STAR WARS MILLENNIUM FALCON

BUILD THE MODEL – EXPLORE THE GALAXY



THE *FALCON'S* SPEED CONTROL

F219FSC013

FANHOME

DeAgostini COLLECTIBLES

Disney · LUCASFILM

© & ™ 2023 LUCASFILM LTD.

STAR WARS MILLENNIUM FALCON

USA Published by De Agostini
Publishing USA, Inc.
299 Park Avenue, New York,
New York 10171

UK Published by De Agostini UK Ltd
c/o Royds Withy King, 69 Carter Lane,
London EC4V 5EQ

DE, AT, NL, PL, CZ, SK, LT, SE
Published by De Agostini
Publishing, S.p.A, Via G. da Verrazano 15,
28100 Novara,
Italy

All Rights Reserved.

Printed in Italy

ISSN: 2976-6990 (Print)

Pictures and © & TM 2023 LUCASFILM LTD.

© & ™ 2023 LUCASFILM LTD.

The price of this issue includes the magazine and the attached assembly parts.

TO OUR READERS
The publisher reserves the right to modify any components as required during the course of the collection. Not suitable for children under the age of 14 (12 for USA). This product is not a toy and is not designed or intended for use in play. The model is complete in 100 issues.

CUSTOMER SERVICES

USA
email: support@usa.fanhome.com

UNITED KINGDOM
email: support@uk.fanhome.com

DEUTSCHLAND
email: support@de.fanhome.com

AUSTRIA
email: support@at.fanhome.com

NETHERLANDS
email: support@nl.fanhome.com

POLAND
Kontakt z biurem obsługi klienta:
tel: 22 307 64 59
e-mail: bok@deagostini.pl

CZECH REPUBLIC
Kontakt na zákaznické centrum ČR:
tel: 246 017 120
e-mail: zakaznicke.centrum@deagostini.cz

SLOVAKIA
Kontakt na zákaznické centrum SR:
tel: 0220 839 090
e-mail: zakaznicke.centrum@deagostini.sk

WARNING
Any reproduction, even partial, of the contents of the magazine is prohibited without permission from the Publisher. The assembly parts and the magazine that accompanies it are strictly for private use, and within the family, in accordance with Article L122–5 10 of the Code of Intellectual Property. Any reproduction other than that provided for in Article L122–5 20 of the Intellectual Property Code is prohibited. The magazine and/or elements of the collection may not be distributed, loaned, resold, rented or exploited for commercial purposes.

FANHOME

DeAgostini COLLECTIBLES

More information at
fanhome.com
deagostini.com

MODIFIED YT-1300FP

THE MILLENNIUM FALCON

EARLY HISTORY

Almost destroyed before her launch, battered, abused, crashed, sent for scrap, and impounded, it is a miracle that the *Millennium Falcon* survived at all – let alone becoming a legend in her own lifetime.



Under one of her many earlier names, the *Stellar Envoy*, the *Falcon* visited Coruscant's Republic Executive Building docking bay shortly after Supreme Chancellor Palpatine escaped the crash of the *Invisible Hand*.

The *Falcon* began her incredible career in the Corellian Engineering Corporation's Orbital Assembly Facility 7 shipyard; just another of the YT-1300s being churned out in their thousands, decades before the Clone Wars. Number 492727ZED was lucky not to be written off when a production-line accident occurred before she was launched, but she then remained unsold for some years before she was bought by Corell Industries Limited, who named her *Corell's Pride* and used her as a typical tramp freighter, ferrying goods around the Corellian system.

The ship had several changes of name, but calling her *Fickle Flyer* or *Meetyl's Misery* played to the fact that on a good day, she was one of the fastest in the fleet, but on a bad day (and there were lots of them), she was an exception to CEC's reputation for building solidly reliable ships. As a result, all of the ship's pilots modified and tinkered with her, generally making matters worse, until CI went bankrupt 12 years later.

