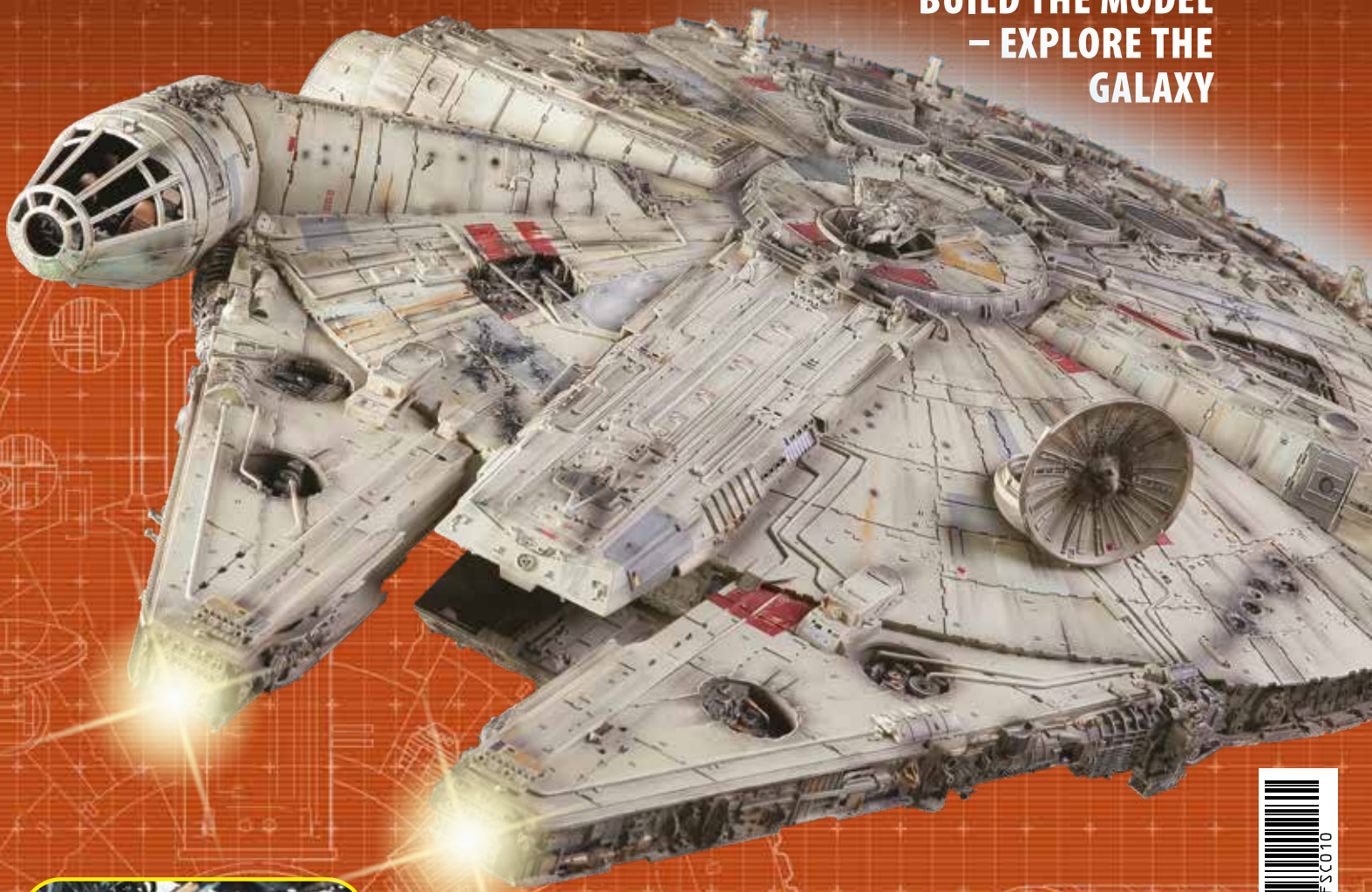
STAR WARS MILLENNIUM FALCON

BUILD THE MODEL – EXPLORE THE GALAXY





THE YT-1300'S NAVIGATION COMPUTER

F219FSC010

FANHOME

DeAgostini COLLECTIBLES

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CEC'S LIGHT FREIGHTER VARIANTS

YT-1300F & YT-1300P

CARGO TRANSPORTERS & PEOPLE CARRIERS

Nothing demonstrates the versatility of the YT-1300 better than the fact that CEC offered it in two entirely different configurations – as a cargo transporter or a people carrier.



Although CEC expected its customers to add their own modifications from the options available, the company initially offered its new light freighter with a choice of two basic configurations – the YT-1300f and YT-1300p.

