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#PRP1766

***Star Trek: Enterprise* Phase Pistol Prop Kit Assembly Manual**



Thank you for your purchase of the **Roddenberry.com *Star Trek: Enterprise* Phase Pistol Prop Kit.**

This is the first 1:1 scale kit of the hero prop made available and comes with the hinged main body and separate power cell, which is upgradable for special effects electronics. This kit will build up a static non-functioning prop. Electronic parts other than what's provided in the kit are not included, check with Roddenberry.com about the availability of a phase pistol electronic upgrade kit.

Moderate prop or model making experience is recommended.

BASIC INVENTORY:

Resin casting:

Main Receiver
Rear Top
Interior Plate
Force Setting Sliders
(left and right)
Hinged Hood
Emitter
Pistol Grip
Trigger
Power Cell
(left, right, and end cap
clear-cast shells)
Power Cell Stop Block
Dovetail Plate

Other parts, Phase Pistol:

2 @ 8-32 hinge screws
with bent wire tool
2 @ grip securing screws
3 @ 1/4" magnets
5 @ laser-cut black plastic
oval strips
Foam piece for trigger
Interior graphics
Clear emitter insert with silver tape

Other Parts, Power Cell:

Micro-push switch
Brass power cell plate with 2-56 screw
Chrome graphic detailing



MATERIALS NEEDED:

Cyanoacrylate (CA) glue with fast-cure accelerator
Automotive or hobby spot putty filler
Masking tape (blue painter's tape recommended)
Epoxy glue (5-minute type recommended)

Optional: Bondo
2 @ AAAA batteries

TOOLS NEEDED:

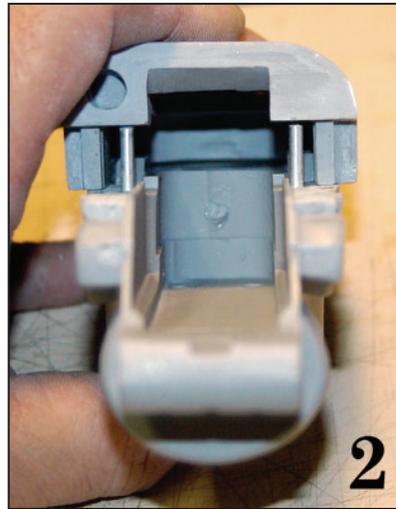
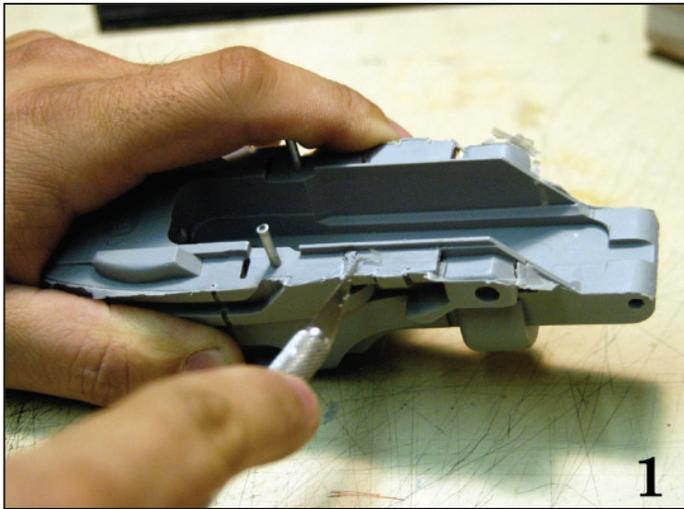
Hobby knife (X-Acto brand or similar)
Sandpaper (220-320 grit rough, 400-600 grit finish)
Files and/or sanding sticks
Drill with a #20 bit (or 5/32") and 1/8" bits
8-32 tap with tap handle
Small Philips screwdriver
Standard or needlenose pliers

PAINTS NEEDED (all spray cans):

Gray primer (sandable-type)
Semi-Gloss Black
Testors Model
Master Magnesium Metalizer (#1453) and
Titanium Metalizer (#1454 - small cans)
Testors Aluminum
Plate Metalizer (or Krylon Dull Aluminum)
Testors Metalizer Sealer or Testors Dullcote
(all Testors paints available at hobby stores)

