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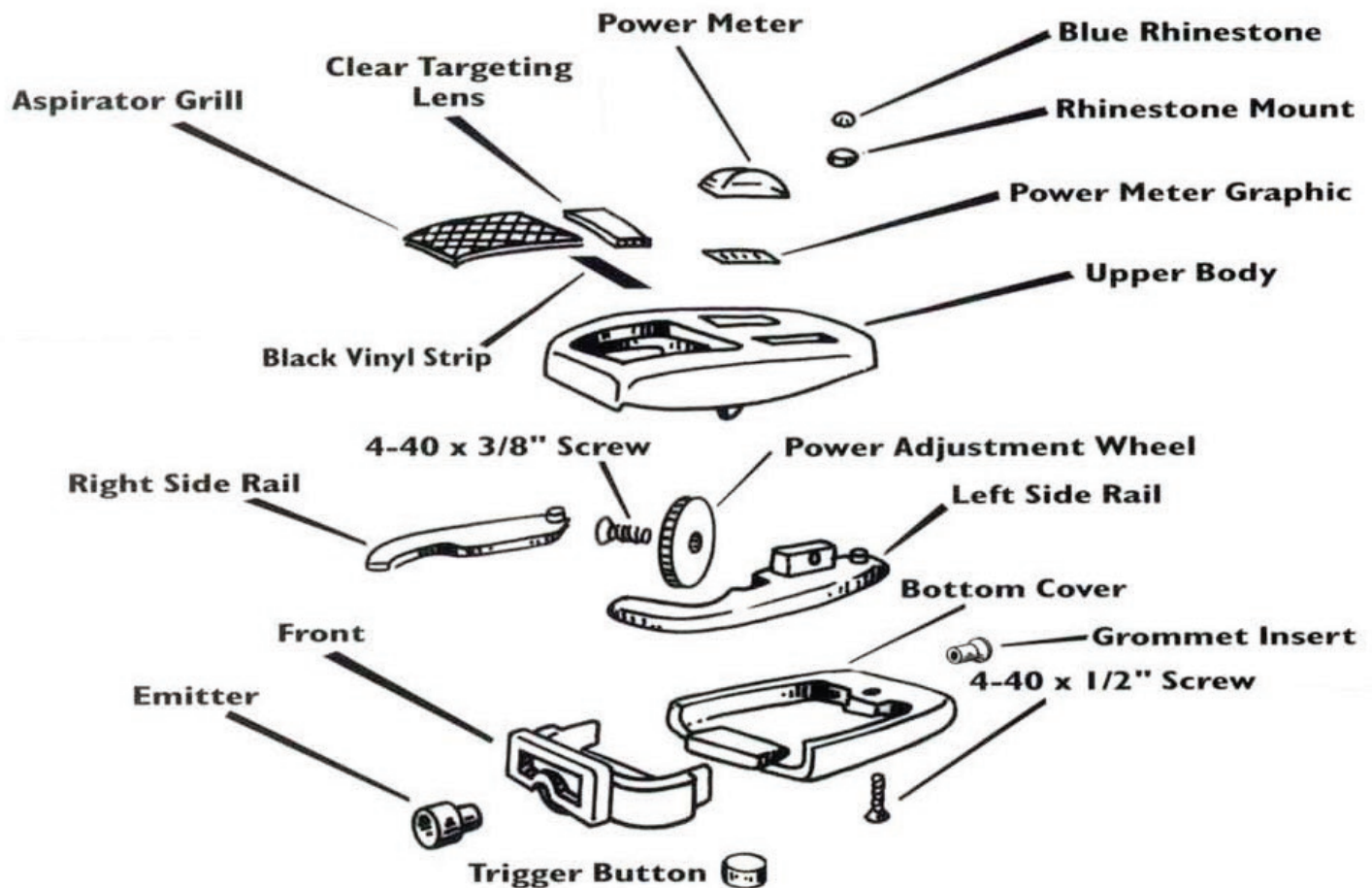
***Star Trek*™ TOS Phaser 1 Prop Kit Assembly Manual**



Thank you for your purchase of the **Roddenberry.com Star Trek Phaser 1 Kit**. These instructions will enable you to construct an accurate replica of the Original Series Phaser 1, as made for the **Star Trek: Deep Space Nine** episode "Trials and Tribbleations." You may also finish the kit as seen in its various incarnations from The Original Series.