In the freight version, most of the interior of the ship is simply an empty space, maximizing the cargo holds at the expense of the crew, who are provided with only minimal facilities and few creature comforts. Emphasizing the designers' priorities, the YT-1300f has twin (port and starboard) loading ramps, configured to admit droids and treaded cargo loaders. The space taken up by these ramps, and the clearance that they need to retract, take up much of the space that is used for escape pods in the YT-1300p. Instead, there are matching port and starboard docking rings. These changes barely alter the external appearance of the YT-1300.

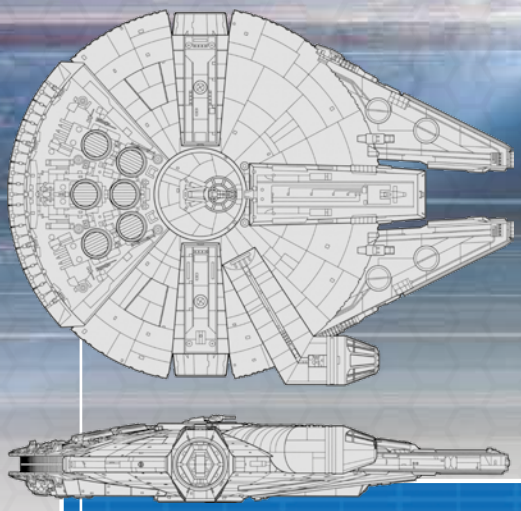
PASSENGER CARRYING

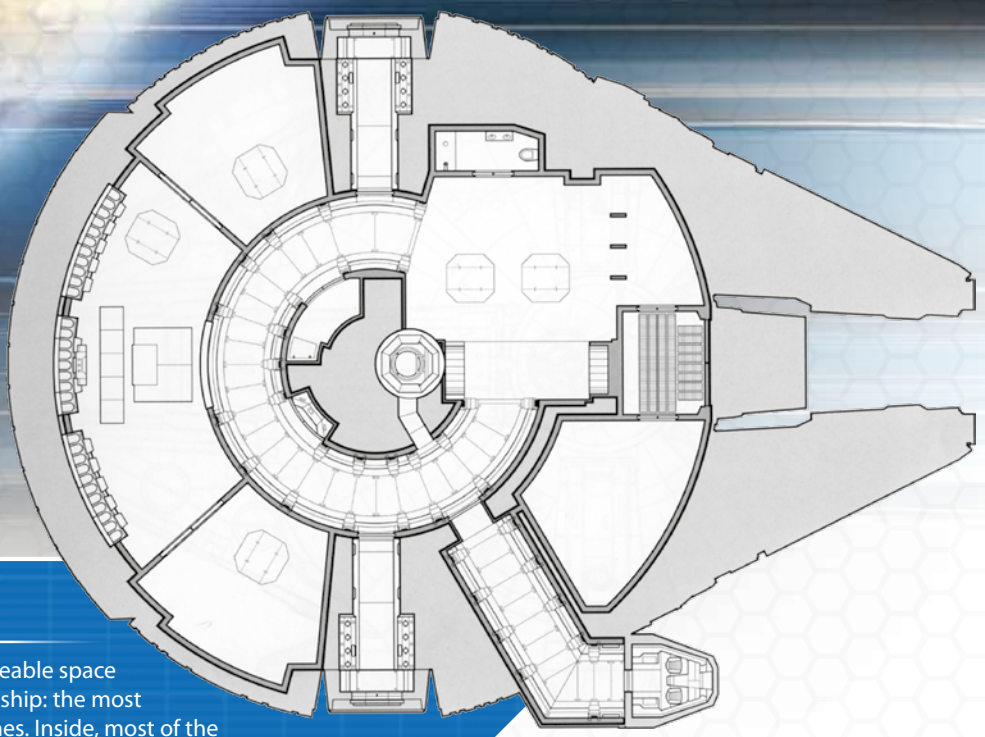
Conversely, the YT-1300p configuration fits as much living space as possible into the hull, installing multiple passenger cabin modules in areas that would otherwise be used for cargo or machinery. There is a single cargo hold behind the forward freight loading room. Each passenger module is normally equipped with three bunks, a compact refresher cubicle, and storage compartment, but can be reconfigured with a total of five bunks per cabin.