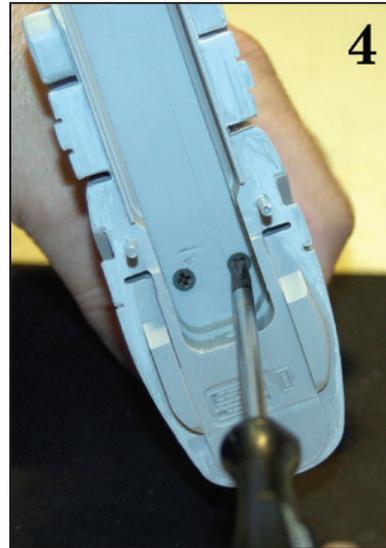
PREPARATION:

These instructions are for building up a non-functioning static prop. If you are thinking of installing an electronics upgrade kit, note that once parts are glued together, you may not be able to get the parts apart without damaging them if you change your mind later.



Step 0:

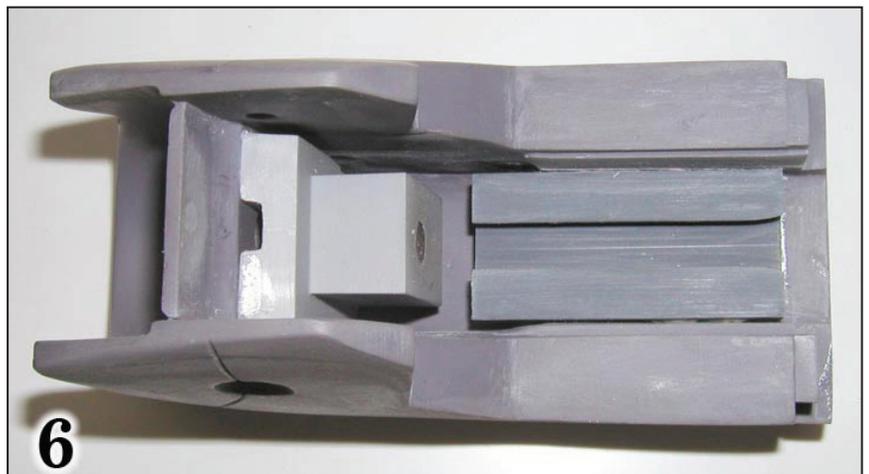
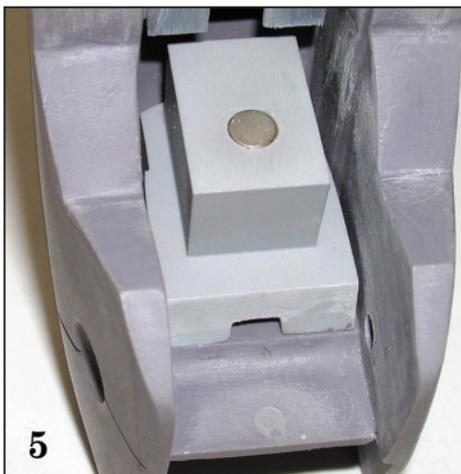
Start by sanding the mold lines and flashing from all the resin parts, using your tools at hand: sandpaper, files, sanding sticks, knife, etc., and try not to eat into the details too much **[Fig. 1]**. Use spot putty to fill in any obvious marks or holes and sand smooth. Test fit your parts to make sure they all work. **[Fig. 2]**.

**Step 1:**

Drill with a 1/8" bit into the two side-by-side divots in the receiver from the bottom. These are the clearance holes that will secure the grip [Fig. 3]. Screw the grip onto the body with the two Philips head screws to try it out [Fig. 4], then remove the grip and set aside.

Step 2:

Apply the foam piece to the back of the trigger button, then try the trigger out in the grip. Remove the trigger and set aside.