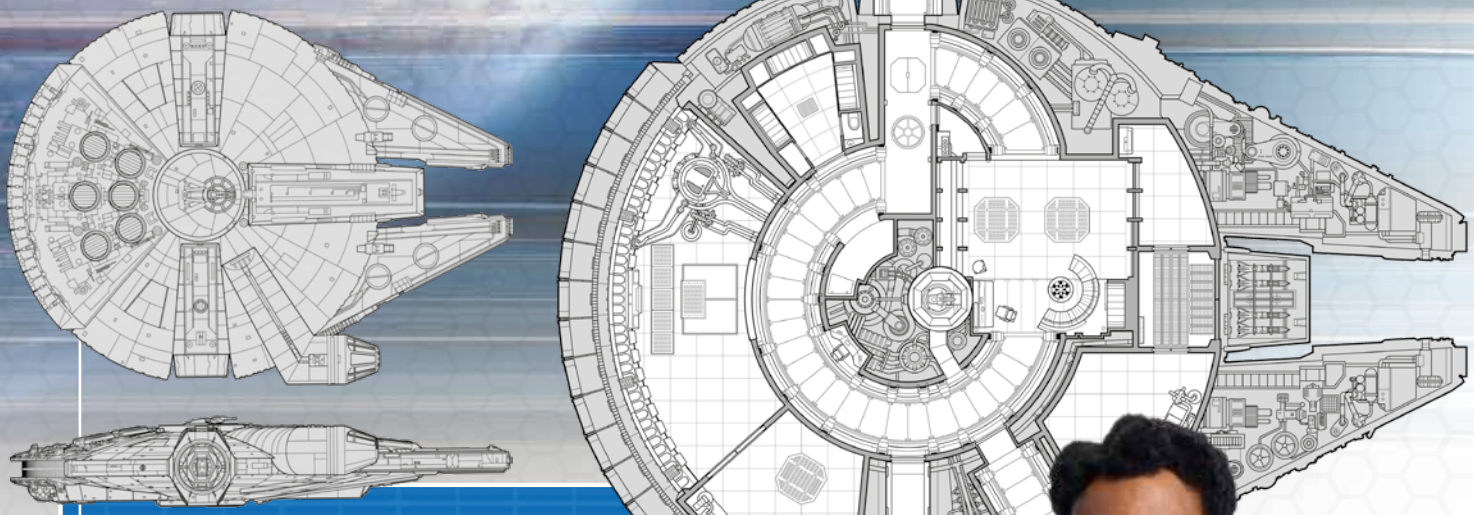
CHANGING FORTUNES

To recover money, part of the CI fleet was sold off and the ship, then known as the *Jackpot*, was sold to brother and sister Kal and Dova Brigger, a pair of 'freelance traders', who rechristened her *Hardwired*, upgraded the hyperdrive, and launched her on a smuggling career. Both siblings met unfortunate ends, and the ship – now renamed *Wayward Son* – became the property of the Republic Group, a covert Loyalist operation opposed to Supreme Chancellor Palpatine's rule of the Galactic Republic.

As the *Stellar Envoy*, the aging YT-1300 gained another hyperdrive and comms upgrade. One of her missions took her to Capital City during the Battle of Coruscant, but although the *Stellar Envoy* survived the conflict, she was in a

FORMER REGISTRATIONS

Corellian Engineering Corp.	YT 492727ZED
Corell Industries Ltd	*Corell's Pride*
Corell Industries Ltd	*Fickle Flyer*
Corell Industries Ltd	*Meetyl's Misery*
Corell Industries Ltd	*Jackpot*
Kal and Dova Brigger	*Hardwired*
Kal Brigger	*Wayward Son*
Tobb Jadak	*Stellar Envoy*
Bammy Decree	*Second Chance*
Zenn Bien	*Gone to Pieces*
Quip Fargil	*Millennium Falcon*



THE MILLENNIUM FALCON

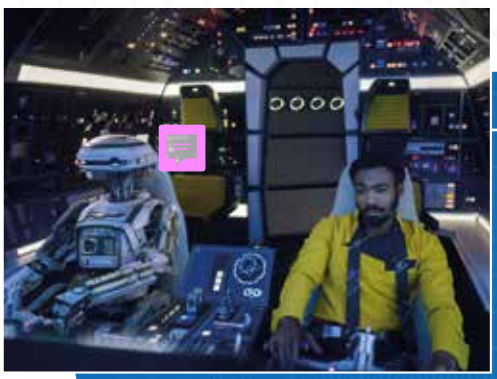
It is hard to see where the original YT-1300fp ends and the *Falcon* begins – although the upgraded hyperdrive, port airlock, and extra ring corridor are obvious departures from anything that CEC had in mind when the YT series was designed. Many of the smuggling ship's best features are subtle system upgrades, while some modifications cannot be identified from a simple floor plan, which doesn't reveal the presence of concealed compartments and five underfloor escape pods.

collision with a bulk freighter soon afterwards, which saw her written off and sent for scrap.

Fortunately, the hulk was bought by a technician with the skills and motivation to rebuild her, using sections of a wrecked YT-1300p, as well as new and upgraded components. Bammy Decree was fortunate to have the assistance of Lira Blissex, gifted naval architect and designer of three classes of Star Destroyer.

Her new owners had little chance to use her and she languished in a pound before being stolen, with the idea of using her to further the rebel cause. It was then that the ship gained her final name, in honor of the bat-falcon, but after her owner pulled out of a rebel strike mission, the *Millennium Falcon* continued to be used against those on the fringes of the law, until the gambler Lando Calrissian acquired her in a game of sabacc. She was already at least as fast as any vessel of her size, and Lando continued to make modifications and repairs that increased her speed, firepower, and defenses.

Lando used the *Millennium Falcon* for years and came to love the old ship. It would be a personal disaster when he lost her in another game of sabacc with his old sparring partner, Han Solo.



While not such an expert pilot as Han Solo, at the Battle of Endor, Calrissian would fly his old ship into the second Death Star's core to destroy its reactor.