The larger passenger complement means that the ship requires more escape-pod capacity, so two Class-6 (six-person) escape pods are fitted into the end of the passage tubes on both sides. As these leave no room for loading ramps, short, retractable boarding ladders are fitted inboard of the escape pods on both sides of the

TECHNICAL SPECIFICATIONS

TYPE	YT-1300f
CREW	2
PASSENGERS	6
CARGO	100 tonnes
TYPE	YT-1300p
CREW	2
PASSENGERS	9-15
CARGO	25 tonnes
COMMON FACTORS	
LENGTH	34.75m
MAX SPEED IN ATMOSPHERE	800km/h
HYPERDRIVE	Class 2
HYPERDRIVE BACKUP	Class 12



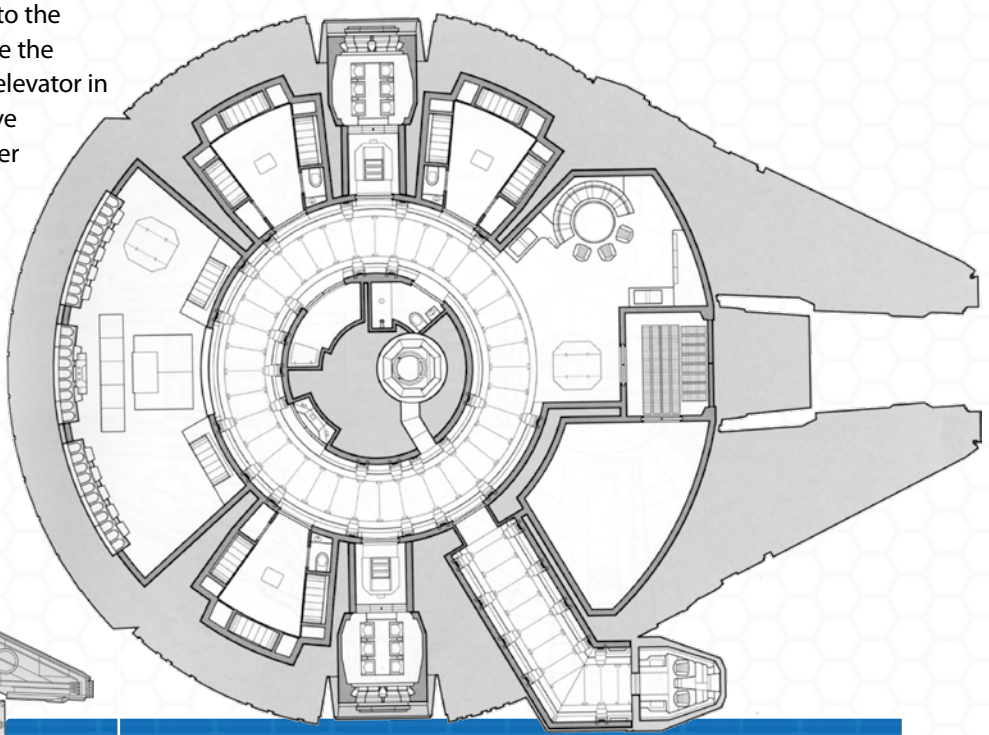


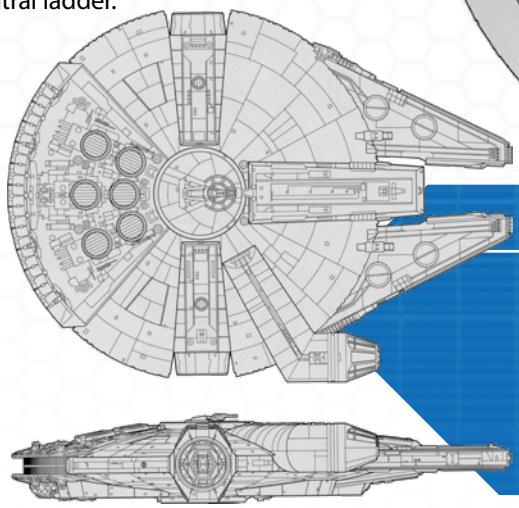
YT-1300F CARGO TRANSPORTER

From the outside, only the more knowledgeable space traveler can tell the YT-1300f from its sister ship: the most obvious clues are the subtly different hatches. Inside, most of the ship is given over to empty space, designed to pack in as much cargo as possible and turn the ship around with the minimum of delay during the loading/unloading cycle. This is the main reason for the two wide loading ramps. Creature comforts for the crew are clearly a secondary consideration.

ship. The steps automatically flatten when the ladders are raised, leaving a smooth floor to the passage. Passengers who are unable to use the ladders can enter or leave the ship via an elevator in the engineering bay, which also houses five individual single-person escape pods under hatches in the floor.

The passage tube running between the transparisteel viewing ports in the ventral and dorsal hull is billed as the 'observation deck', and marketed as an attraction to customers who want to experience the novelty of the built-in gravity compensators that seamlessly orient passengers between the 'up' and 'down' windows as they move along the central ladder.





