

# PRIMARY HULL DEFLECTOR GRID COMPASS



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## INTRODUCTION

Thank you for purchasing ParaGrafix's Deflector Grid Compass for the smooth primary hulled 1/350 scale TOS USS Enterprise kit.

Please note that this compass requires a stead hand. Luckily, if you make a mistake a standard pencil eraser will remove it so you can try again.

### 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 PhotoFold from ParaGrafix.

You will need a 0.5mm mechanical pencil. The hardness you pick will depend on how sharp and fine you want the grid lines. For very sharp and fine, use 4H lead. For very soft and wide, use 6B. Typically, you will use a lead 2H or H, which is harder than a standard #2 lead.

We suggest using a low take tape to hold the compass in place when drawing the radial (straight) lines. This will help hold the straight edge in place and eliminate wobble. Tamiya masking tape is shown in the photographs.

And finally, you will need a matte finish clear coat to fix the pencil lines in place. Use whatever matte clear works best with your preferred paints.

TIP: Don't worry if you make a mistake. You can erase the pencil mark with a standard pencil eraser ... up until you spray with the clear coat.

\* We prefer a #17 Xacto chisel blade.

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

### Key

Kit part (plastic): 1

Photoetched part: 1

## ANNEALING

Etch parts 1 and 3 must be annealed prior to use so that they can follow the contours of the primary hull. If you are unsure how to do this, we have provided a short video on the subject that will teach you everything you need to know.

You will want to view Part 4: Annealing, here: <https://www.paragrafix.biz/video-instructions-1.asp>

Once the parts are annealed, form them to the contours of the hull.



## UPPER PRIMARY HULL RADIAL LINES

Prepare the central protractor (etch part 2) by folding down the 4 longest legs, which form the stop inside the B/C deck opening, keeping the central axis hole immobile.

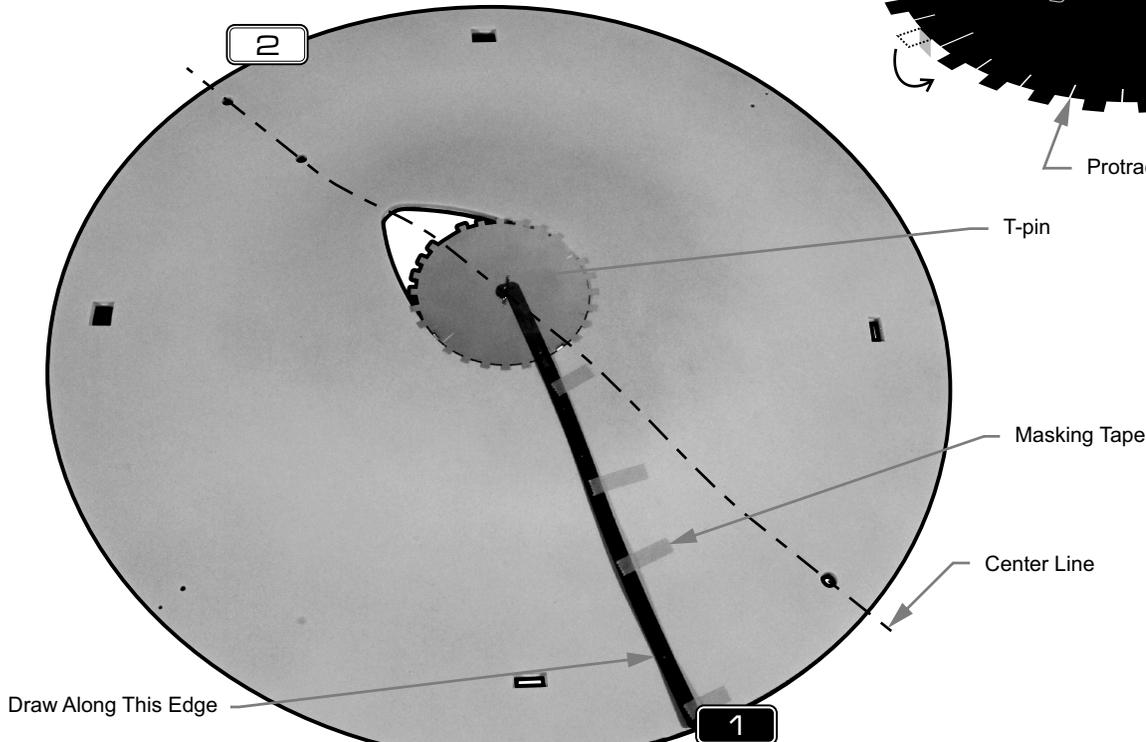
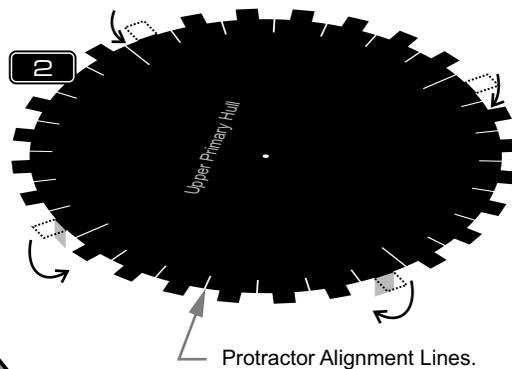
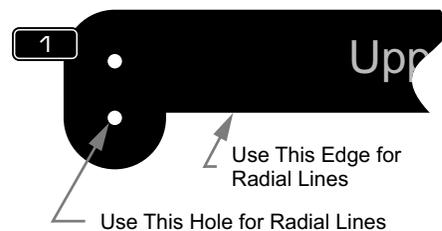
Insert the protractor into the B/C deck opening, using the jutting tabs as supports. Align two of the long alignment lines along the fore-aft centerline of the hull. You can use the openings for the impulse linear accelerator and the bow light as guides.