The resin-cast parts of this phaser kit are molded directly off the master pattern of the "Trials and Tribbleations" Phaser sculpted by Michael Moore. The kit parts have been upgraded from those used on the filmed props, and the kit features hollow body parts for both lighter weight and end-user upgradability, a removable bottom cover, and a turning power setting wheel.

BASIC LAYOUT AND INVENTORY



NOTES ON MAKING A TOS FIRST SEASON "BLACK AND WHITE" PHASER:

Read all of the instructions first. If you wish to make a TOS First Season "Black and White" Phaser, then make the following modifications as you assemble your kit....

Paints needed:

Semi-Flat or Gloss Black spray paint

Phaser 1 Modifications:

Take the aspirator grill and bend it the other way -- the smooth side is out. Glue this with epoxy to the body, do not fill in the seams. Leave off the clear plex targeting lens for now and glue this on with the black vinyl underneath like for the standard Phaser 1 after painting.

Glue on the side rails (the adjustment wheel can be installed later, or masked before painting) and the front before painting, then sand flush with the surface so it all appears as one piece, putty and sand smooth.

Fill in and sand the power meter hole.

Paint semi-gloss or gloss black, including the side rails and the aspirator grill area.

After curing, glue on the clear targeting lens, and add the emitter tube and trigger button.

The power meter graphics consists of cutting out numbers 1 and 10 in white squares and affixing them in place at either end of the surface where the plastic meter would go. The half-round meter is not used, and the graphic numbers are exposed.

The rhinestone is not used with the B/W phaser.

Good luck with your kit!

PARTS LIST:

- 1 Upper Body
- 1 Front
- 1 Bottom Cover
- 1 Aspirator Grill
- 1 Clear Plex Targeting Lens
- 1 Black Vinyl Strip
- 1 Adjustment Wheel
- 1 Power Meter with power level graphic
- 1 Emitter
- 1 Trigger Button
- 1 Left Side Rail
- 1 Right Side Rail
- 1 Blue Rhinestone
- 1 Rhinestone Mount
- 1 4-40 x 3/8" Screw
- 1 4-40 x 1/2" Screw
- 1 Grommet Insert
- 1 180 grit sandpaper
- 1 320 grit sandpaper
- 1 "Scotchbrite" pad

TOOLS AND SUPPLIES NEEDED:

All of these can be found in your local hardware store...

- Epoxy glue -- 5 minute curing
- Fine sandpaper -- 400 to 600 grit
- Small jeweler's file (flat or half-round)
- Automotive spot putty
- Hobby knife (X-Acto brand or similar)
- Small brass wire brush (resembles a large toothbrush)
- Hand drill with 1/8" drill bit
- Some sort of hand saw (fine hobby saw or hacksaw)
- Cyanoacrylate glue (medium "gap-filling" type recommended)
- Masking tape
- Toothpicks