YT-1300P PASSENGER SHIP

From the outside, only the presence of a large, six-person escape pod reveals this ship's primary role. Although the four crew modules (three with sleeping berths, plus a lounge) are far from luxurious, they are comfortable and practical. Operators can even attract customers with the promise of two observation ports for taking in the starscape, even if the dorsal window is partly obscured by the presence of the laser cannon turret.

NAV COMPUTERS



The set for the *Millennium Falcon* under construction, with the circular display for its navigation computer prominent near the centre of this shot.

Any journey through realspace or hyperspace depends on being able to plot a course that avoids the countless hazards en route. The calculations required to do this are so complex that a starship captain needs the help of an automated system.



The risk of flying blind through hyperspace was well illustrated after the Empire destroyed Alderaan. The *Falcon* emerged from the jump at what the stored astrogation data showed was a safe distance from the planet, but the crew found that the course plotted by the nav computer had placed them in the middle of a new field of debris.

Almost every starship is equipped with a navigation or astrogation computer – commonly called a 'nav computer' or 'navicomputer'. This complex device works together with the ship's sensors and drive systems to calculate a route that will allow the ship to avoid hazards and reach its destination safely. Starfighters are often able to make do with using the astrogation buffer of an astromech droid, while small starships often only have a basic nav computer, holding a small number of preset routes.

However, larger vessels that routinely make long journeys have sophisticated equipment that is capable of navigating to any conceivable destination in the known universe.

PLOTTING A COURSE

A nav computer is capable of handling travel either at sublight speeds (in realspace) or during light-speed jumps through hyperspace, but its role during sublight journeys is easiest to understand. If the ship is traveling in a planetary atmosphere, the nav computer uses a combination of stored mapping data and sensor feedback to calculate a safe route over land, avoiding physical obstacles such as mountains, or other known hazards. When the ship enters open space, the nav computer's role is much the same, although the job of calculating a safe



The *Millennium Falcon*'s nav computer was upgraded with additional memory modules, allowing it to store enough data to permit almost unlimited jump calculations to star systems all over the galaxy.



With the hyperdrive out of action, Han Solo computed the options for reaching a safe port in which to make repairs, settling on the distant gas giant Bespin.

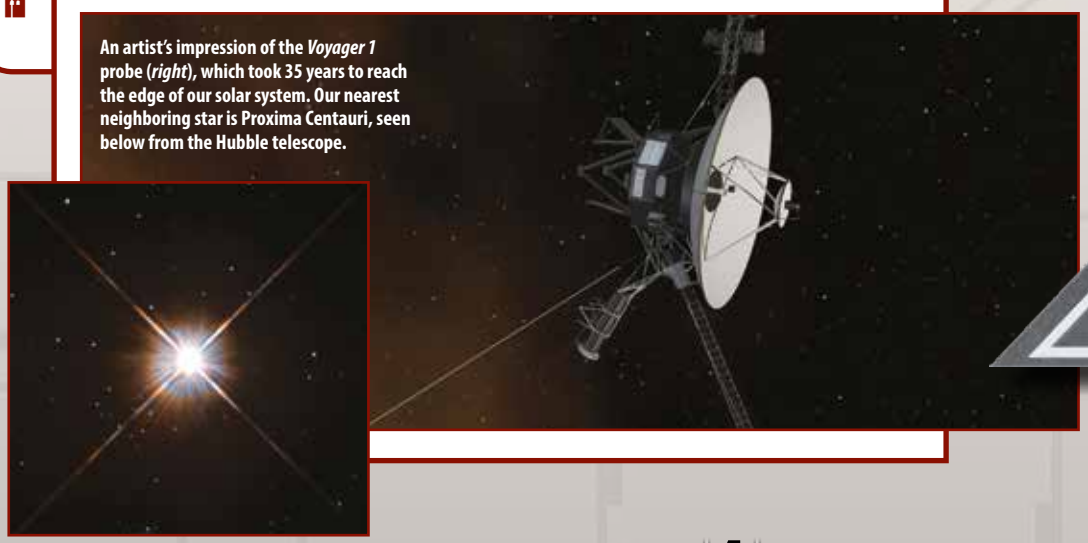
BEHIND THE SCENES

INTERSTELLAR TRAVEL

Conventional science suggests that it is impossible to travel faster than the speed of light (671 million miles per hour), and although some theoretical physicists have suggested various ways in which a form of 'hyperspace travel' might be possible, going faster than light would require a whole series of scientific breakthroughs that go way beyond our current understanding.