**Step 3:**

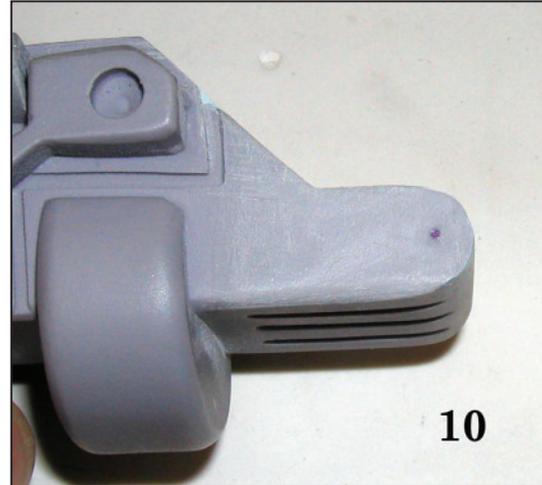
CA glue the power cell stop block to the inside of the hinged hood as shown. Make sure it is flat on the surface but all the way up...since it needs to stay out of the way of the receiver's hinging point [Fig. 5]. Glue one of the magnets in the hole, direction doesn't matter. Take the dovetail block and try sliding in the power cell assembly, regardless if you've assembled it first or not. If there is difficulty in this, it will be easier to sand the inside dovetail angles and the outer slotted surface before it gets glued to the hood [Fig. 6]. So make sure the power cell will slide easily before gluing on the dovetail, taking into account the thickness of the paint you'll be applying.

**Step 4:**

Drill two holes for the hinge screws into the hood, using a #20 (.161") bit [Fig. 7]. A common 5/32" bit may be used, but be sure the hinge screws (the ones with the two holes on top) go in the holes loosely. Use a round file to make the holes a little bigger, if needed. The hinged hood will be hinging on the screws, so try not to make these holes too big.

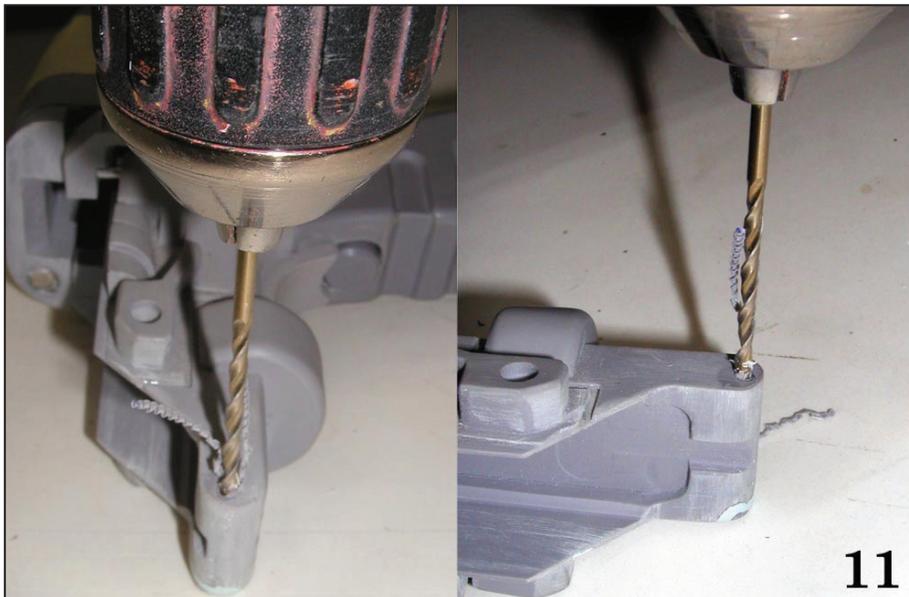
**Step 5:**

Place the rear top on the receiver; use tape too hold it in place. Place the hinged hood on the receiver where it is supposed to go for the best look -- flat on the receiver and back to the rear top, making sure the parts appear smooth to each other. Use 4-5 thicknesses of ordinary paper at the top joint to create a small gap there -- the graphic details have a thickness to them that will interfere with proper closure if you don't have a gap [Fig. 8].