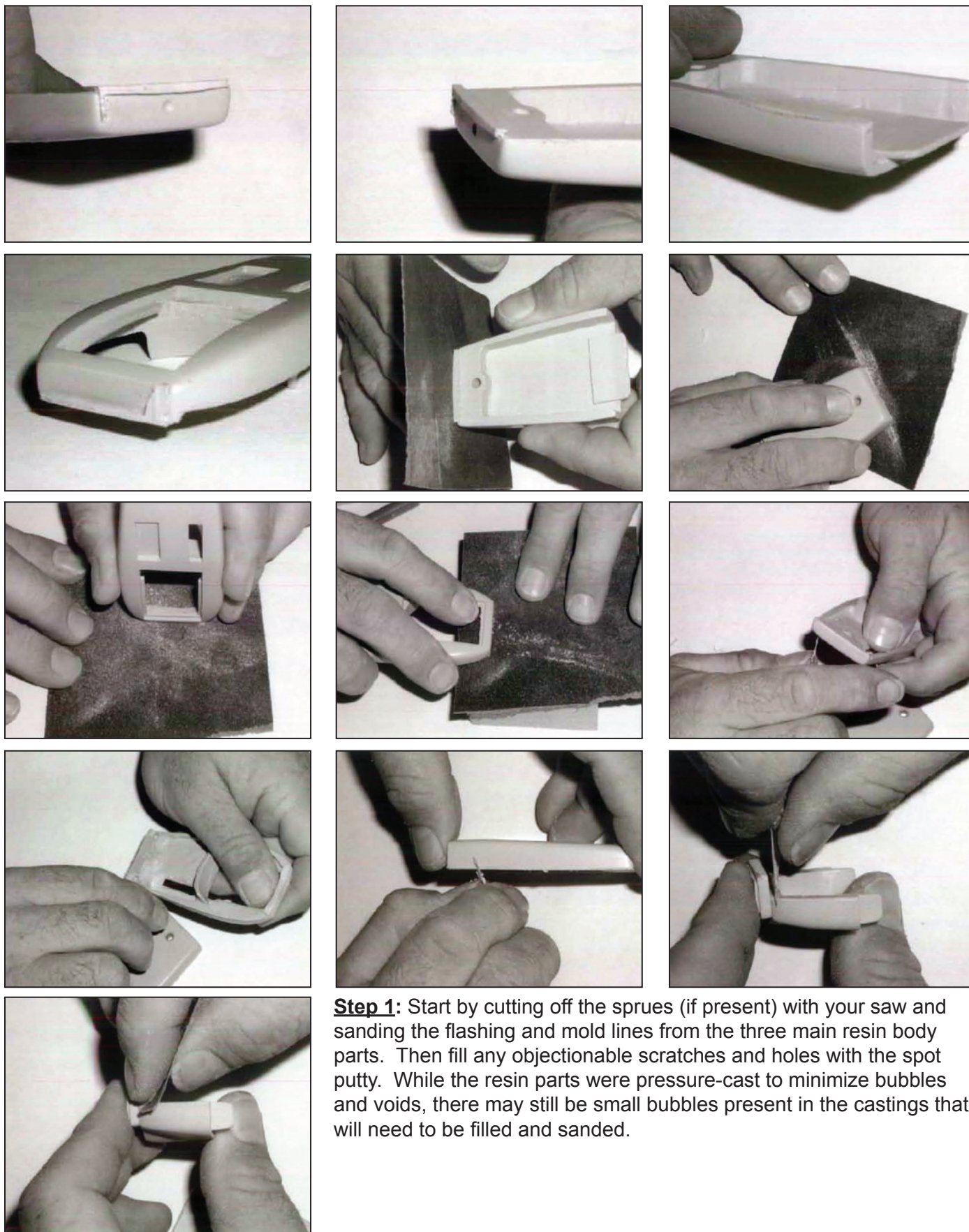
SPRAY PAINTS:

- Spray primer (sandable scratch-filler type)
- Krylon "Shadow Gray" (for Trials and Tribbleations)
- Zynolyte Dark Gray Primer (for TOS)
- Krylon Matte Finish or Testors Dullcote (if you're using a primer as the color coat)
- Semi-Flat or Gloss Black (for TOS)

OPTIONAL TOOLS AND SUPPLIES:

- Automotive body filler (Bondo brand or similar)
- Dremel brand moto tool or similar
- Metal polish (Simichrome or other)
- Velcro

Wash your resin parts with soap and water to remove any lingering traces of mold release before you begin.

