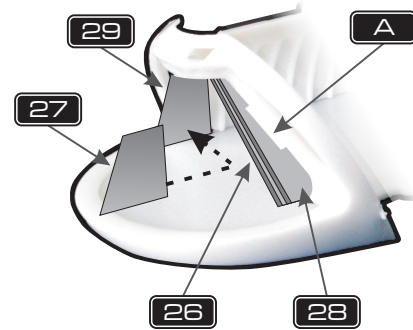


PART 12: Shuttle Bay Doors - Optional

These doors may be attached at any time - when you install them will depend on the order in which you assemble the ship.

Note that you will need to remove at least some of the tabs A to allow the doors to sit flat against the inside edge of the door.



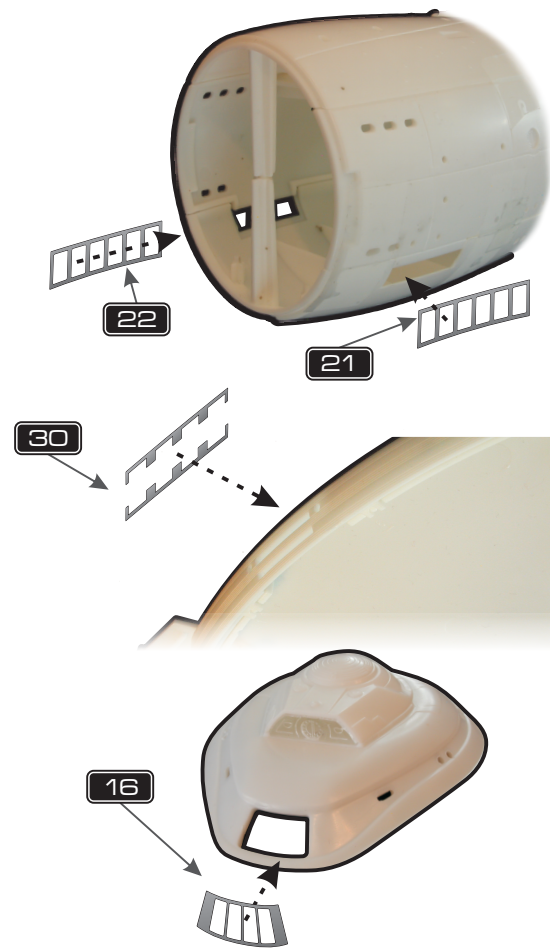
PART 13: Window Frames

ANNEALING: Note that these pieces work best when the metal has been annealed. Annealing simply means heating the metal until it glows, then allowing it to cool slowly to room temperature so that it is pliable and will easily conform to the shape of the hull.

BE EXTREMELY CAREFUL when annealing metal. If you are uncomfortable with this process, do not do it and either carefully bend the pieces to fit, or leave them off.

TIP: File or sand down the existing window frames on the clear kit parts slightly to allow for the added thickness of the metal window frames. Alternatively, use the clear kit parts as an aid in shaping the metal parts before installation, then replace the glazing with Micro Crystal Clear or another modeling "glass" material.

PARTS MISLABELED: The two rec room windows (marked 30) are not identical. Looking at the fret, the top window pane goes with the top window and the bottom window pane goes with the bottom window. We apologize for any confusion.



1:350 REFIT STARSHIP PHOTOETCHED ACCESSORY SET

PGMS ParaGrafix
Modeling Systems

INTRODUCTION

Thank you for purchasing ParaGrafix's photoetched enhancement set for the Polar Lights 1:350 scale refit starship. We have made every effort to ensure that these parts can be used successfully by a modeler of modest experience, but there may be items that require advanced modeling techniques. For a basic primer on the use of photoetch, please visit http://www.starshipmodeler.com/tech/jl_pe.htm and other resources available on the web.

Materials

In addition to the photoetch, you will also need scissors or a knife* to remove individual pieces from the main fret, a file to remove material left from cutting, and super glue (aka CA or cyanoacrylate). Additionally, to fold some pieces, you will need a pair of razor blades** or a specialty tool such as an Etchmate 3C from Mission Models.

