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**#PRP1785**

***Star Trek: The Motion Picture* and  
*Star Trek: The Wrath of Khan* Phaser  
Prop Kit Assembly Manual**



Roddenberry.com presents, for the first time, the **Phaser** as seen in the first two **Star Trek** movies. With this prop kit, you can build your choice of either the phaser from **The Motion Picture** (1979) or **The Wrath of Khan** (1982) as highly accurate, non-functioning props.

This prop kit is hollow cast in several pieces for lighter weight, as well as to facilitate the installation of an electronics kit, and will look great in your prop collection or to wear with a costume.

*No electronics are included with this kit. And although there are limited electronics preparation instructions, the phasers shown here are non-functioning models.*

## PARTS INCLUDED IN KIT:

- Phaser top (resin-cast)
- Phaser left and right sides (lower body and grip, resin-cast)
- Emitter (laser-cut acrylic)
- Dilithium crystal cell (machined acrylic)
- Bottom grip cover (laser-cut styrene), and 2 screws
- Triggers (1 each) for TMP and WOK
- Graphics sheet for TMP and WOK
- Rainbow tape strips (2) for WOK
- White detail strips (12) for WOK

## TOOLS AND SUPPLIES NEEDED:

- Sandpaper (220-320 grit rough sanding, 400-600 grit finish sanding)
- Drill, with a 1/16" drill bit
- Bondo plastic filler and/or automotive/hobby spot putty
- Screwdriver for grip cover screws
- Cyanoacrylate (CA) glue (medium-set recommended), and CA cure accelerator
- 5-minute epoxy
- Masking tape (blue low-tack type recommended)
- Hobby knife (X-Acto brand or other), plastic straightedge, a self-healing cutting board (available at art supply stores -- recommended for graphics cutting but not mandatory)
- Scissors

## PAINTS LIST [SPRAY PAINTS UNLESS NOTED]:

- Primer (sandable-type recommended)
- Krylon Stone Gray #1306 (TMP)
- Plastikote Light Blue #1540 (TWOK), or a similar shade of light metallic blue (Plastikote #1523, #1568, etc.)
- Clear spray such as Krylon Crystal Clear
- Gloss Black (Krylon or other brand)

## OPTIONAL TOOLS:

- Dremel moto tool
- 1/8" drill bit

## BEFORE YOU BEGIN:

Instructions common to both phasers are in plain black type.

*Electronics preparation work is in blue italics.*

**Star Trek: The Motion Picture style phaser is in green bold.**

***Star Trek: The Wrath of Khan style phaser is in red bold italics.***



The differences between the two phasers are as follows:

**Star Trek: The Motion Picture Phaser (TMP) body uses the smooth trigger without the hole in it and is painted Krylon Stone Gray #1306 (Krylon's replacement for the original color of Dove Gray). When the trigger is added, do not fill in the seam where the trigger attaches. The bottom access plate on the grip is painted gloss black, and this uses the full color graphic on top.**

***Star Trek: The Wrath Of Khan (WOK) version uses the trigger assembly with the hole in it, and the round rod protrudes from it as the trigger. The rib detail at the emitter end is sanded off to the inside emitter detail about 3/4" back from the nose end. The color is a Plastikote light metallic blue [#1348], which is also the color for the bottom of the grip. This phaser uses the black/copper graphic on top and rainbow tape/diffraction grating tape detail that run along the sides inside the rib detail.***

Wash all resin parts with a chlorine based cleaner such as Comet or Ajax to remove traces of mold release which may interfere with the eventual paint finish. Sand all mold lines and sprues from the parts, fill any bubbles or other bad spots present with bondo, and sand until smooth when the filler is hard.



**Step 1:** Line up the two lower phaser halves. Using CA glue, tack in place (use accelerator to speed the cure if needed), then glue the entire seam all around.

*At this point, if you are adding electronics, you will need to place your trigger switch. You will notice that a wall is provided for the trigger to attach to when you glue the two halves of the lower body/grip assembled together. Place your switch here on the wall (or drill a hole through, depending on your what you're using for the switch), and screw (or glue) it to the wall so you can activate it with the trigger.*



**Step 2A:** The Motion Picture trigger may be glued in place as is for a non-functioning phaser -- bearing in mind the seam around the trigger does not get filled in at any time, that line should be visible on the finished phaser.



**Step 2B:** *The Wrath of Khan trigger comes in two pieces; the trigger housing and the cast resin rod which should have the hollowed out end protruding from the housing surface about 3/16 of an inch at the bottom edge, and is glued on for a non-functioning phaser. When the assembly is glued onto the phaser, you'll fill in the seam all around the large trigger housing*



glue emitter in place



**Step 3:** Test fit the clear emitter and sand flat if needed to fit into place, it should fit even with the ends and flush with the top surface. Glue into place with CA.