Even though the speed of light seems incredibly fast, interstellar travel will depend on exceeding it. Our nearest neighboring star, Proxima Centauri, is 4.24 light years away. That means explorers would take almost 51 months to reach it – even if their spaceship could attain full light speed. A journey taking that long would at least be feasible for a human being, but traveling across our galaxy (the Milky Way) even at light speed would take an impossible 100,000 years.

However, we are a very long way from achieving such speeds. The most distant probe we have been able to send out is *Voyager 1*. When it left our solar system in 2012, it was traveling at a speed of a little under 40,000mph – and at that rate, a spaceship would take 80,000 years even to reach Proxima Centauri.



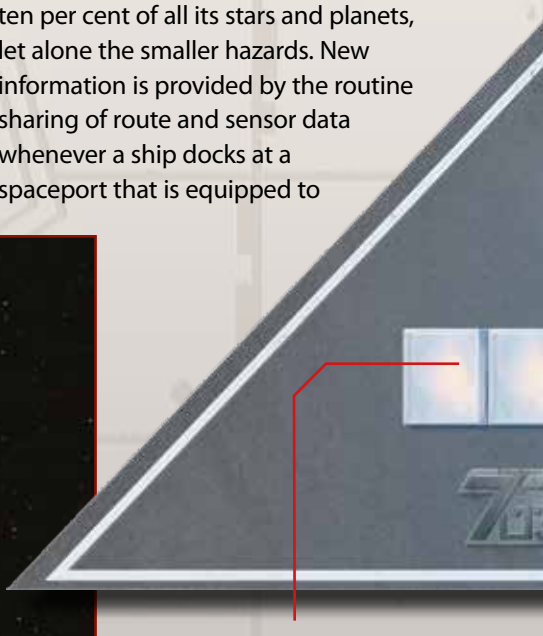
An artist's impression of the *Voyager 1* probe (*right*), which took 35 years to reach the edge of our solar system. Our nearest neighboring star is Proxima Centauri, seen below from the Hubble telescope.

trajectory becomes far more complex. Here the nav computer needs to factor in the positions of a host of hazards, which can include everything from tiny pieces of drifting debris up to a massive star or black hole.

ASTROGATION DATA

To help it do so, the nav computer needs to store a vast amount of data, logging the galactic coordinates of all known star systems, planets and moons, asteroid fields, gas clouds, gravity wells, and much more. But to add to the complexity of the task, none of these bodies is in a fixed position, as they are all constantly orbiting or floating through space.

Astrogation data is regularly updated, but only about a quarter of the galaxy has been extensively surveyed, and it is believed that the charts show less than ten per cent of all its stars and planets, let alone the smaller hazards. New information is provided by the routine sharing of route and sensor data whenever a ship docks at a spaceport that is equipped to