LANDO CALRISSIAN

At various times, Lando made a living from gambling and smuggling before becoming a more-or-less legitimate businessman. He both won and lost the *Falcon* playing sabacc, a game that also gained him the post of Baron Administrator of Bespin's Cloud City. During his time there, Calrissian was reunited with his old ship, and fell in with the Rebel Alliance.



SPEED CONTROL



The Millennium Falcon's heavily modified Girodyne SRB42 sublight engines can deliver a massive boost of speed when her pilot needs to get the ship out of trouble.

While a ship is travelling in realspace, as opposed to hyperspace, it is possible to calculate her speed in terms of kilometers per hour, and the way this speed is controlled is very complex. Not only is a ship's speed affected by her thrusters, but also by every object that she comes near.

Sublight engines create thrust by breaking an explosive fuel down into charged particles and hurling them out of the exhaust. The amount of energy that this produces can be varied by adjusting the rate at which the fuel is consumed to increase or decrease the power level. This is controlled using a simple lever positioned between the pilots: forward for more power, back for less.

This is a relatively crude way to control a starship's speed when slowing down, because the inertia of a moving vessel means that it will tend to keep going until another force acts on it. Close to a planet, atmospheric drag will slow a ship down, but this doesn't apply in the vacuum of space. The only efficient way to stop a forward motion is to apply a force in reverse, so starships are fitted with braking thrusters. But although the brakes' primary purpose is simply to reduce the ship's speed or bring it to a stop, skilled pilots are able to use them in conjunction with the attitude jets (and/or thrust vectoring of the main engines) to make a ship virtually 'dance' through open space. In combat, this becomes a vital skill – if one of the hardest things to teach.

GRAVITY ASSISTS

There is another way to control a ship's speed and, at the same time, alter its direction. This is to harness the natural forces exerted by other bodies in space, in what is called a 'gravity assist'.



Sublight engines and thrusters can be controlled directly by the pilot, with or with the assistance of a navigational computer.

Planets, moons, suns, and even asteroids exert a natural gravitational force that increases as a ship nears them, and in the maneuver known as a 'swing-by', or a 'gravitational slingshot', this effect is harnessed to boost the ship's speed. As a ship approaches a planet, the large body's gravity naturally makes the ship accelerate. This effect is balanced by a matching deceleration while the ship is escaping



Gravitational effects can be deceptive. Although Bespin appears to be made of wispy clouds, this gas giant's enormous mass gives it a gravitational pull that is many times that of more apparently solid, but smaller, planets.

from the gravitational pull. However, because the planet is orbiting its sun, the ship is also affected by this motion. If the pilot flies with the movement of the planet, the ship will pick up some of the planet's orbital energy, causing it to accelerate. To visualize how this works, think about throwing a ball at a speeding land craft. Instead of bouncing off at more or less the same speed it hit, the ball will fly off at its own speed, *plus* that of the craft it hit.

COMPLEX CALCULATIONS

In practice, the most frequent application of a gravity assist uses this principle in reverse – to slow down and enter a planetary orbit. This is done by approaching on a curving (elliptical) path that takes the ship over and past the planet, against its natural movement. This will cause it to decelerate, using gravity to help pull it back and down into orbit.

Whether the pilot wants to speed up or slow down, the ship's nav computer can be used to calculate the most efficient course, taking into account the gravitational forces of the target planet, any moons and, of course, the sun, together with the speed of the ship itself.

