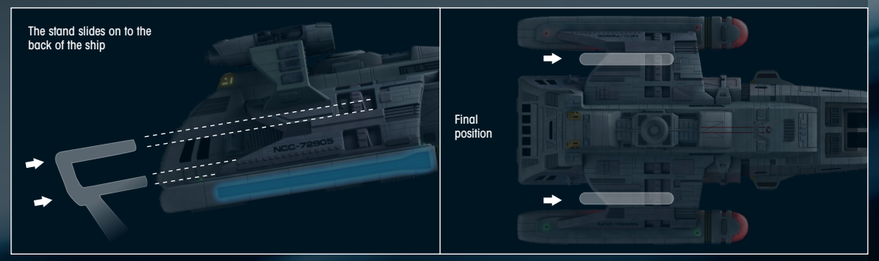
- DANUBE CLASS
- LAUNCHED: 24th C
- LENGTH: 23.1 METERS
- MAX SPEED: WARP 5

STARFLEET

RUNABOUT

Contents

Stand assembly:



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RUNABOUT

SPECIFICATION

OPERATED BY:	STARFLEET
CLASS:	DANUBE
CONSTRUCTED:	2365
LAUNCHED:	2368
LENGTH:	23.1 METERS
CREW:	2-4
TOP SPEED:	WARP 5
WEAPONRY:	FOUR PHASER ARRAYS ONE MICROTORPEDO LAUNCHER

Runabout was the generic name for the *Danube* class, small warp-capable Starfleet starships that were in operation in the latter half of the 24th century. At 23.1 meters in length, they were larger than standard shuttlecraft, but smaller than fully-fledged starships. This meant they were capable of more protracted missions and carrying more cargo than shuttles, but without wasting the resources and manpower that a full-sized starship would require.

Runabouts were designed to carry out a number of roles such as scientific expeditions, personnel and cargo transportation, covert tactical missions, and even act as mobile defense platforms.

ADAPTABLE VESSEL

The prototype runabout was called the *U.S.S. Danube* NX-72003, and in keeping with Starfleet tradition this type of vessel became known as the *Danube* class. Typically, runabouts were operated by a crew of two to four from the cockpit, while a habitat module with rudimentary sleeping quarters was located at the rear of the vessel. The mid-section contained a detachable module that could be changed for different mission profiles. This meant it could carry science, medical, defense or cargo payloads, depending on what assignment it was undertaking.

The runabout's most ground-breaking feature, as well as its most useful, was its compact warp reactor core. This ingenious piece of engineering was located in the middle of the spine that ran along the top of the vessel, and worked in conjunction with the nacelles. Despite being much smaller than the warp cores found on full-sized starships, it was still capable of propelling the ship to speeds as high as warp 5.

▼ Equipped with warp drive, runabouts were more capable than standard shuttlecraft, but not much larger. This meant they were extremely flexible and could be used in a variety of roles, but they were most often used as support ships to space stations.

STARFLEET RUNABOUT

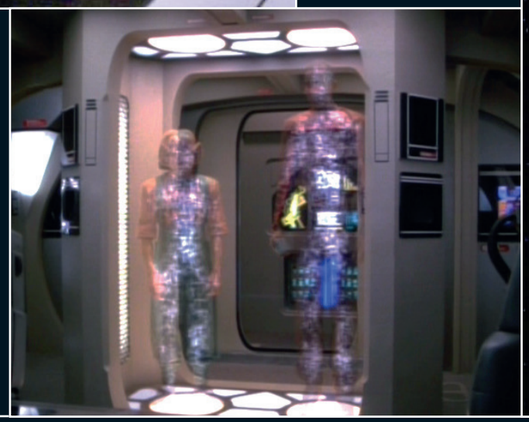
Resembling an enlarged shuttlecraft, runabouts were multi-purpose ships often assigned to space stations.

◀ The cockpit of a runabout was similar to that found on shuttlecraft, but was slightly larger. The primary flight controls were duplicated at the two forward stations, but the normal configuration was to have the port station set as the mission commander's controls, and the starboard station set as the pilot's controls.

SHIP PROFILE

◀ The runabouts on *Deep Space 9* were housed in launch bays located around the habitat ring. They were lifted from the bays on retractable pads so they could launch from the outer surface of the ring.

▶ Runabouts featured a two-person transporter that in their original design was located at the rear of the cockpit. Personnel could beam down to a planetary surface, leaving the runabout unmanned in standard orbit.



▲ The runabout was designed to allow a small crew to undertake longer interstellar missions than was possible with a standard shuttle. This was mainly due to its small, flattened warp core that in conjunction with its warp nacelles was capable of powering it to speeds as high as warp 5. It was also fitted with thrusters that allowed it to make planetary landings.

This ability to travel at relatively high warp speeds meant that runabouts were able to travel between planetary systems to carry out missions, unlike impulse-only shuttlecraft. They could also land and take off from planetary surfaces, as they were fitted with vertical lift vents under the winglets.