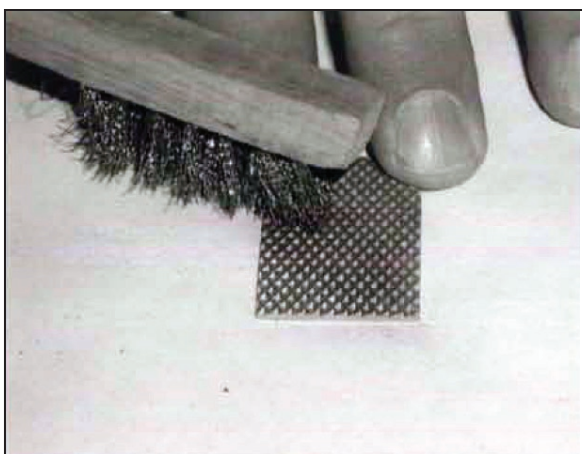


Step 1: Start by cutting off the sprues (if present) with your saw and sanding the flashing and mold lines from the three main resin body parts. Then fill any objectionable scratches and holes with the spot putty. While the resin parts were pressure-cast to minimize bubbles and voids, there may still be small bubbles present in the castings that will need to be filled and sanded.





Step 2: While the putty is drying, sand the edges and mold lines off of the cast metal parts. As you work, continually check the fit of your parts and sand or file away any resin or metal that interferes with proper fit and function.



Step 3: The aspirator grill finish is achieved by wire brushing the top surface with your small brass brush. Brush with the diamond pattern in both directions to give it the desired finish.

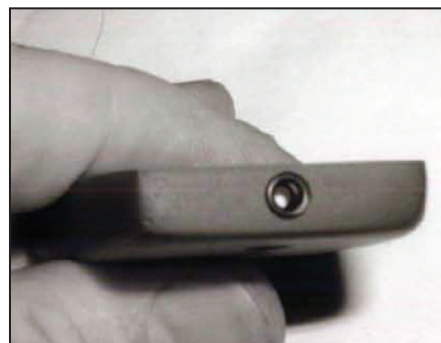


Step 4: Sand the outer edges of the two side rails until smooth (down to 400-600 grit). Be careful, as they are easily bent. Rubbing them with the Scotchbrite pad will give the rails a nice brushed look, or they can be polished with metal polish.

The rails and the aspirator grill can be bent slightly for a more even fit -- **be careful not to over-bend.**



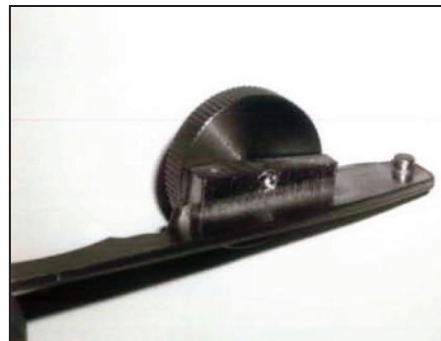
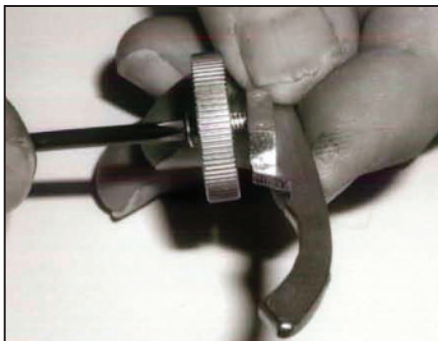
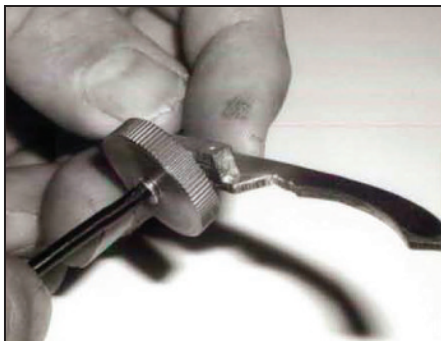
Step 5: Try the fit of the clear plex targeting lens and the aspirator grill, sand either or both parts until they fit. The targeting lens may not appear to be even to the surface of the body. You may add material to the low end or cut away material from the high end on the body until it looks good to you.