You may want to tape the protractor in place to assure that it doesn't move. Don't cover up the alignment lines, though.

Insert the included T-pin through the hole in the straight-edge (part 1), and then through the axis hole in the protractor.

For each radial line, align the edge of the straight-edge with one of the alignment lines, tape the straight-edge in place, and draw a line from the edge of the B/C deck opening all the way to the outer edge of the primary hull.

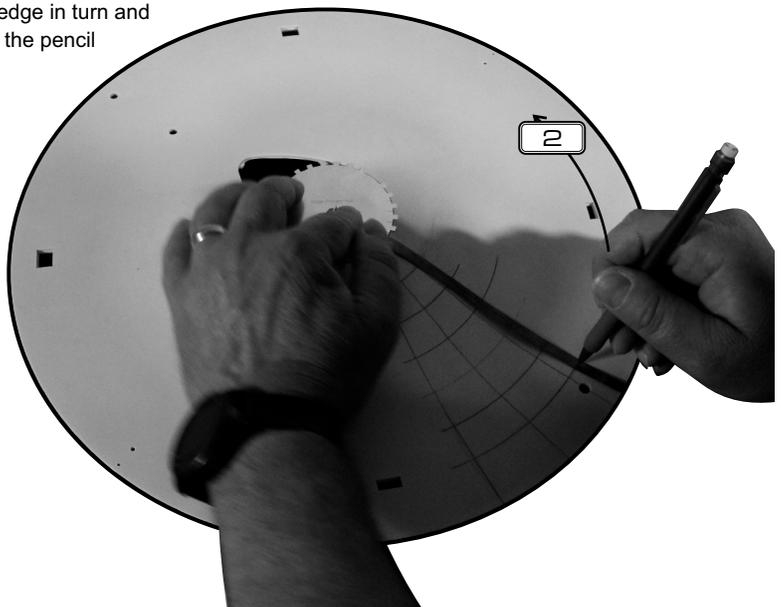
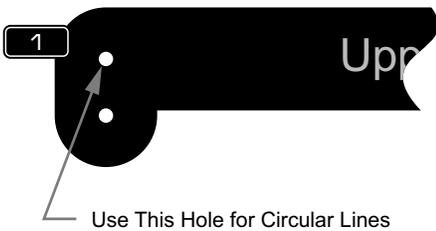
**NOTE:** When done, fix the pencil lines by spraying clear flat over the entire hull.