For defense, the runabout was armed with six phaser strips and a microtorpedo launcher that was located at the front of the vessel, under the cockpit. These armaments, together with its defensive shields, meant the runabout was able to engage much larger vessels in combat.

Additional sensors could be added to runabouts in the form of a roll bar module that was fitted over the top of the ships. These removable bars could be added for specific types of missions and extended the ship's sensor capabilities.

Other features of the runabout included a two-person transporter and a food replicator that were initially located immediately behind the cockpit stations. Later these facilities were moved further back in the ship and a secondary tactical console was positioned in the cockpit. The exterior of the vessel featured an aft tractor beam emitter that was powerful enough to tow a ship at least as large as a Cardassian *Galor*-class warship.

SPACE STATION SUPPORT

Deep Space 9 initially took delivery of three runabouts in 2369, and they were housed in dedicated launch bays situated around the habitat ring. These vessels were called the *U.S.S. Ganges*, the *U.S.S. Yangtzee Kiang*, and the *U.S.S. Rio Grande* – all additional runabouts that were supplied to *Deep Space 9* over the following years were also named after Earth rivers.

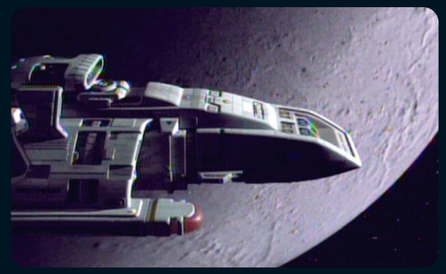
These runabouts provided the primary method of transport for people living on *Deep Space 9*, in addition to providing defensive support. During their first few of years of service the runabouts proved particularly useful in helping to evacuate the inhabitants during violent plasma storms in 2370 and when the Circle, a separatist group, tried to seize control of the station. They were used extensively in the Badlands to track down members of the renegade Maquis organization. They were also used for exploration and were instrumental in discovering many new worlds in the Gamma Quadrant, as well as the Bajoran wormhole itself.

As the threat from the Dominion rose, it became clear that the runabouts did not provide sufficient protective cover for *Deep Space 9*, and in 2371 the *U.S.S. Defiant* NX-74205 was brought in to bolster the space station's defenses. Nevertheless, runabouts were still widely used in a number of capacities, such as in 2373 when a runabout took part in a covert mission to rescue Enabran Tain and Dr. Bashir from a Dominion prison, Internment Camp 371. Runabouts continued to play an important role throughout the Dominion War and were used in exercises with the Ninth Fleet in 2374. At the climax of the war, Colonel Kira Nerys used a runabout to travel to Cardassia Prime in order to help with Damar's resistance movement.

▲ Three runabouts were initially assigned to *Deep Space 9* in 2369. They provided a means of transportation off the station and remained its primary defensive support until the arrival of the *U.S.S. Defiant*.

DATA FEED

Runabouts could be equipped with a 'roll bar' mounted pod over the spine of the vessel. These pods were easily removable and normally contained sensor equipment.



CREATURE COMFORTS

The habitat module at the rear of the runabout provided everything the crew needed to keep them comfortable on extended missions. The main feature of the compartment was a large meeting/dining table where the crew could discuss their mission objectives, relax and eat. A replicator provided food and drinks, but if it failed there were backup supplies in the form of emergency rations. Small bunk beds were located on each side of the exit leading to the middle section so that the crew could sleep. There was also a computer console with a chair on one side of the compartment where the crew could access a comprehensive library for research purposes, record the activities of their mission, and access some of the ship's primary systems. This section housed medical kits, four emergency EVA pressure suits, and a selection of hand phasers.

▲ Captain Picard and his colleagues enjoyed a meal together in the habitat module of a runabout on their way back to the *U.S.S. Enterprise* NCC-1701-D after attending a psychology conference.

DATA FEED

Defensive payloads, special laboratories, emergency habitats or additional living quarters were just some of the different modules that could be fitted to the swappable central section of a runabout between the cockpit and the habitat area.

NAME CHANGE

The runabout seen in the episode 'Penumbra' was originally called the *U.S.S. Ganges* until the writers realized that it had already been destroyed, so the name was changed to the *U.S.S. Gander*.

STARSHIP CLASS

The official designation of *Danube* class for runabouts was not spoken on screen until the fourth season episode 'Hippocratic Oath.' Benjamin Sisko called them "Runabout class" in the pilot episode, 'Emissary.'