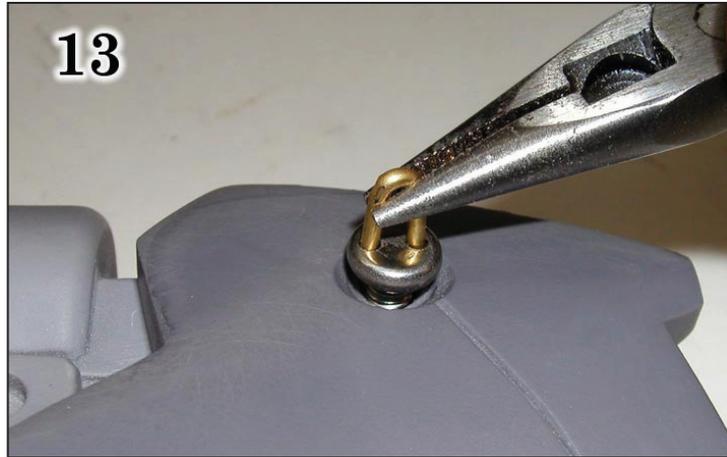
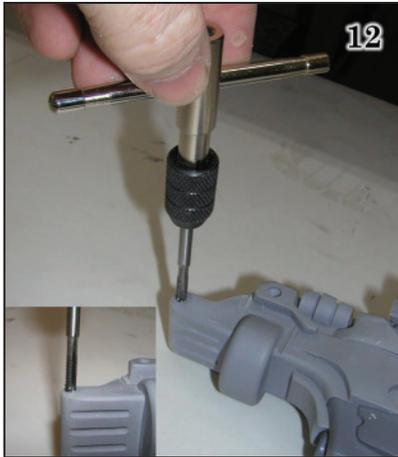
**Step 6:**

Draw a mark in both hinge holes on the receiver; or if you have a center punch available or something pointy, you may punch a mark in the center of the hinge holes that will locate where the drill bit needs to go [Fig. 9]. Remove the hood [Fig. 10].

Note: if you have a receiver where there are large divot marks already in place, check with the hood in place to see if you have perfect alignment -- if not, you will need to fill in the divots with Bondo, sand flat after it hardens completely, and proceed as stated in the last paragraph.

**Step 7:**

Drill a 1/8" hole in both ends of the receiver hinge point. Do not attempt to make this a through hole, but they do need to go in approx. 3/8". Be very sure you drill these in straight, as any angling can affect how the hinging action works or how much meat you have in the hinge point for the screws [Fig. 11].

**Step 8:**

It is recommended that you get a 8-32 tap with a tap handle to thread these holes so the hinge screws can be secured; these are available at any hardware store. Tap the holes [Fig. 12], using water for lubrication if necessary, then put the hood back on and thread in the hinge screws using the bent wire tool with pliers [Fig. 13].

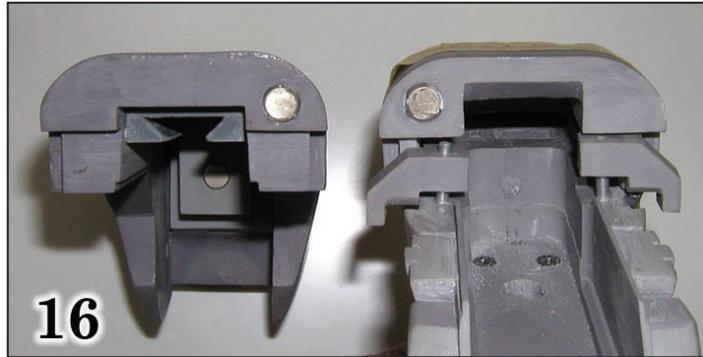
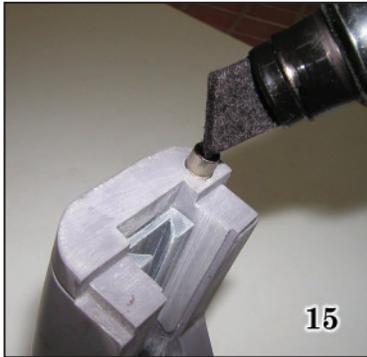
You have the option of purchasing the “Drill Master 100 Piece Security Bit Set” available at Harbor Freight Tools [#SKU91310], which will have the right #8 “spanner” driver bit for these screws. A specialty tool store might carry a screwdriver for this screw--one that’s available is marked “TAMPER-PRUF #8.”