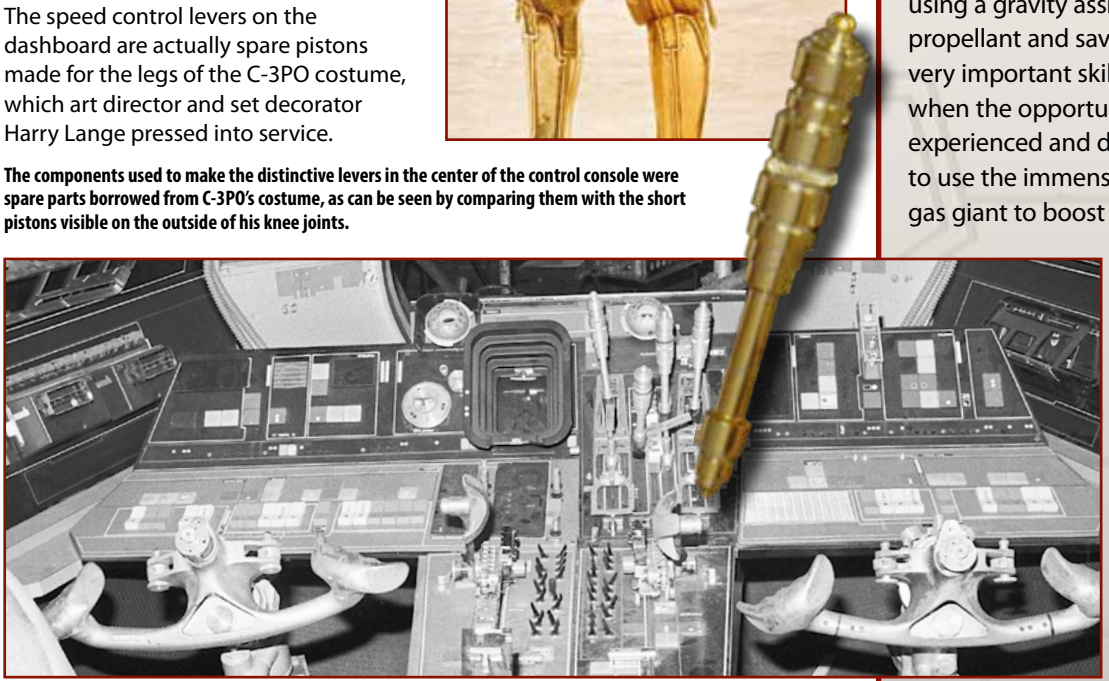
As well as reducing the journey time, using a gravity assist will conserve propellant and save energy, so it is a very important skill to be able to use when the opportunity arises. Very experienced and daring pilots are able to use the immense gravity of a star or gas giant to boost their ship's power by a massive factor. However, such 'solar slingshots' are fraught with danger (not least from the high levels of stellar radiation), so tend only to be employed by pilots who are irresponsibly cocksure, or in desperate need.

BEHIND THE SCENES

RECYCLED PARTS

The blueprint for the cockpit set constructed for *The Empire Strikes Back* indicated that it should be the same size as the one in the original movie, but the studio actually made it a little larger at the insistence of the producer Gary Kurtz, who wanted more space for the actors – although George Lucas had intended it to appear cramped. As few components had been kept from the first movie, the center console had to be dressed with lights and switches again. The speed control levers on the dashboard are actually spare pistons made for the legs of the C-3PO costume, which art director and set decorator Harry Lange pressed into service.





The components used to make the distinctive levers in the center of the control console were spare parts borrowed from C-3PO's costume, as can be seen by comparing them with the short pistons visible on the outside of his knee joints.

YOUR NEXT PARTS

This issue includes more internal details for the hold, which you will be putting together in the following steps. You also have more parts for the bottom of the hull, but you need to keep these for assembly after you have received more frames.

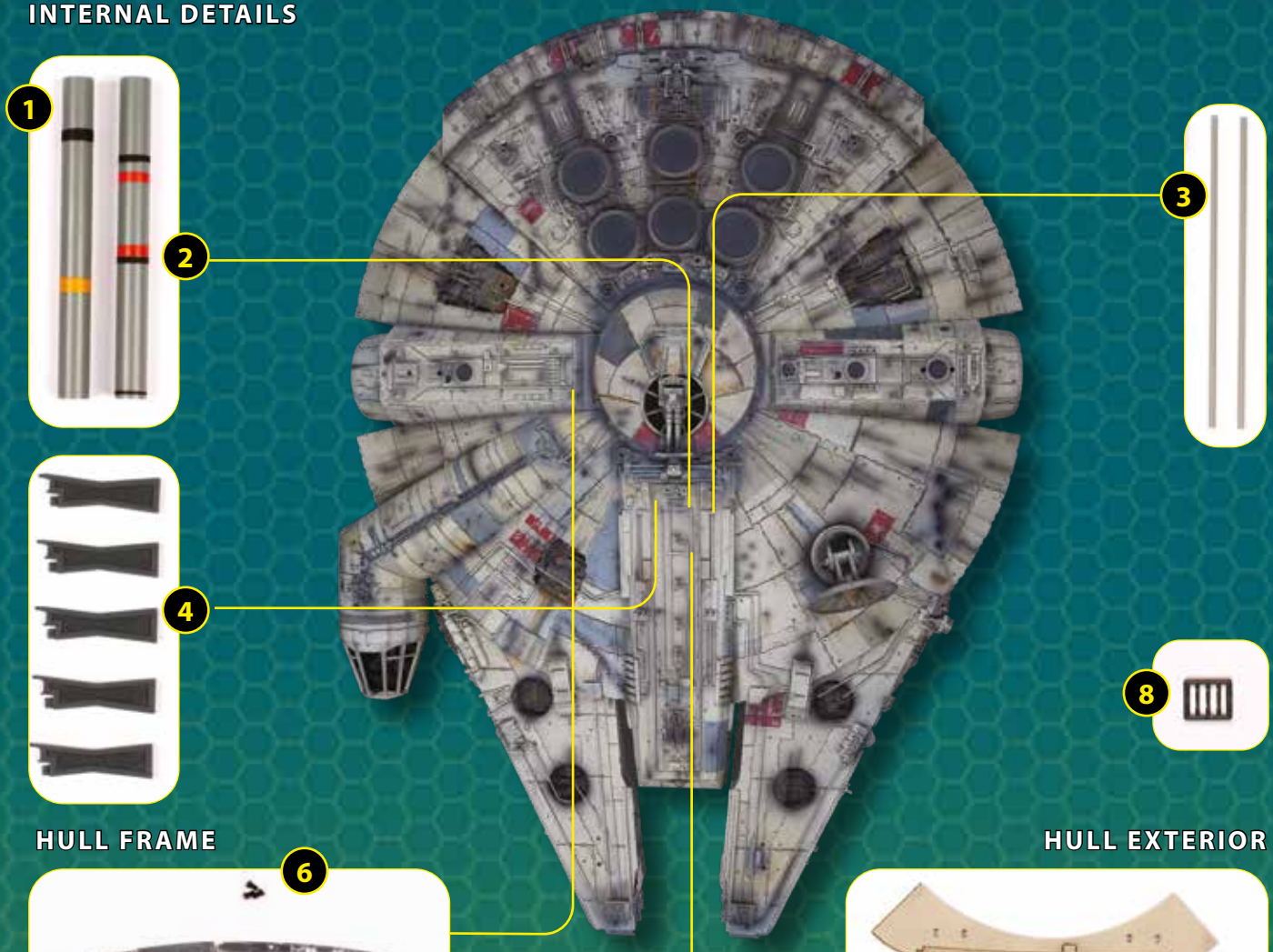
Now that you have most of the parts for the hold, Stage 13 of the assembly sees you fixing these to the floor, and fitting all but one of the walls. Start by collecting the sub-assemblies you have already put together, and selecting the necessary extra components provided with previous issues, as shown opposite.