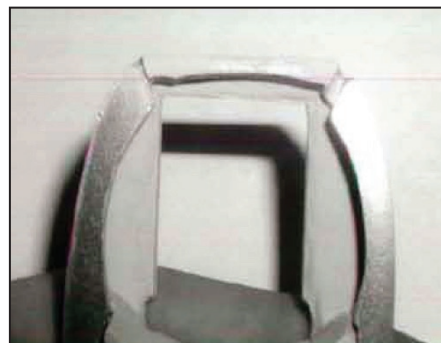
Step 6: Drill a 1/8" hole into the end of the bottom cover, enough for the grommet insert to fit in. The grommet may be installed before or after painting.



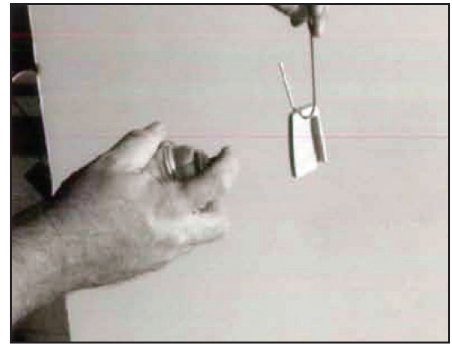
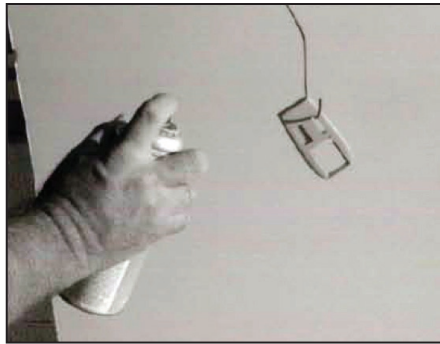
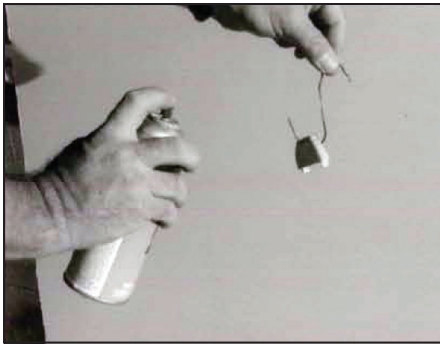
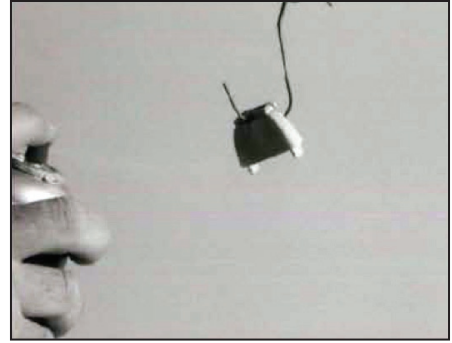
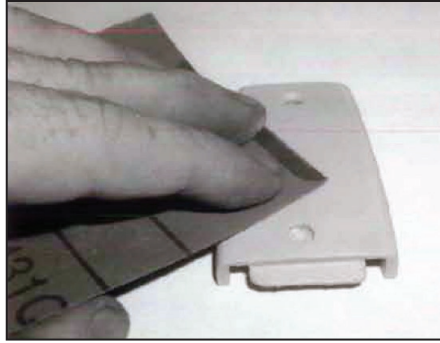
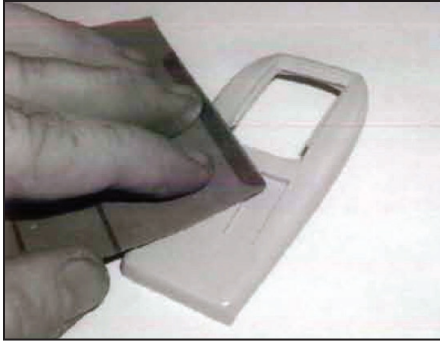
Step 7: Clean the hole in the front where the emitter tube fits in.