* We prefer a #17 Xacto chisel blade.

** Extreme care must be taken when using razor blades. Risk of serious injury.

PART 1: Shuttle / Cargo Bay

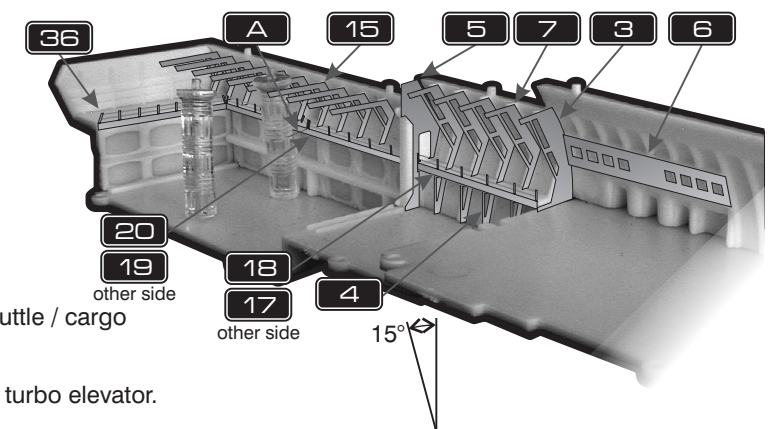
NOTE that although the shuttle is shown partially assembled, you will likely find it easier to attach the metal parts before assembly.

The railings should be bent outwards at 15°.

TIPS:

Use some of the people (parts 31) to populate the shuttle / cargo bay and arboretum.

Fold parts 19 & 20 at A so that the railing meets the turbo elevator.



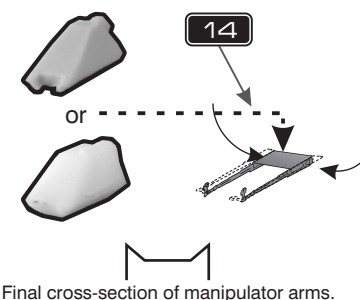
PART 2: Cargo Train

NOTE that these pieces have been designed to work with the resin cargo pods available from DLM. The side arms of the train (12) should be bent down slightly to "grip" the cargo pods.

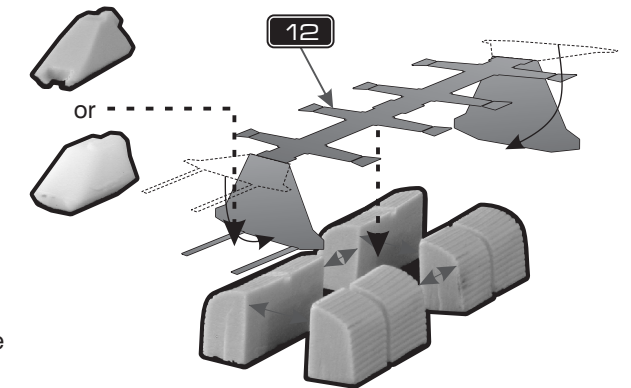
Work bee sits on top of "fork lift" arms at front.

PART 3: Work Bee Manipulators

The work bee arms may be used with either the original kit work bee or with those available from DLM.

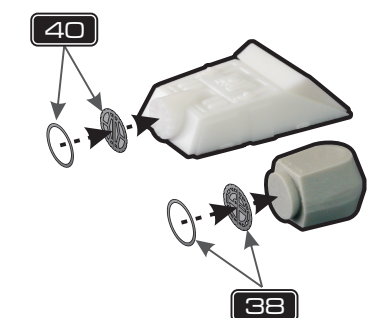


Final cross-section of manipulator arms.



PART 4: Shuttles

If using the kit supplied travel pods (not shown), you may have to adjust the size of the plastic docking ring.