ONE APPEARANCE

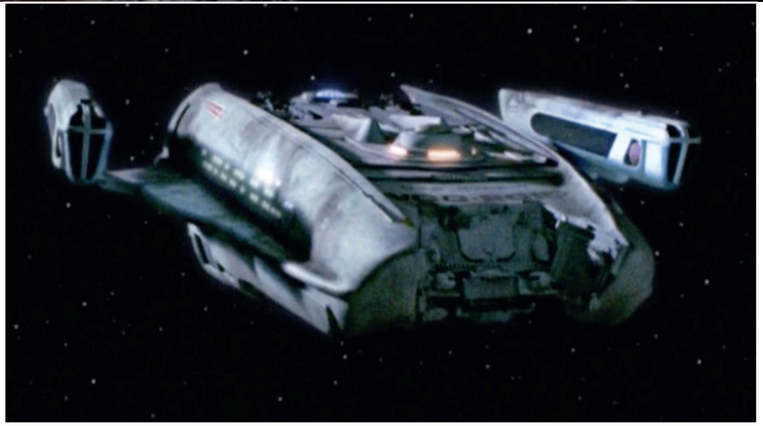
The habitat module in the rear section of the runabout was never featured in an episode of *STAR TREK: DEEP SPACE NINE*. This living area was only ever seen in the *STAR TREK: THE NEXT GENERATION* episode 'Timescape.'

▶ The *SD-103* transport vessel seen in *STAR TREK VI: THE UNDISCOVERED COUNTRY* provided the initial inspiration for the design of the runabout.

▼ The design origins of the runabout can be traced all the way back to the *Galileo* shuttlecraft that appeared in *STAR TREK: THE ORIGINAL SERIES*.

DESIGNING THE RUNABOUT

▶ The *SD-103* shuttlecraft was modified with warp nacelles and various components from *Constitution* class and *Miranda* class models to become the *U.S.S. Jenolan*. This model was seen in *THE NEXT GENERATION* episode 'Relics,' and was originally going to be used unchanged as the runabout.



The runabout was the first *STAR TREK* ship to utilize a modular design, as senior production illustrator Rick Sternbach explains…

The *Danube*-class runabout was designed by Rick Sternbach and Jim Martin. They based it on an existing model of a Federation *SD-103* type transport that took the command crew of the *U.S.S. Enterprise* NCC-1701-A to their vessel when it was moored in Spacedock near the beginning of *STAR TREK VI: THE UNDISCOVERED COUNTRY*.

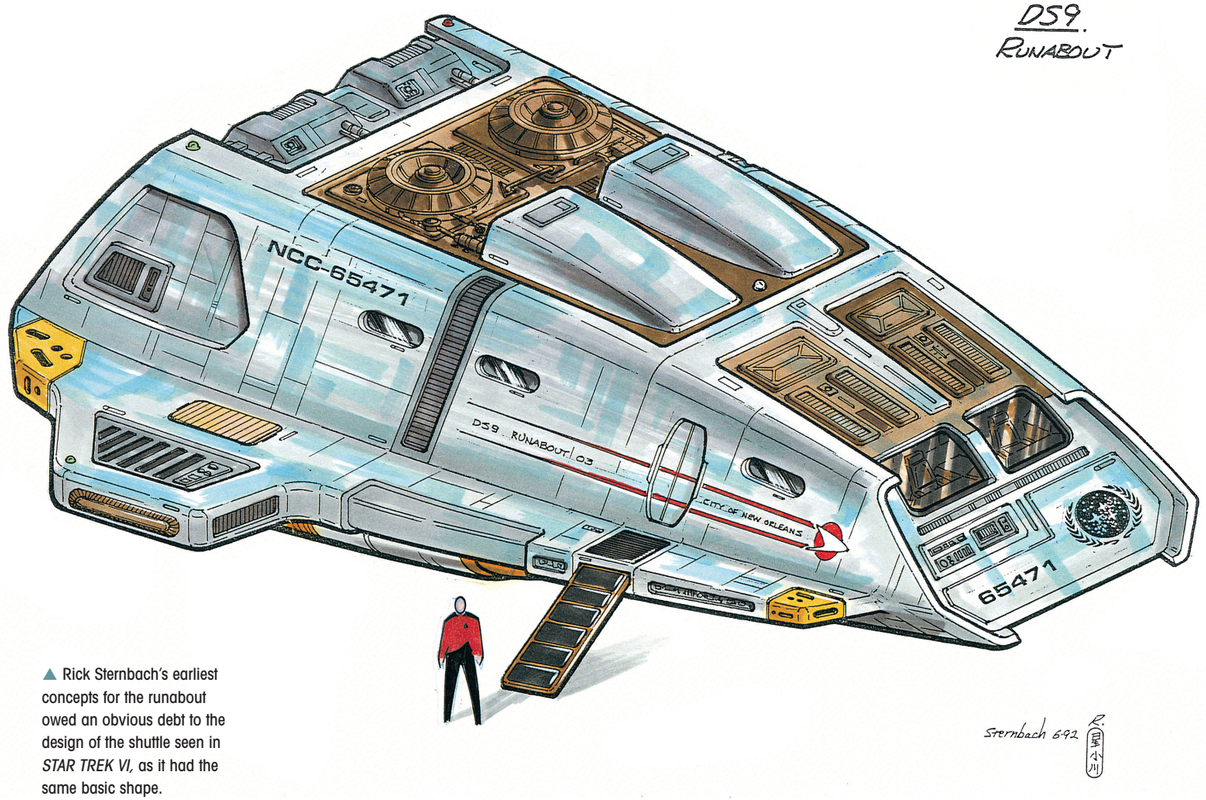
The original *SD-103* model (which was designed and built by Bill George and John Goodson at Industrial Light & Magic) was in turn an updated design of the *STAR TREK: THE ORIGINAL SERIES* shuttlecraft *Galileo*, with recognizable elements such as the forward windows, aft grille, protruding winglets and side-opening doors. Incidentally, this *SD-103* model was later modified to become the *Sydney*-class *U.S.S. Jenolan* NCC-2010 used by Scotty in the *STAR TREK: THE NEXT GENERATION* episode 'Relics,' and it also featured briefly in 'Trials and Tribble-ations,' when it delivered the Temporal Investigations agents Dulmer and Lucsly to *Deep Space 9*.