Step 8: Install the adjustment wheel onto the left side rail using the 4-40 x 3/8" screw. You will want this slightly loose so the wheel spins freely. Fit this assembly onto the phaser, and file away the slot in the body if it interferes with the smooth spinning of the wheel (see next photo below). Be sure to file at an angle to avoid filing away any of the visible slot. Try the fit again to be sure it works; once satisfied as to the function, glue the end of the screw with cyanoacrylate glue so it can't work its way loose.



Step 9: Once again, continue to test fit your parts!



Step 10: Make yourself some small hangers so you can hang your resin parts for painting. It may help to slightly roughen up your surfaces with 320-400 grit sandpaper before you spray your first coat of primer. You may mask off the areas that you'll be gluing parts to before you paint, as glued parts do not adhere well to painted surfaces.

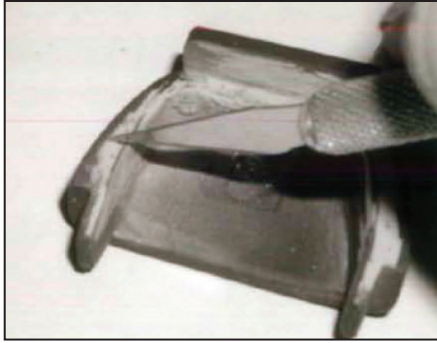
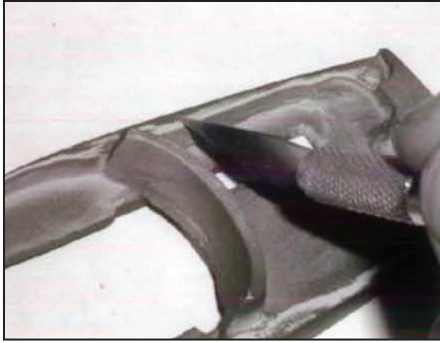
After your first coat of primer dries, check the finish of the surfaces. The primer coat may reveal scratches and other flaws that were not visible to you before, use the spot putty and sand those spots. Primer again and repeat if needed -- it may take several putty, sanding, and primer steps before you get a surface that you're pleased with.

When the final primer coat is dried enough, spray on your first coat of color. "Trials and Tribbleations" phasers were painted Krylon Shadow Gray, or you have the choice of using Zynolyte Dark Gray Primer or similar, or a semi-flat or gloss black color coat if you want to paint a color used on TOS.

If you're using a primer as your color, give your phaser a final coat of clear Krylon Matte Finish, Testor's Dullcote, or another brand of clear finish.

You may if you wish wet sand in between coats with 600 grit or finer sandpaper for an ultimate smooth finish.