*If you are adding electronics, you will need to attach your light source behind the clear emitter at this time -- the emitter stays in place on a working TMP phaser, and you may need to hollow out a space for your bulb or LED[s]; or for a WOK, you could dispense with the clear emitter entirely or cut into it to make room for four LEDs to match the beam that comes out in the famous close-up of Kirk shooting the Ceti Eel.*



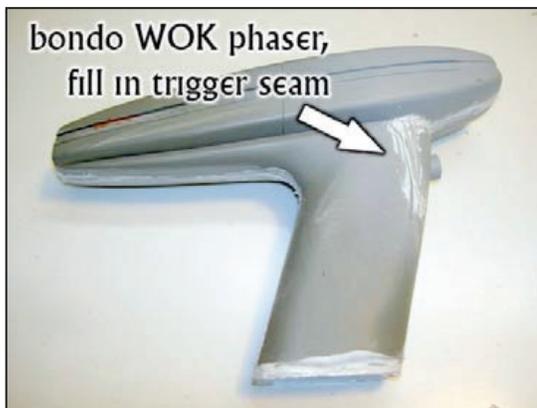
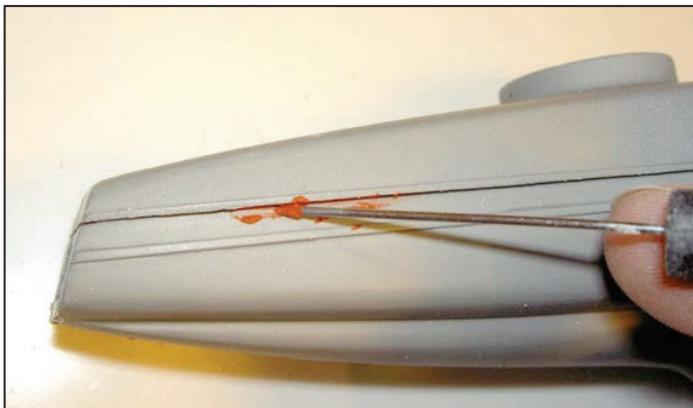
**Step 4:** After the glue has set, line up the top cover. Test fit the cover and make sure the angled side seam lines that is the separation line for the Phaser I align correctly. Also make sure the front end lines up even at the emitter area and the back end all line up evenly. Do not glue yet unless you're making a nonfunctioning phaser.

*You will need to drill the 4 holes for the lights that poke through the graphic in the Wrath of Khan version of this Phaser. Drill them at the spots where the points are molded in, and add your lights and electronics before you glue on the top cover, making sure you have a couple wires coming out the bottom grip hole for your battery source.*

*For the Motion Picture version of electronics, the whole graphic seems to light up from underneath, so you will keep your light sources flush with the top and not protrude through the graphic -- you will likely drill bigger and more squared-off holes for these lights, or cut a piece of clear plastic and inset it in the rectangular place where the graphic goes. Again, you should install your circuit board and do all interior work before gluing the top of the phaser permanently, and be sure you have battery wires coming out the bottom grip hole.*

*If you are adding sound, a good place for the speaker is under the round hole that will hold the dilithium cell. Drill some holes inside the ring on top; and before you glue down the cell, add a couple pieces of scrap spacer plastic so the sound can get out from under the cell.*

When you are ready, glue the top cover in place using CA glue. Try not to spill too much glue into the ribbed detail area, you'll be cleaning it out if you do.



**Step 5:** Fill any “open” seams where the top cover meets the body and the seams running around the bottom body with bondo or spot putty, sand until smooth.



**Step 6A:** *For the WOK version, sand the ribbed area on the emitter end flat to the body from the emitter around the corners to the points where the inset emitter detail ends -- the portion of which that will be painted black. Also fill the seam around the trigger base with bondo putty and sand smooth.*



**Step 6B:** *The TMP version side and front strip detail is left alone.*

**Step 7A:** If you are going to build a non-functioning static version of either phaser, just glue on the bottom grip plate, blend it in with sandpaper if needed, bondo the seams, and sand smooth (see the photo on the top right of this page).



Note that the bottom grip plate that comes with this kit is made of styrene, not clear acrylic like in these pictures; and it is made to fit the irregular shape of the grip surface only one way.

**Step 7B:** For battery access, you will need to drill two 1/16" holes into the handle area. Using the plate as a guide (this is irregularly shaped and will look good and even in only one direction, and the hole closer to its edge should go towards the front), drill your two holes into the body, and secure into place with the two screws provided. It is recommended that you use a clamp on the grip before drilling and screwing in the screws for the first time, as the drill may separate the seams. Sand the edge of the cover to match the contour of the body if needed.