COMPONENTS CHECKLIST

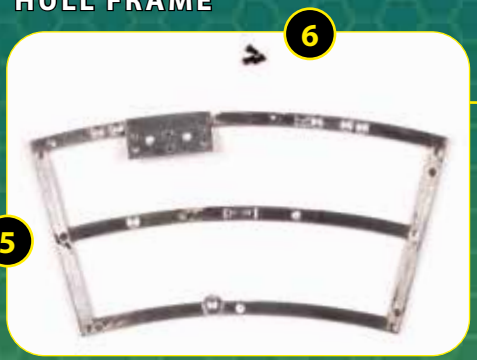
1. Main hold lower pipe
2. Main hold upper pipe
3. Floor-level pipes (x 2)
4. Frame members (x 5)
5. Hull frame BF-16
6. Fixing screws (x 2, plus spare)
7. Hull plating BP-7
8. Fixing studs (x 2, plus spare, on sprue)

WHERE THE PARTS FIT

INTERNAL DETAILS



HULL FRAME



HULL EXTERIOR

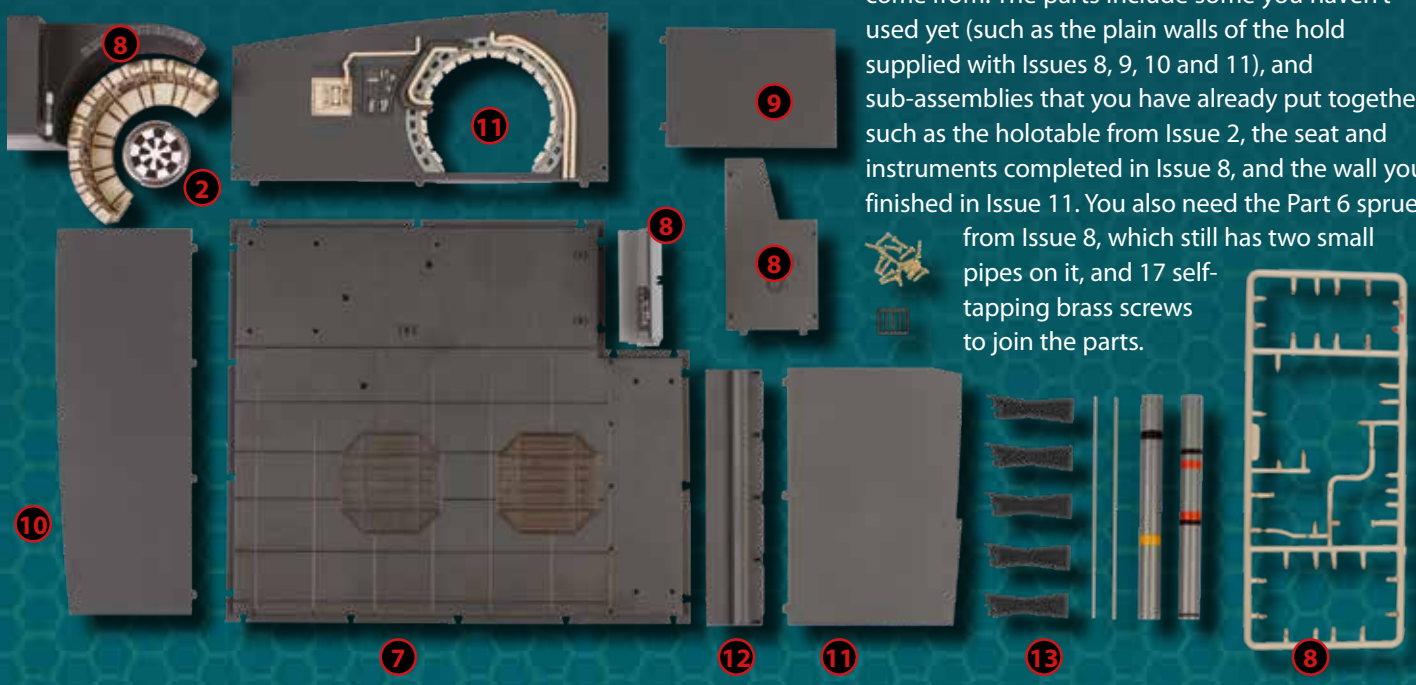


Parts 5 and 7 are for the **underside** of the hull.

ASSEMBLING THE HOLD WALLS

Over the next few pages, you will be fitting the internal details to the hold and adding all the walls apart from the port wall, which will be done in Stage 14.

Collect all the parts shown in the photo, referring to the numbers that indicate which issue they come from. The parts include some you haven't used yet (such as the plain walls of the hold supplied with Issues 8, 9, 10 and 11), and sub-assemblies that you have already put together, such as the holotable from Issue 2, the seat and instruments completed in Issue 8, and the wall you finished in Issue 11. You also need the Part 6 sprue from Issue 8, which still has two small pipes on it, and 17 self-tapping brass screws to join the parts.