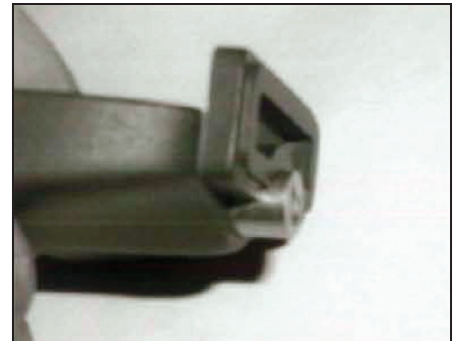
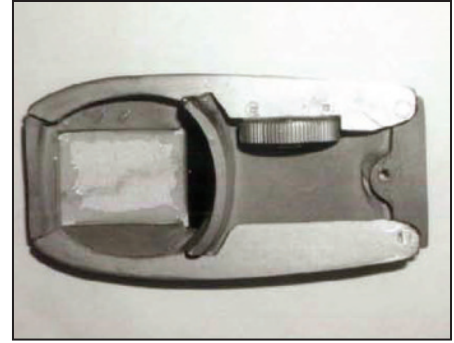
Allow your painted body parts to dry and cure before you handle them again, allow several hours or overnight before you begin final assembly. If you've masked any areas before painting, remove the masking tape carefully so you don't lift your freshly painted surfaces. You may need to score the tape edges with a hobby knife before lifting the tape off.



Step 11: Before gluing your parts on, roughen up any surfaces you're gluing together. This is also necessary to remove paint from your joints since resin glues better to resin and metal than it does to paint. Be very careful you do not damage any visible surfaces. While gluing, try to avoid handling the phaser any more than necessary to keep glue fingerprints off. Allow sufficient cure time in between installing parts.



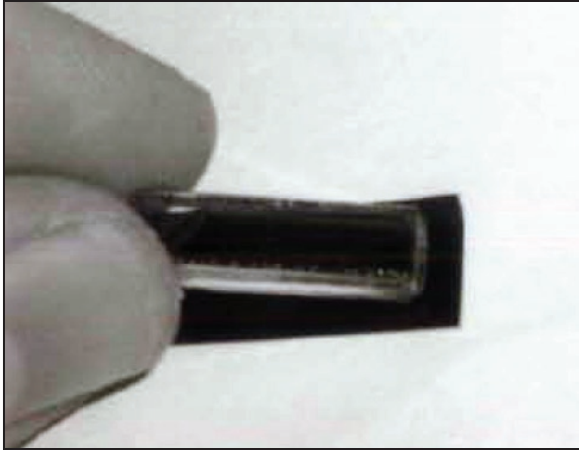
Step 12: Start by gluing the side rails to the upper body, one at a time. You can wipe away excess "outside" glue while it's still wet, or you can leave it alone without touching it and pick away at the glue with toothpicks when it starts to cure but before full hardness -- there is a small window of opportunity when you can do this without damaging finished surfaces. When the glue is soft without being sticky and stringy is best for this; it will get progressively harder to remove glue this way the more it is curing.



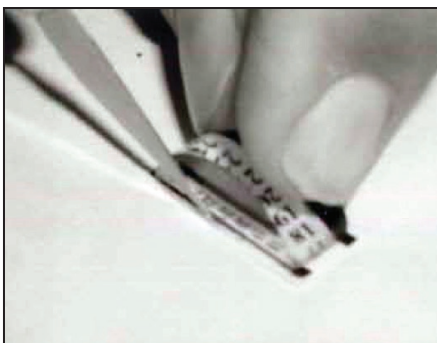
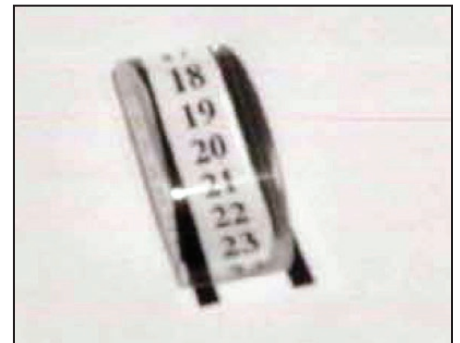
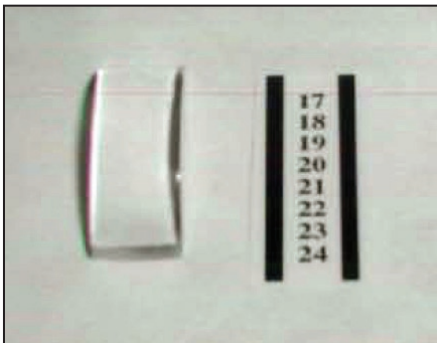
Step 13: You may use your own preference for the order in which the rest of the parts assemble. Glue the front on using cyanoacrylate on the resin-to-resin joint, or epoxy if you want to have the convenience of moving the parts slightly for final positioning. Look at the front of the phaser and make sure you're putting it on straight and even; once in place it will be hard to correct a visual mistake. Spread epoxy inside where the front butts up on the rails. Install the emitter either before or after gluing the front, it sticks out approximately 1/16 of an inch (see photos on the bottom). Spread epoxy around the emitter on the inside; it is not necessary to put glue in before pushing the emitter in the hole.