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Special thanks to Don Matthys
of Don's Light & Magic for his cooperation
in designing this kit to fit his parts.
www.dlmparts.com

DON'S LIGHT & MAGIC
DLM

Designed in cooperation
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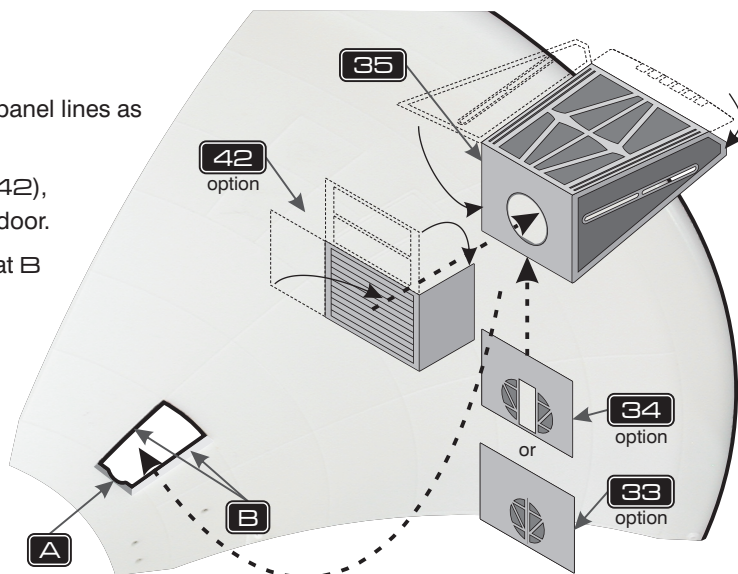
PART 5: Primary Hull Airlock

Remove the airlock doors in the primary hull, using the panel lines as a guide. Leave extra material in place for fitting.

A: If you will be installing the open airlock door (34 & 42), remove material thickness at A so it does not block the door.

B: If you are lighting the kit, remove material thickness at B so it does not block the two lighting slots in the airlock opening.

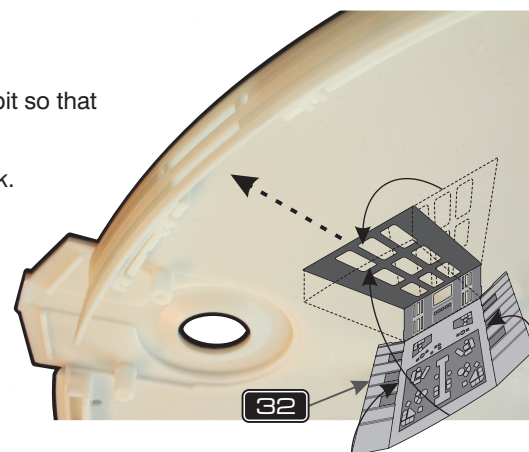
Also, you will likely wish to fill the slots in 35 and 42 with Micro Crystal Clear or a similar material to simulate glass.



PART 6: Recreation Deck

NOTE that if you are lighting your ship, you can shim the rec deck down a bit so that light shine down through the ceiling "light panels".

Don't forget to install the kit-supplied windows before attaching the rec deck.



PART 7: "Shadow" Crew

To help provide the illusion of scale, place the "shadow" crew (31) behind some of the ship's windows. Fold as shown.

The oval windows generally work best.

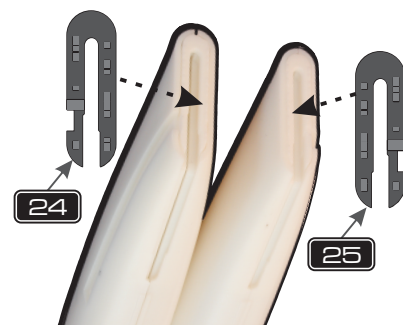
Place as many or as few crew as you'd like behind whichever windows you choose.

Some gap filling super glue or gussets of scrap plastic will help keep the "people" standing up without sagging.