Apply spot putty to fill any visible blemishes and sand until smooth.



**Step 8:** Place masking tape over the clear emitter (or your LEDs), and primer paint the whole body. Fill in any bad spots you didn't catch before with spot putty, sand smooth and primer again until it looks good.

**Step 9:** Paint the body the color of your choice and let dry. **The Motion Picture version is painted with Krylon Stone Gray #1306, while the Wrath of Khan version is painted with Plastikote Light Blue #1540 or your choice of light blue metallic paint.**

Paint inside the groove from the edges of the clear emitter to the sunken in edge on the sides Gloss Black (see above photo and later photos). You can mask this area off and spray it, or just hand paint it with a paintbrush.

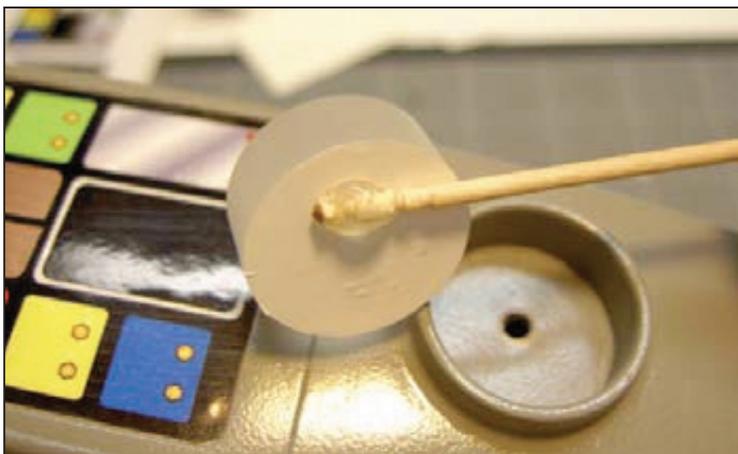


**Step 10A:** The grip cover for the Motion Picture version is also painted Gloss Black; if it's a separate part, paint it and the screws by themselves; or mask to expose the bottom grip if you glued it on, place the tape about 1/16" up on the grip sides.

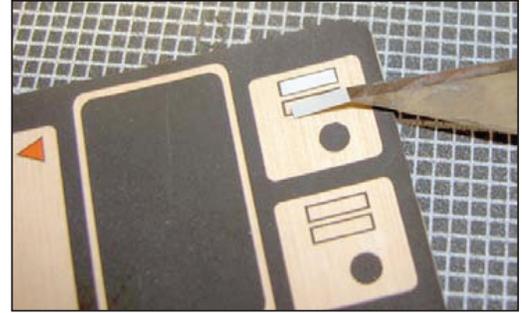
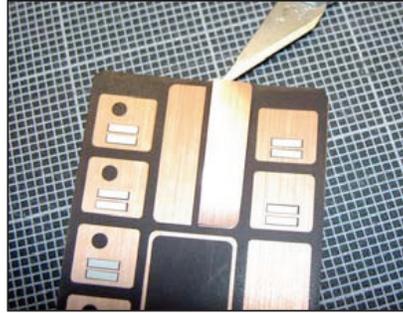
**Step 10B:** *The grip cover for the WOK version is the blue body color, and masking is not necessary.*

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Final assembly may be done in any order...



**Step 11:** Glue the dilithium crystal cell into place at the top receptacle tube with 5-minute epoxy -- note that it already has some white vinyl to make it reflect light and appear to glow. Be careful not to fill the holes and spaces for your sound if you have drilled them.



**Step 12:** The more colorful graphic is for the Motion Picture Phaser version (photo on the left). You will need to place the cut copper detail tapes in the large rectangle areas on the graphic, *(this step is optional on the WOK graphic as the copper is already visible...see middle photo above)*. Cut the main graphic to the edge of the black ink using a plastic straightedge and your hobby knife on a self-healing cutting pad (available at art supply stores) or on a flat and clean surface you don't mind damaging, and cut the round edges with scissors before applying.

*The WOK graphic is the all copper one. There are 12 rectangle places where the white tape strips are placed, use a small tool such as the tip of a hobby knife to place the strips (photo on the right). You will need to spray some clear coating (such as Krylon Crystal Clear) over this graphic to protect the white strips as well as the printed surface.*



**Step 13:** *For the WOK version, place the 2 @ 1/8" rainbow tape/diffraction grating strips along the sides.*



Congratulations, you've completed a Phaser from one of the first two Star Trek movies!

For a related project, Roddenberry.com recommends the *Star Trek: The Motion Picture* Tricorder Prop Kit #1786, contact [www.roddenberry.com](http://www.roddenberry.com) for ordering information.

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### **IMPORTANT NOTES:**

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