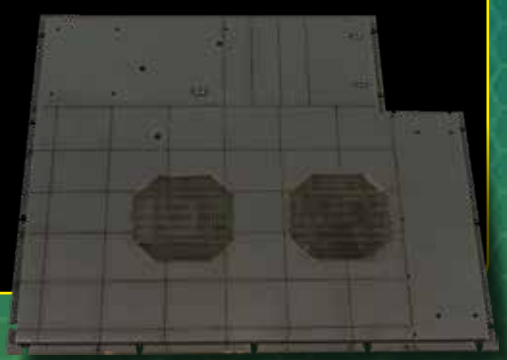


CUSTOMISING THE HOLD FLOOR

The hold floor provided with Issue 7 can be used as supplied, or customized with a little 'dirt' detail. This is very simple to do. Thin some drawing ink with water and brush it into the molded grooves. Quickly blot away the surplus with a paper towel to leave dark lines.







FITTING THE SEAT

You assembled the seat in Issue 8 and may already have temporarily fitted it. Whether or not you did so, you can now attach it to the floor permanently.

01



Take the seat back and the hold floor. (In this photo, the floor pattern has been picked out as shown on the right.)

02



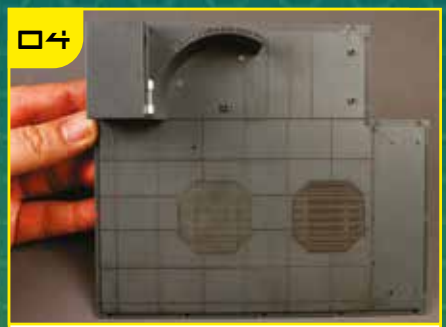
The seat back fits against this corner of the hold, as shown above.

03



Turn the assembly over and insert five screws through the holes shown, to attach the seat back.

04



The assembly should look like this.

05



Add spots of glue to the three locating pins underneath the seat.

06



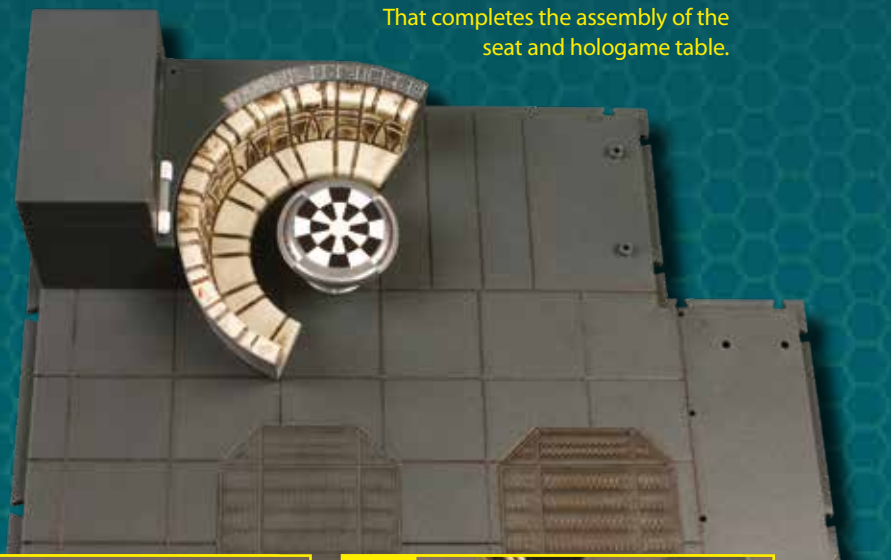
Fit the pins into the holes in the hold floor and press the seat firmly into place.