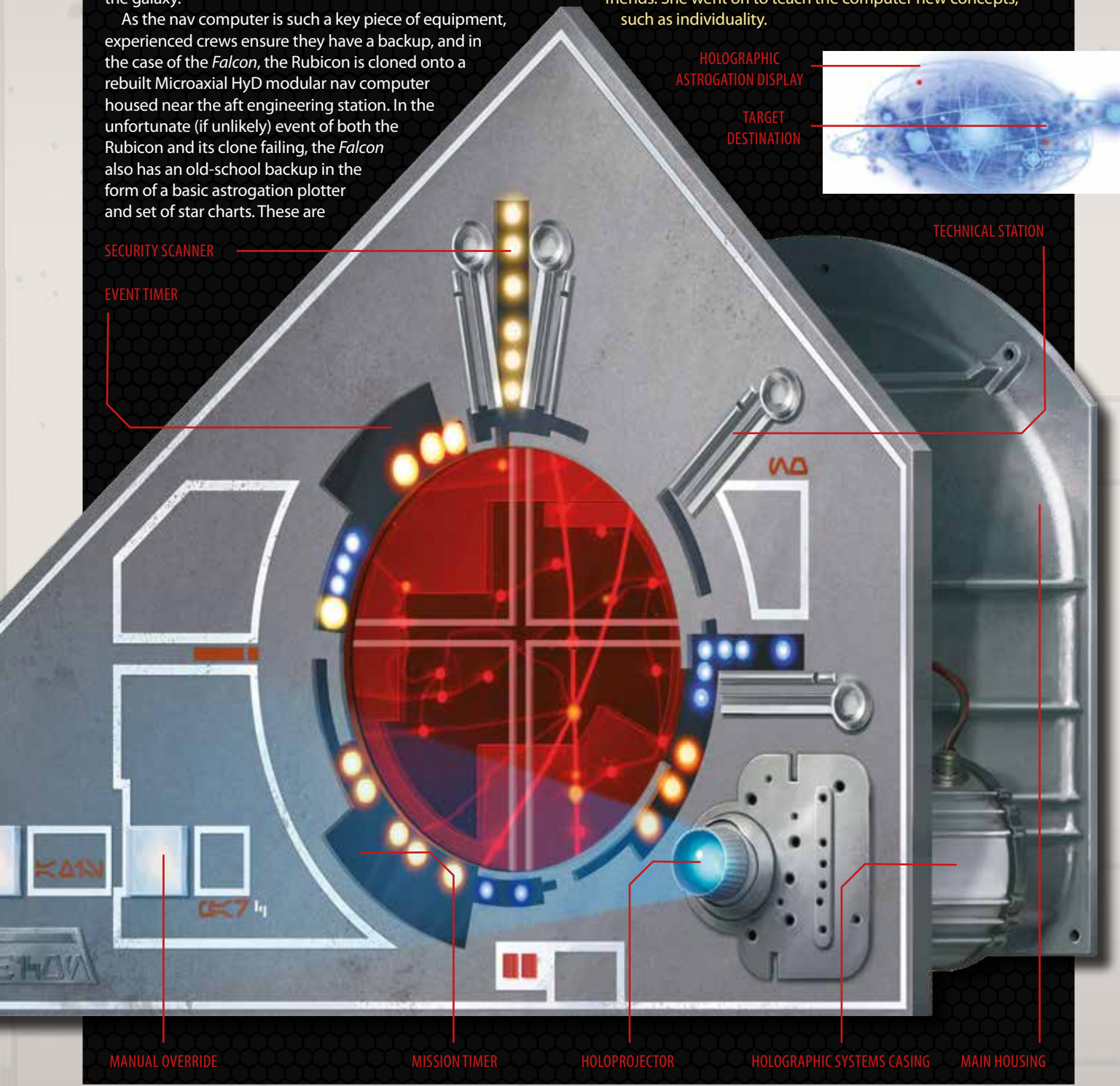


THE FALCON'S NAV COMPUTER

The standard equipment for a YT-1300 is a Rubicon astrogation computer made by the Microaxial company. This was state of the art when the ship was originally designed, and is still faster than most brand-new astromech droids. Like most of the components specified by CEC, the stock nav computer is both tough and easy to upgrade, and Han Solo saw no need to change the *Millennium Falcon*'s factory fitting. However, he and Chewbacca have upgraded the Rubicon's memory modules so it can store data for almost unlimited jump calculations to star systems all over the galaxy.

As the nav computer is such a key piece of equipment, experienced crews ensure they have a backup, and in the case of the *Falcon*, the Rubicon is cloned onto a rebuilt Microaxial HyD modular nav computer housed near the aft engineering station. In the unfortunate (if unlikely) event of both the Rubicon and its clone failing, the *Falcon* also has an old-school backup in the form of a basic astrogation plotter and set of star charts. These are housed in a strongbox bolted underneath the engineering station in the ring corridor. In an emergency, these tools are enough to allow an experienced spacer to calculate the ship's location and plot a path to the nearest spaceport or habitable planet.

Escaping from the Empire after the raid on Kessel, Lando Calrissian uploaded the neural core of his droid companion, L3-37, into the navigational system of the *Millennium Falcon*. Although initially hesitant, L3-37 agreed to integrate with the two droid brains in the *Falcon*'s nav computer to save her friends. She went on to teach the computer new concepts, such as individuality.





There are some occasions when there is no time to engage the nav computer. During the escape from Cloud City, Lando flew the *Falcon* manually until they reached a safe distance and could think about setting a course.

download from its nav computer. However, smugglers and other outlaws often doctor their nav computers so that outsiders cannot download information about where they have been.

HYPERSPACE TRAVEL

If the nav computer's role is critical to safely traveling in realspace, it becomes absolutely essential when making a hyperspace jump. Even though subspace sensors operate faster than light, they cannot keep up with the vast speeds of hyperspace travel. This means that the journey must be plotted in advance, avoiding all known obstacles. Without precise calculations, a ship could fly right through a star, or emerge too close to a black hole or supernova, a course that would destroy the vessel and all its passengers. Even the gravity well or 'mass shadow' in the vicinity of a large body poses a deadly hazard when a ship is traveling at many times the speed of light.

Before making a jump, it is essential to make astronavigational calculations that factor in all the celestial bodies en route. This is why the use of detailed star charts and safely plotted hyperspace routes have been so important to the development of galactic trade and settlement. But nothing in space is stable, and even the best known hyperlanes have to be regularly updated and recalculated. To act as fixed navigation points, hyperspace beacons, and space stations have been installed on the most important routes, and these provide updates to the nav computers of ships using them.