▲ The *SD-103* model was designed and built by Bill George and John Goodson at Industrial Light & Magic.

STARTING POINT

At first it appeared that this *U.S.S. Jenolan* miniature was actually going to be the runabout used on *STAR TREK: DEEP SPACE NINE*. However, the producers soon decided to have us create a unique ship and modify portions of the formerly Cardassian station to accommodate six docking bays. John Goodson's handiwork would still provide us with a good starting point; my earliest drawings reflected the major structural elements of his ship, in particular the forward windows, side windows and entry doors. These would be the first pieces 'frozen' in the design process, since the cockpit set had to be finished and filmed before the miniature was completed.

Throughout its evolution, the runabout kept the ability to land on a planet, go atmospheric and hit mid-warp velocities, but within a few weeks two things happened to change the design direction and get us on the road to the final look. First, the producers asked that we make the warp nacelles and pylons more prominent, since they were signature shapes in *STAR TREK*. A few



▲ Rick Sternbach's earliest concepts for the runabout owed an obvious debt to the design of the shuttle seen in *STAR TREK VI*, as it had the same basic shape.

drawings examined how the nacelles might be placed, and the favorite scheme seemed to be one with the pylons extending down from the top. Second, illustrator Jim Martin added a new wrinkle to the vehicle by breaking the body into three distinct operational areas, including a command cockpit at the front, a cargo/labs section in the middle, and a conference or habitation section at the rear, all connected by a structural backbone.

Conceptually, a connecting corridor between the separate sections ran below the backbone to access the aft modules. Soon I created a synthesis of all the ideas we were generating in a few final drawings that the producers could sign off on.

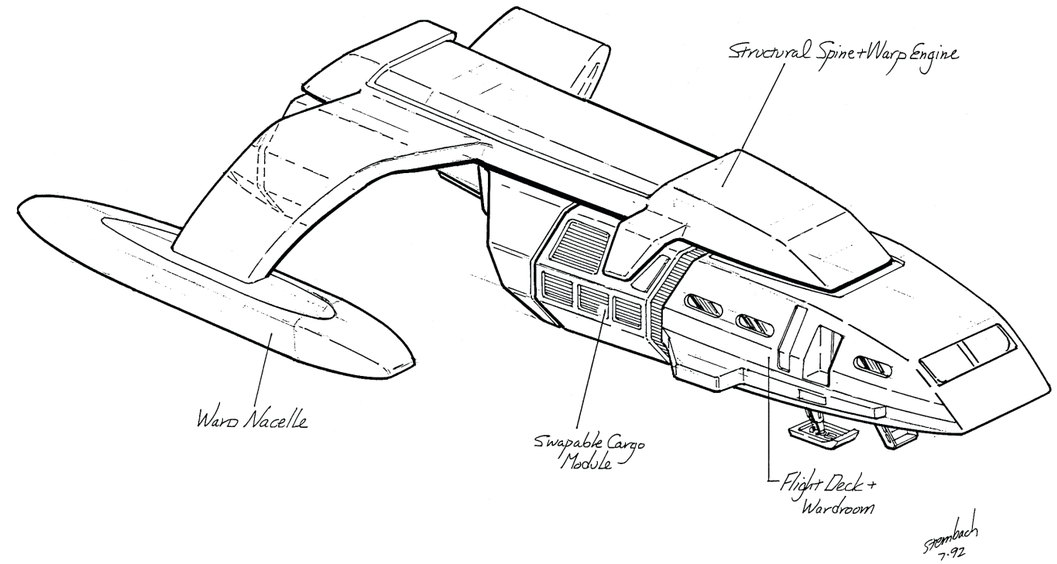
THE RIGHT DETAILS

Once the basic hull had been approved, the detailing work addressed all the standard Starfleet parts, plus the new gear required by Jim Martin's cargo pod. The windows, reduced from three to two, were set into a shallow depression to add a few highlights and shadows; this helped to convey a sense of scale and reality to the model.