07



Glue the dejarik hologame table to the floor, fitting it over the square pin at the center of the seat and ensuring that it is the correct way round.

That completes the assembly of the seat and hologame table.



FITTING THE HOLD WALLS

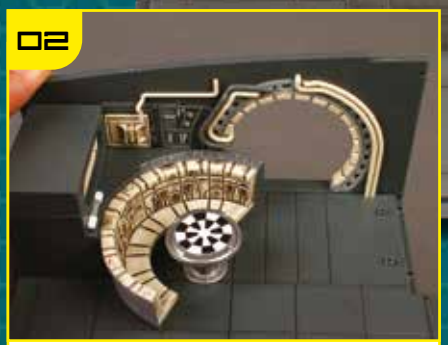
The hold has six walls (including the two short ones that form the alcove), of which you have five. The port wall comes with Issue 14 and will be assembled and fitted then. All of the walls fit into recesses around the edge of the floor. They are held in place with dovetail joints, which means that they need to be fitted by sliding them downwards from the top.

01



Line up the joints in the starboard wall. Note that the pipes by the door are free to move, so they will fit into the recess in the floor, as explained in Issue 11, page 13.

02



Slide the wall downward until it locks into place, with the pipes in the recess and the door sill flush with the floor.

03



Take the back wall of the alcove and line up its dovetail joints, then slide it downwards into the recess.

04



Screw the upper corner of the walls together with a self-tapping screw inserted through the starboard wall.

05



Add a second screw in the lower corner.

06



Slot the front wall of the hold into place.

07



Join the corners of the front wall and starboard wall with two screws.



The hold assembly should now look like this.

FITTING THE PIPE SUPPORT

The pipe support provided with this issue goes on the rear floor of the hold, allowing you to complete the walls in this area.

01



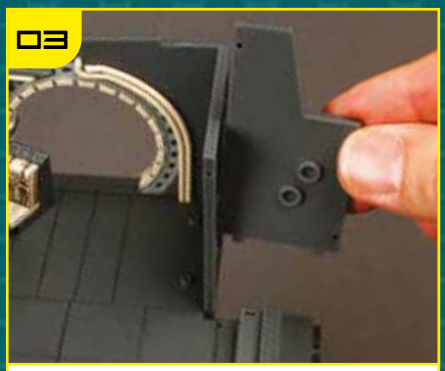
Take the pipe support supplied with Issue 12, noting which way round it fits.

02



Attach it to the hold floor from below, using four screws.

03



Slide the alcove end wall down into place against the pipe support.

04



Clip two of the fixing studs off the Part 7 sprue and trim off any molding flash. Put a spot of glue on the thinner end of one stud and push it into the hole.

05



Make sure that both studs are pushed home flush with the panel.

06



Slot the back wall into place behind the pipe support. Screw the outside corner of the alcove together with two screws.

FITTING THE PIPES

There are six more pipes to fit. You may find it easier to do a dry test-fit before fixing the parts permanently. Note that the pipes in Steps 10-15 are **not** glued. This is to allow them to be fitted into the port wall of the hold, which is added in Issue 14.

01



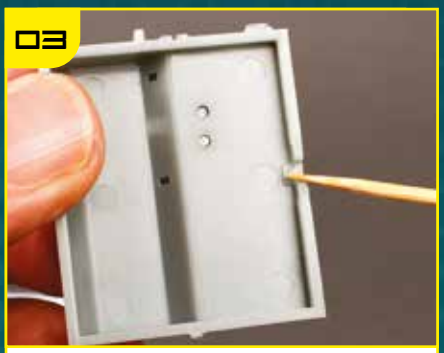
Take the sprue supplied with Issue 8 and remove this short section of pipe. Trim off any molding flash.

02



Take the technical station you assembled in Issue 8 and lay out the pipe next to it, noting the hole near the lower end.

03



Put a spot of glue in this notch on the back of the technical station.

04



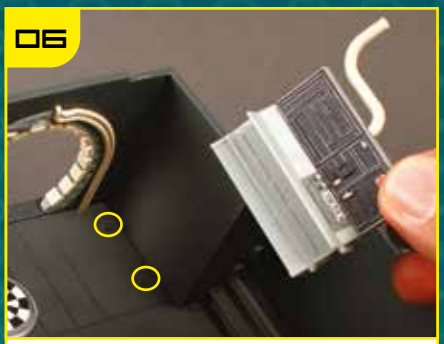
Fit the pipe to the technical station, making sure the pin goes in the hole and that the pipe is positioned squarely.