The *Millennium Falcon*'s nav computer as it appears in your model, at the top of the instrument panels to the left of the door in the cockpit bulkhead.

YOUR NEXT PARTS

This issue includes another wall for the hold, plus more parts for the bottom of the hull, which you will be assembling at a later stage. First, it's time to continue putting together the hold by adding details to the starboard wall.

Although you now have three frames and two panels for the bottom of the hull, keep them until you receive some more parts that will brace the structure. Stage 10 of the assembly continues fitting out the hold, for which you will need some of the small components provided with Issues 8 and 9.

COMPONENTS CHECKLIST

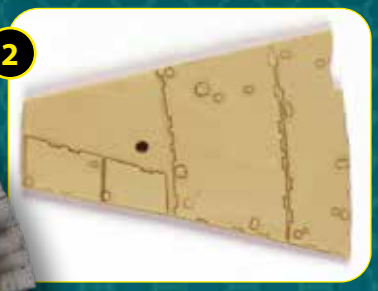
1. Hold forward wall
2. Hull plating BP-9
3. Fixing screws (x 7, plus spare)
4. 2-hole connector
5. Fixing screws (x 2, plus spare)
6. Hull frame BF-11
7. Hull frame BF-13
8. Radial stiffening rib

WHERE THE PARTS FIT

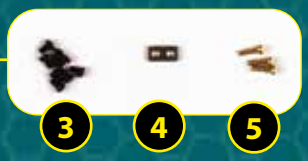
INTERNAL DETAILS



HULL EXTERIOR



Parts 2, 6, 7, and 8 are for the **underside** of the hull.



3 4 5



EXISTING COMPONENTS

This issue's assembly uses key components you already have, including some sprues from which pieces have already been taken. Collect the parts shown here before turning to the steps.

PARTS FROM ISSUE 8

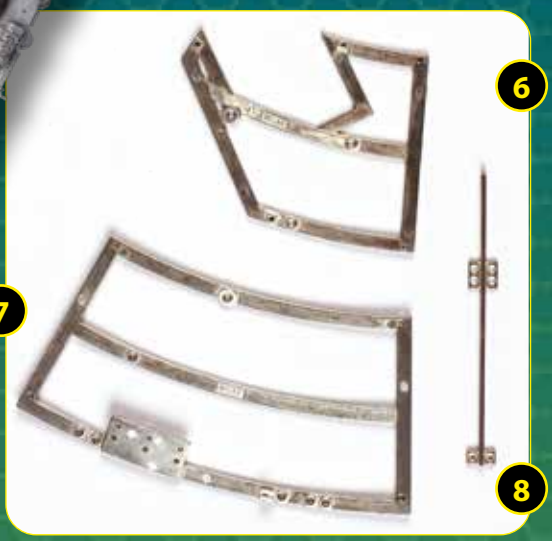




PARTS FROM ISSUE 9



HULL FRAMES

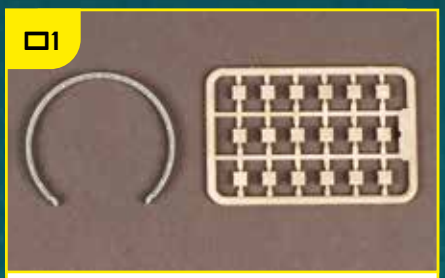


6 7 8

LINING THE HOLD DOOR

Like most of the *Falcon's* passageways, the circular door leading into the hold is lined with protective padding. In the model, these are separate mouldings, which you need to glue in place before installing the door in the wall of the hold.

01



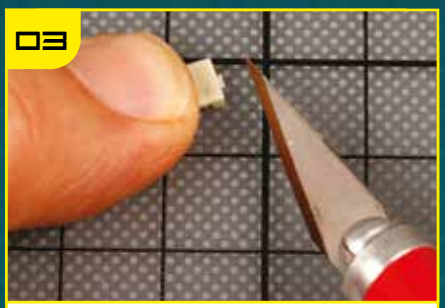
Take Parts 5 and 7 that were provided with Issue 9. These are the inner door liner, and a sprue with 18 door pads.

02



Carefully clip the door pads off the sprue.

03



Cut or file off any molding flash, to leave both sides of the pads flush.

04



Prepare all 18 pads the same way. Before gluing them, it's a good idea to test-fit them as shown in Steps 5, 6 and 8.

05



The pads have a groove down the center, which fits over a matching rib on the inner door liner.

06



Each pad should sit flush with the door liner, with its ends against the stops in the rib.

07



Use a cocktail stick to apply small drops of superglue to each side of the rib, then carefully refit the pad.

08



Continue in this way around the curve of the door liner until you have fitted all the pads.