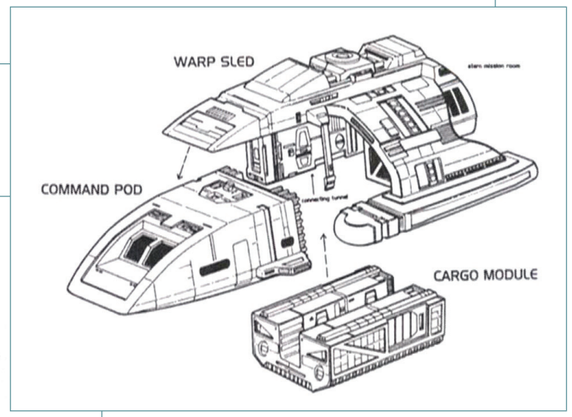
The flat 'pancake' warp reactor was placed atop the backbone, along with its matter and antimatter injectors and fuel tanks.

The pylons had a few areas trimmed out, and were given phaser strips, plasma conduits and interesting plating, again part of the use of texture to convey scale.

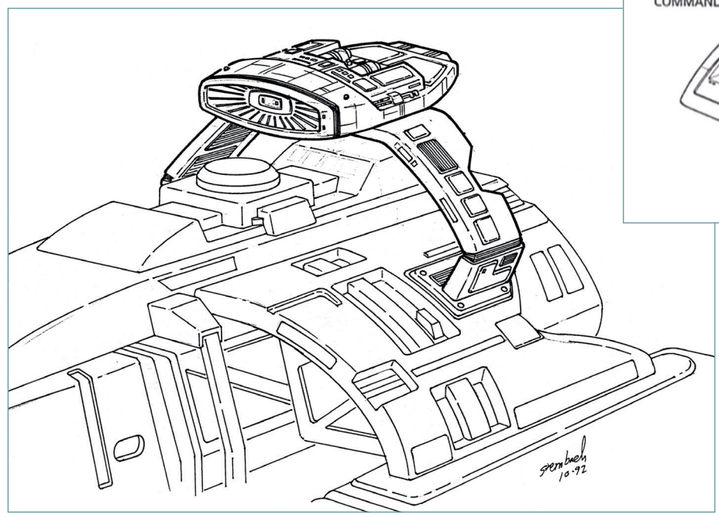
The command section, now imagined as an escape craft with its own limited propulsion system, had its nose streamlined. The winglets and their vertical lift vents were reduced in size and moved forward. Retaining clamps were added to the backbone to hold the cargo pod; other mission modules could have been swapped in, but we never got around to it. Sensor strips, transport emitters and additional phasers were also spotted around.



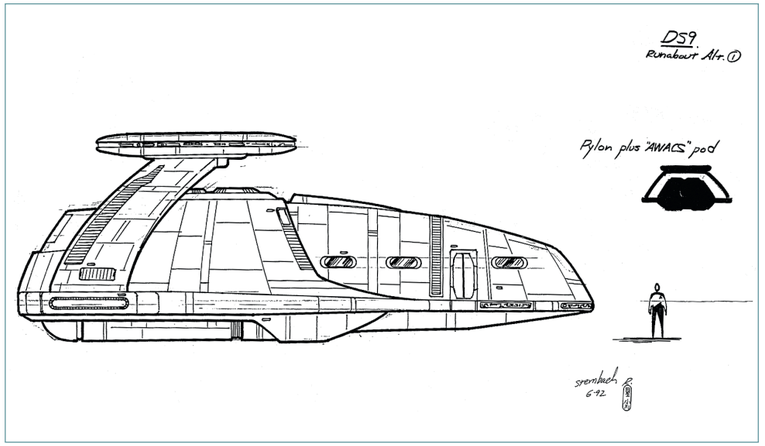
▲ Jim Martin came up with the idea of giving the runabout a modular design, with different sections 'hanging' from the central spine, which Sternbach worked into this concept.



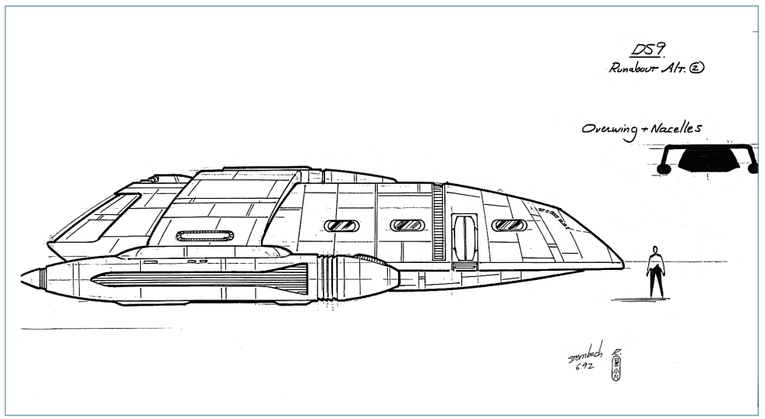
▲ The command pod became an escape craft, the middle section could be swapped out to serve different functions, and the backbone provided the propulsion and living quarters.