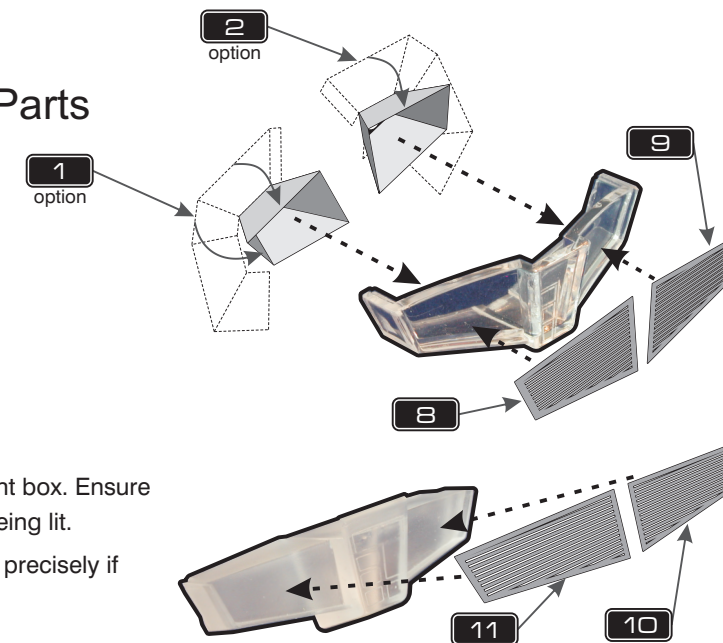
PART 8: Warp Engine End Caps

Smooth each of the kit parts 54 and 55 and install normally. Then glue etch parts 24 and 25 in place to cover the seam.



PART 9 A: Impulse Engines - Kit Supplied Parts

If lighting the engines, fold light boxes (1 and 2) as shown and install on the inside of the engines. A hole is supplied that will fit a 3mm LED. Alternatively, you can remove the section with the hole and use any lighting system you like.



PART 9 B: Impulse Engines - DLM Part

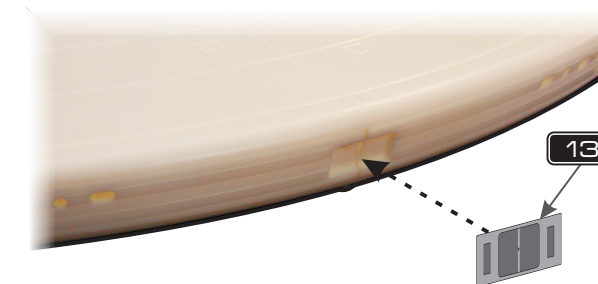
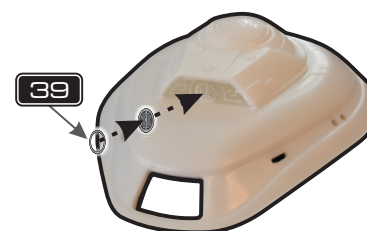
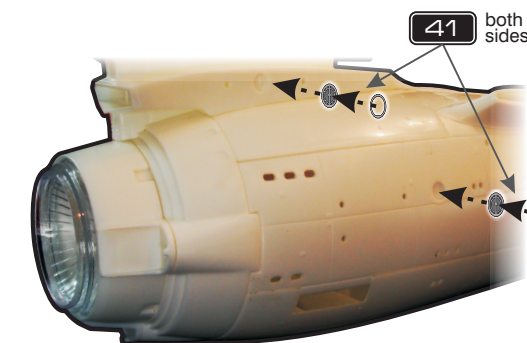
Being solid, the DLM accurized engines do not use a light box. Ensure that the part is properly opaqued to block light leaks if being lit.

NOTE: Parts 10 and 11 are not identical and will not fit precisely if installed on the wrong side.

PART 10: Docking Ports & Gangway

Docking Ports: Install docking ports (39 and 41) with the flat facing down. Note that the deck 1 docking port (39) is slightly smaller than the other four ports - the other four will not fit behind the bridge.

Gangway: File or sand away some of the raised detail of kit piece 1B before installing it to allow the etch gangway (13) to fit flush to the hull.



PART 11: Deflector Ring

TIP: Install this part after painting it and the kit separately. This will allow it to work as a light block and allow the proper lighting around the deflector dish. Make sure to mask the bottom area of the ring's groove.

Note that the four large openings should end up at the noon, 3, 6, and 9 o'clock positions. For best visual results, line the holes up with the indentations on the back of the kit part.