ASSEMBLING THE HOLD WALL

The main starboard hold wall was supplied with Issue 8 (Part 4). Before you attach it to the hold floor, you need to fit the door you have just assembled, plus two instrument panels that came on the sprues also supplied with Issue 8 (Parts 5 and 6). In the next stage, you will be adding some pipework.

You may find it helpful to do a dry run of the assembly before gluing the parts in place.

01



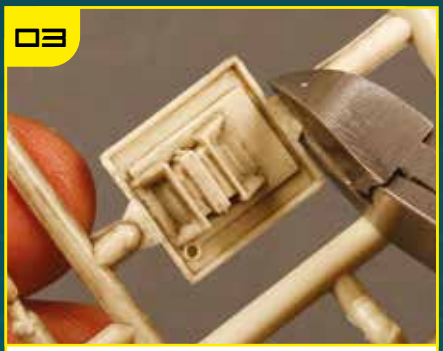
If you have chosen to paint your model, you can drybrush the instrument panel on the Part 5 sprue to add detail.

02



Carefully clip the panel off the Part 5 sprue close to the yellow lines in Step 1.

03



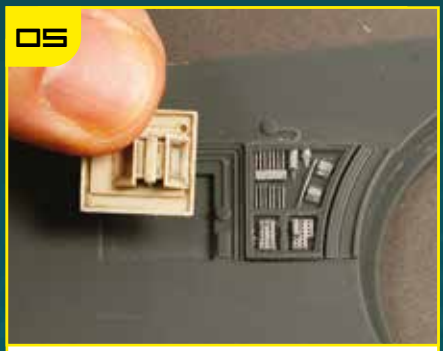
Clip the other instrument panel off the Part 6 sprue. You can enhance its detail with paint, too, if you wish.

04



Lay the parts out next to the hold wall, making sure the rectangular panel is the right way round. The small hole near one corner should be at top right.

05



Apply a little superglue to each of the recesses in the wall and press both instrument panels firmly into place.

06



The outer door liner (Part 6, provided with Issue 9) fits into a recess around the doorway. Test-fit it as in Step 7, then apply a little glue with a cocktail stick.

07



Press the outer door liner firmly into place and hold it until the glue bonds.

08



Apply a smear of glue all round the inner face of the outer door liner.

09

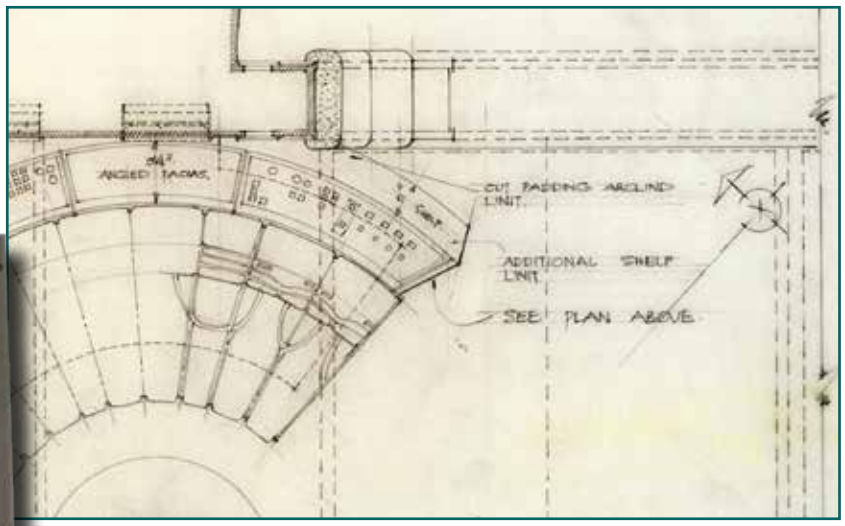


Press the inner door liner into place until it bonds, making sure it is flush with the outer liner all round.



SETBUILDING

Round, padded corridors and doorways became a classic sci-fi convention during the 1970s, heavily influenced by the landmark *2001: A Space Odyssey*, released in 1968. Similar sets feature in movies as diverse as *Moonraker* (1979), *Alien* (1979), and *Saturn 3* (1980). The design cues for all of them were probably images of real aircraft and space vehicles – particularly the widely screened sequences of astronauts undergoing a few minutes of weightlessness training in 'reduced gravity aircraft', the interiors of which were padded to prevent injuries when normal gravity returned.



Norman Reynolds' 1978 drawing of the hold built for filming *The Empire Strikes Back* shows how separate foam pads were applied to the round doorway in the plywood wall. A note reads 'cut padding around unit'.

BEHIND THE SCENES

STAR WARS MILLENNIUM FALCON

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