## UPPER PRIMARY HULL CIRCULAR LINES

Remove the T-pin and shift it to the other hole.

Insert a mechanical pencil lead in each hole on the straight-edge in turn and carefully draw a circle, trying not to put outward pressure on the pencil which can distort the circular line.

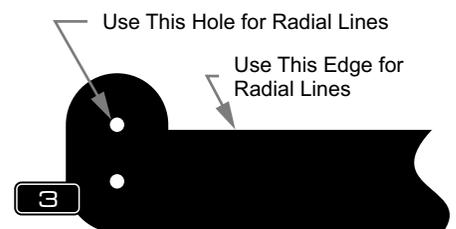
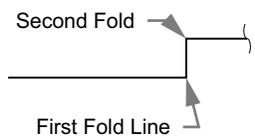
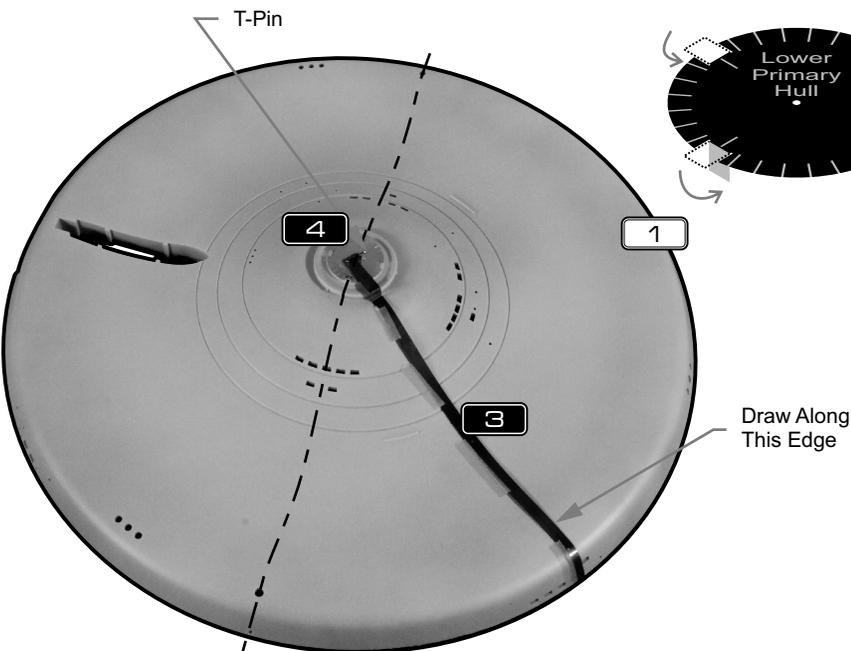


## LOWER PRIMARY HULL RADIAL LINES

Fold the lower primary hull straight-edge (part 3) as shown.

As with the upper primary hull, fold the tabs on the protractor, etch part 4. Insert this into the opening for the planetary sensor and align two of the alignment lines with the port and starboard running lights. Mount the straight-edge using the T-pin and draw the radial lines.

**REV1 NOTE:** If your etch set reads "P/N: PGX232 REV1", an error in manufacture eliminated one of the fold lines necessary to clear the planetary sensor hump. After folding at the first fold line, use the curve below as a guide to making the second fold. The distance between the first and second folds is  $7/32"$  (5.6mm).



## LOWER PRIMARY HULL CIRCULAR LINES

As with the upper primary hull, remove the T-pin, shift the straight-edge and insert the T-pin through the other hole. Stick the pencil lead into each hole on the straight-edge in turn and draw the circular lines, try to exert as little outward pressure on the pencil as possible.