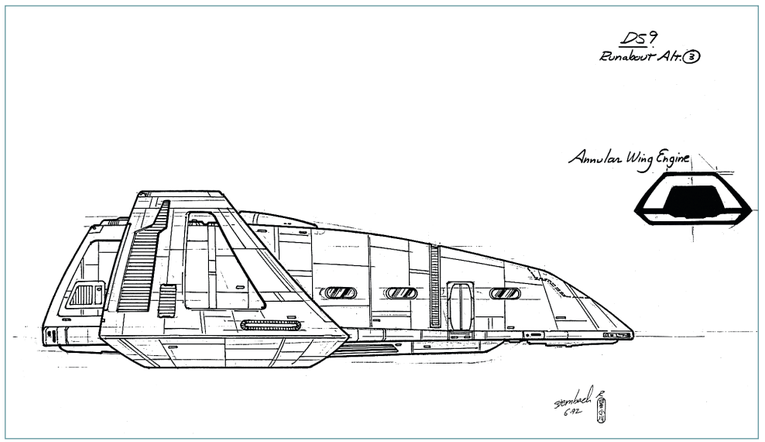
◀ A 'roll bar' module was added so that if two runabouts were shown together in one scene, the audience would be able to easily distinguish between them.



▲ Sternbach presented several alternative versions of his early designs for the runabout to the producers.



▲ This illustration was close to the final design and had the nacelle pylons attached to the backbone of the ship.



▲ Sternbach came up with this 'annular' wing engine as he experimented with different looks for the warp section.

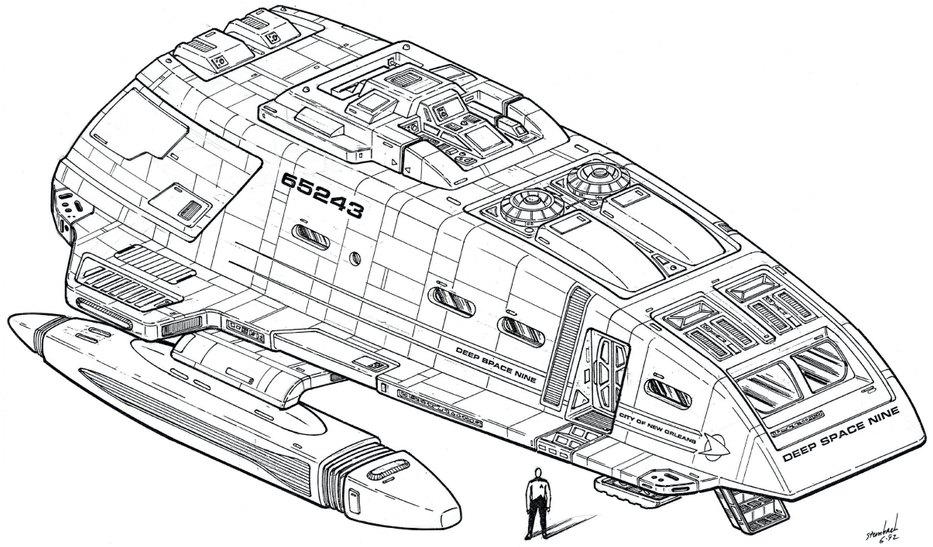
The only big unknown left was where to locate the impulse engines. The intakes and exhaust nozzles could have been embedded in a thick pylon, but the better location turned out to be under a thinner, more aesthetically pleasing wing. With the impulse grilles set back, the wing retained its proportions, and the mass of the impulse system filled in an empty volume that might otherwise have made the runabout appear to be a flapping bird.

One of the reasons we do drawings in light blue pencil first is to test just these kinds of ideas. Luckily, over the years I haven't erased as much as I've drawn, but occasionally changes were necessary; a certain shape might have looked great initially, but didn't fit in the overall drawing, or a shape looked good but needed one last thing to make it perfect.