Glue on the aspirator grill with epoxy. You may spread glue inside the body for greater strength; this also applies for all the other parts.



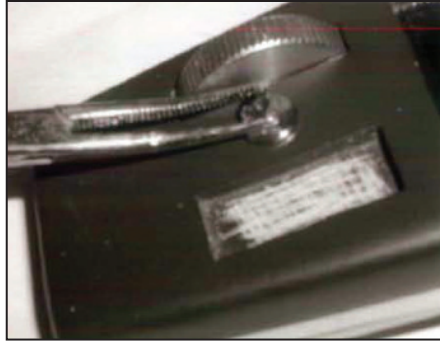


Step 14: Put the black vinyl tape on one surface of the clear plex targeting lens, this helps to keep from seeing into the interior of the phaser. Glue the taped targeting lens onto the phaser, tape side down. You may want to add a piece of support plastic at the joint of the targeting lens and aspirator grill, or at least add extra glue there inside the phaser.



Step 15: Epoxy the power meter onto the graphic. You may use your choice of power number ranges; there is enough length on the graphic so if you make a mistake with your gluing, you can peel off the graphic and try again. When the glue has been curing for a few minutes, cut away the excess graphic with your hobby knife before it achieves full cured hardness.

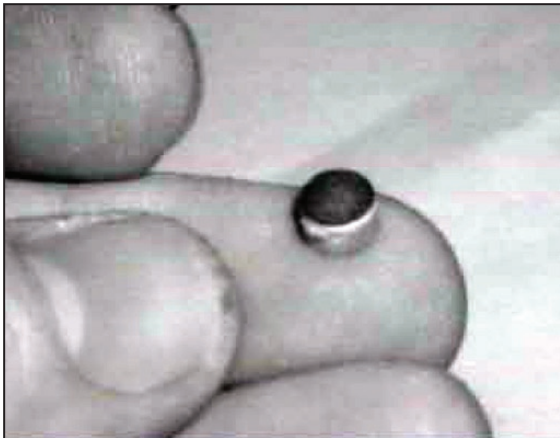
The "Trials and Tribbleations" Phaser 1 had a blue rhinestone in between the meter and adjustment wheel. Many of the TOS phasers didn't have the rhinestone or used a red one, so its installation is purely a matter of preference as well as what color you use (the Blue "Trials and Tribbleations" rhinestone is the only one supplied).



Step 16: To install the rhinestone, scrape away a very small patch of paint where the rhinestone goes. There is no specific place imprinted on the casting for this; you'll have to eyeball its placement. Sand the metal rhinestone mount until flat. Place a tiny drop of epoxy on this patch then very carefully put the rhinestone mount in place, using tweezers if needed. The rhinestone may be glued onto the plate either before or after it goes on the phaser.



Step 17: Epoxy on the power meter assembly; make sure it fits in the hole before you glue it.



Step 18: Glue the trigger button onto the bottom cover.



Step 19: Secure the bottom cover with the 4-40 x 1/2" screw. If you wish, you may affix a piece of Velcro to the cover to carry your phaser with a costume.



Enjoy your new Phaser 1!

IMPORTANT NOTES:

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