05



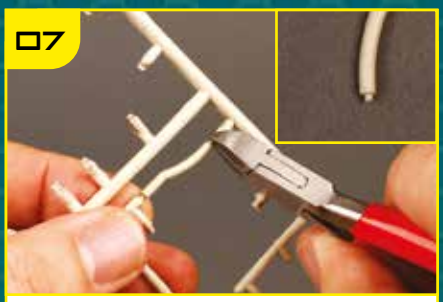
The complete technical station assembly should look like this.

06



Glue the technical station to the two pins on the hold floor (circled in yellow).

07



Cut the last short pipe off the sprue from Issue 8. Trim off any molding flash, but be sure to leave the locating pin.

08



Apply a spot of glue to the locating pin and fit it into the small hole in the corner of the seat base.

09



That completes the assembly of the starboard end of the hold.

10



Take the two thin pipes supplied with this issue (Parts 3) and lay them against the pipe support, as shown.

11



Take a frame member (Part 4) and glue its end pins into the holes in the floor and pipe support, trapping the pipes.

12



Slide the lower pipe (Part 1) along the pipe support until its end fits over the circle on the alcove end wall. Make sure the black stripe is at this end.

13



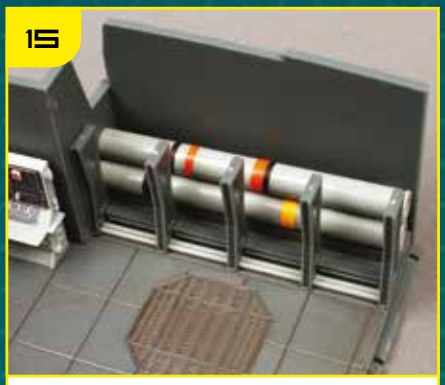
Repeat with the upper pipe (Part 2), noting which way round the colors go.

14



Glue the remaining four frame members over the floor pipes, making sure that the frames are upright.

15

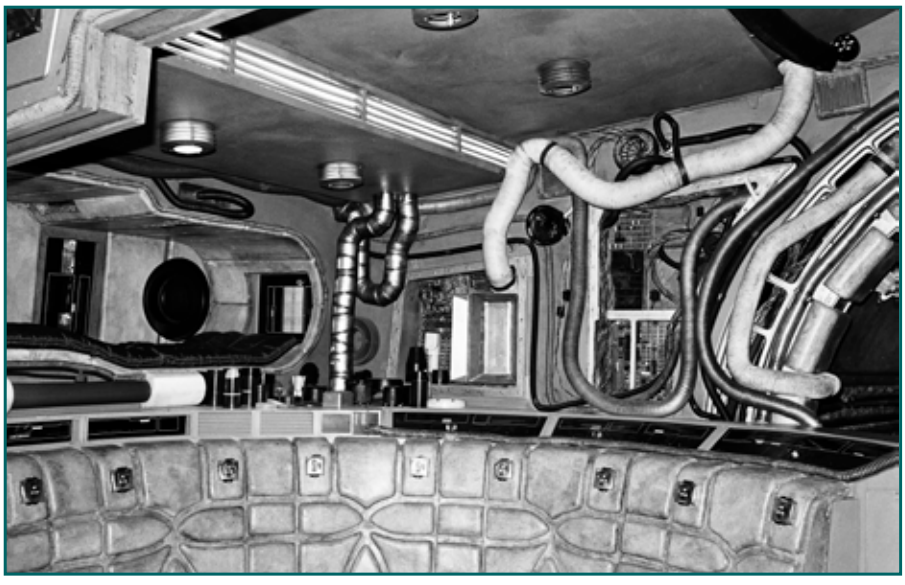


This completes the assembly of the back wall of the hold.

BEHIND THE SCENES

CONVINCING DETAIL

Part of the reason why the starship interiors in *The Empire Strikes Back* look so convincing is that designer Harry Lange had practical experience working on real-world aircraft and spaceships. Escaping from East Germany after World War II, Hans Kurt Lange had trained as an artist before moving to America. There, he worked as a technical illustrator on military flying manuals, and joined the US space program under fellow German refugee Wernher von Braun. When he then applied for a design job on Stanley Kubrick's *2001*, the director was critical of Lange's drawing ability, but hired him because of his NASA know-how. Lange's brief was to create ships that genuinely looked as if they could travel beyond the solar system, and he got on well with the notoriously demanding Kubrick. His team won the BAFTA Award for Best Production Design and was nominated for the Academy Award for Best Art Direction. Lange's work on *2001* led to him being hired for *The Empire Strikes Back* and *Return of the Jedi*, but his talents were put to work on several other movies, including art directing *Moonraker* (1979), acting as aeronautics consultant on *Superman 2* (1980), and production designer on Monty Python's *The Meaning of Life* (1983).



The interior of the *Millennium Falcon* looked like a messy shambles – where if something worked, it would be a miracle. But instead of the set dressing just appearing like a random pile of junk, Harry Lange's design team stressed the importance of each pipe looking as if it led somewhere, and every switch seeming to control something.