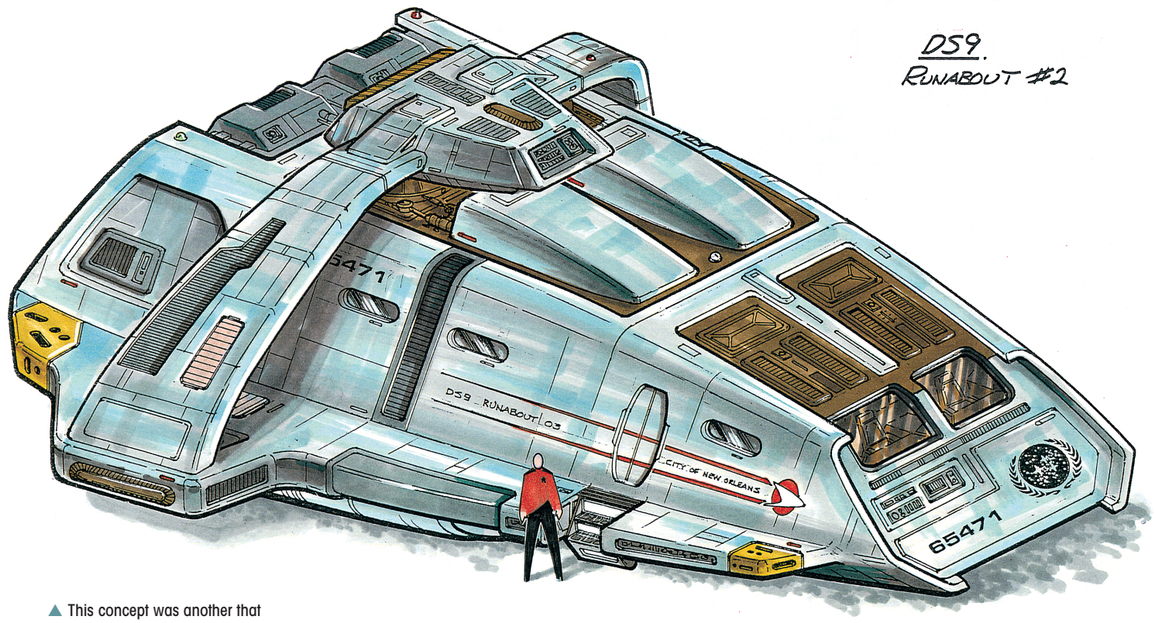
In one episode, two runabouts were chasing each other; to help the audience differentiate them, the producers asked for some additional hardware to be added to one of them, so a large sensor pod structure was mounted atop the warp reactor. Weapons fire was usually done with the phasers, although we did also add a microtorpedo launcher under the front nose section of the ship.

REGULAR CRASHES

The runabout managed to hold its own until the third season of DEEP SPACE NINE and the arrival of the *U.S.S. Defiant* NX-74205. Then again, maybe it didn't; they did have a tendency to crash or explode like other Starfleet shuttles, with the notable exception of the *U.S.S. Rio Grande*. In fact, they crashed so often we built a full-size cockpit exterior for a crashed runabout, complete with escape hatch. Evidently, the emergency separation system was offline that day!



◀ This design variant of the runabout featured warp nacelles that were attached to the underside of the runabout via short pylons. The figure in the illustration was there to give an idea of the size and scale of the ship.



▲ This concept was another that showed the 'roll bar' module, and it eventually led to the idea of having the pylons extending down from the top with the nacelles hanging down below.

▲ The original shooting model of the runabout was built at Tony Meininger's Brazil-Fabrication model shop and filmed at visual effects company Image G.

▲ The runabout studio model was approximately 18 inches long, and featured internal wiring for the lighting of the windows, the impulse engines and warp nacelles.

BUILDING & FILMING THE RUNABOUT

Two different-size runabout models, as well as a CG version, were used for filming on *STAR TREK: DEEP SPACE NINE*.

Once Rick Sternbach and Jim Martin's design for the runabout had been approved, they sent blueprints and orthographic views to studio model maker Tony Meininger who operated his own modeling shop, Brazil-Fabrication & Design in Glendale, California. Meininger and his crew had already created the incredible studio model of *Deep Space 9*, and they did an equally impressive job of constructing the model of the runabout, building it within one-eighth of an inch of the supplied drawings.

As the runabout was larger than a typical tan Starfleet shuttle, it was suggested that the hull be the same blue-gray as the *Galaxy*-class *U.S.S. Enterprise* NCC-1701-D. This had the added benefit of contrasting against the warm tones of *Deep Space 9* and the Cardassian warships. A few different shades of hull color and some brown accents, mixed with a bit of space 'weathering,' gave it an authentic appearance. Rub-down hull markings were designed and printed, including Starfleet emblems and pennants.

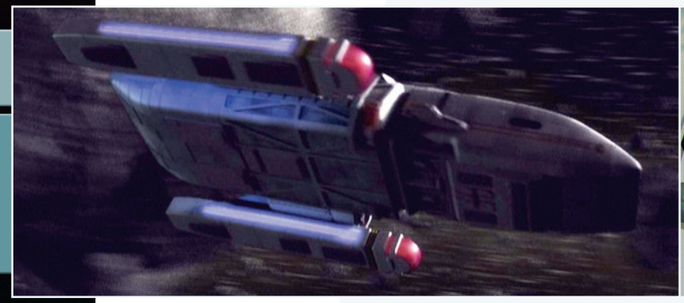
The finished runabout miniature measured approximately 18 inches long and was built with top, bottom and aft model mounts, with electrical connectors for motion-control filming. It joined the rest of the studio model 'fleet' at visual effects company Image G for the 'Emissary' VFX shots.

A large miniature of the *Deep Space 9* docking bay featuring a slide-away roof and a hydraulic landing pad was built to the same scale as the runabout itself. It was then photographically matted into shots of the overall station for launching and landing scenes.

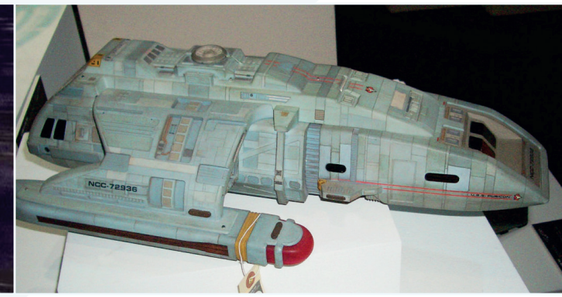
Meininger and his crew built a second studio model of a runabout for the season six episode 'One Little Ship,' in which a runabout was reduced to a tiny size. Dialogue specified that the runabout had been shrunk to just four inches, but building a model that small would have caused problems with lighting and detail. Instead, the model was six inches long and mounted on a specially built three-axis head, which allowed for easier miniature effects work than would have been possible with the original filming model.

A CG model of the runabout was created for the season six show 'Change of Heart.' This was the first episode in which runabout sequences were done completely with computer-generated imagery. It featured complex scenes where the ship weaved through a dense asteroid field, something that would have taken weeks to film using miniature effects work. The CG model for the *Danube* class was developed by Digital Muse and was used from then on as it allowed for more freedom and flexibility of movement.

The original studio model of the runabout decorated as the *U.S.S. Rubicon* was sold in 2006 at the Christies '40 Years of Star Trek: The Collection' auction for $33,600.



▲ A CG model of the runabout was created for the episode 'Change of Heart,' where it was seen maneuvering through an asteroid field.



▲ The runabout studio model featured in the first five seasons of *STAR TREK: DEEP SPACE NINE*. It was later sold at auction for $33,600.

ON SCREEN

TV APPEARANCES:	STAR TREK: THE NEXT GENERATION; STAR TREK: DEEP SPACE NINE
FIRST APPEARANCE:	'TIMESCAPE' (TNG)
FINAL APPEARANCE:	'WHAT YOU LEAVE BEHIND' (DS9)
DESIGNED BY:	Rick Sternbach and Jim Martin

KEY APPEARANCES

STAR TREK: DEEP SPACE NINE
'THE MAQUIS, PART II'

Commander Sisko learns that the Maquis are planning to attack a civilian colony where the Cardassians are suspected of secretly stockpiling arms to be used against Federation citizens living in the Demilitarized Zone. Utiliizing three runabouts – the *U.S.S. Rio Grande*, the *U.S.S. Mekong* and the *U.S.S. Orinoco* – to form a blockade, Sisko tries to prevent a Maquis fighter from reaching its target and instigating a major incident that could lead to war.

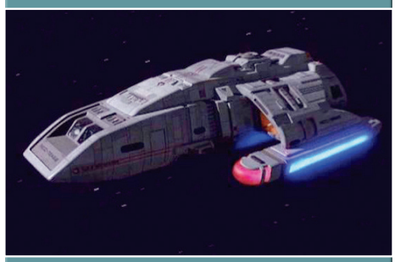
STAR TREK: DEEP SPACE NINE
'ONE LITTLE SHIP'

Dax, O'Brien and Bashir take the runabout named the *U.S.S. Rubicon* into a subspace compression anomaly that shrinks it down to less than one per cent of its original size. Unfortunately, while the runabout is inside the spatial phenomenon, the *U.S.S. Defiant* NX-74205 is taken over by Jem'Hadar troops. When the *Rubicon* gets thrown out of the anomaly in its shrunken state, it's left up to the tiny runabout to take back control of the *Defiant*.

TRIVIA

The *U.S.S. Rio Grande* was the only runabout out of the original three runabouts assigned to *Deep Space 9* to survive throughout *STAR TREK: DEEP SPACE NINE*'s seven year run. A total of seven named runabouts and three unnamed runabouts were destroyed over the course of the show.

The runabouts mentioned by name on *STAR TREK: DEEP SPACE NINE* were the *U.S.S. Gander*, the *U.S.S. Ganges*, the *U.S.S. Mekong*, the *U.S.S. Orinoco*, the *U.S.S. Rio Grande*, the *U.S.S. Rubicon*, the *U.S.S. Shenandoah*, the *U.S.S. Volga*, the *U.S.S. Yangtzee Kiang*, and the *U.S.S. Yukon*.



After the destruction of the *U.S.S. Mekong*, Sisko told Kira Nerys to name the replacement runabout the *U.S.S. Rubicon*. She replied that "at the rate we get through runabouts, it's a good thing Earth has a lot of rivers." This was the first dialogue confirmation that all the runabouts assigned to *Deep Space 9* were named after rivers found on Earth.

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