Note: *Be careful when tapping into the holes and inserting the screws, as plastic threading is very fragile and easily stripped. If your holes end up stripped or too big for threading the screws in, you will need to fill the holes with bondo and/or glue and try again, or use some other means of repairing your threads.*

**Step 9:**

Slide the power cell in place inside the hood if it is already assembled (or tape it together; it will need its end cap in place), then close the hood and see if the power cell interferes with the hood closing. If so, there are several fixes you can do: sand the affected areas on the rear top, sand the power cell fingergrasp where it hits, or try to fix the hinge holes as these might be set at a slight angle [Fig. 14]. You should also sand any place where plastic may be rubbing against plastic on the hinge joint since that’s where paint will rub off, but be careful you don’t sand too much since you can affect the overall look of the phase pistol.

When it’s all good, remove the hood and all the other loose parts.

**Step 10:**

Glue the two remaining magnets to the hole in the rear top body and the hole on the hinged hood. To insure the magnets are attracting, glue one magnet in one part. Stick the loose magnet on your glued magnet and mark the exposed end with a marker [Fig. 15] -- this is the end that will go into the hole in the other part -- if you see your marker ink, turn the magnet around then glue in place [Fig. 16].

Put masking tape on the inside dovetail angles to protect from overspray that may interfere with sliding the power cell in.

PAINTING THE PHASE PISTOL

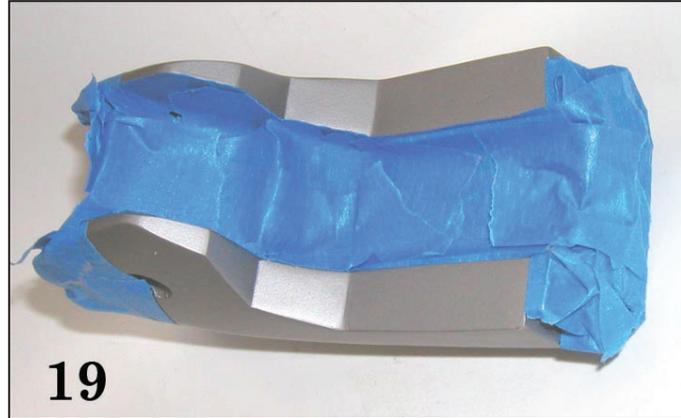


Also see Figs. 20, 21, and 22 for more painted images of the final Phase Pistol.

Step 11:

Paint the interior plate either Testors Aluminum Plate Metalizer or Krylon Dull Aluminum. The receiver unit, the rear top body, the force setting sliders, the hinged hood, and the emitter are sprayed in Testors Model Master Magnesium Metalizer [#1453]. Spray both exterior and interior, then set aside and let cure at least several hours or overnight.

Note: *Testors Metalizer painted parts can be clear coated, but only use their recommended lacquer-based Testors Sealer For Metalizer and/or Testors Dullcote -- do not use Krylon Matte Finish or other enamel based clear coatings. If you happen to use other enamel paints for your colors, note that lacquers should not be painted over enamels as you could damage your paint. Or you can leave the metalizer finish alone, and over time, portions may "buff" out from handling your prop to create a more "machined metal" or "polished metal" look.*

**Step 12:**

After the hinged hood is dry enough so it will survive masking tape (wait several hours if necessary), apply masking tape to the areas at both ends of the hood [Figs. 18, 19], be sure the emitter and the hood interior are protected from overspray, but make sure the edges are exposed. Spray Testors Model Master Titanium Metalizer [#1454] on the exposed portions of the hood...and when dry, remove the masking. This part may be painted in reverse if you think it will be easier to mask: paint the Titanium first, mask the middle area and the edges the opposite of the pictures, then spray Magnesium.



The sample pistol illustrated above has the round protrusion at the bottom of the receiver painted in Titanium. You may either mask and paint this part or leave in the lighter Magnesium as a personal preference...as both are accurate.

ASSEMBLY:

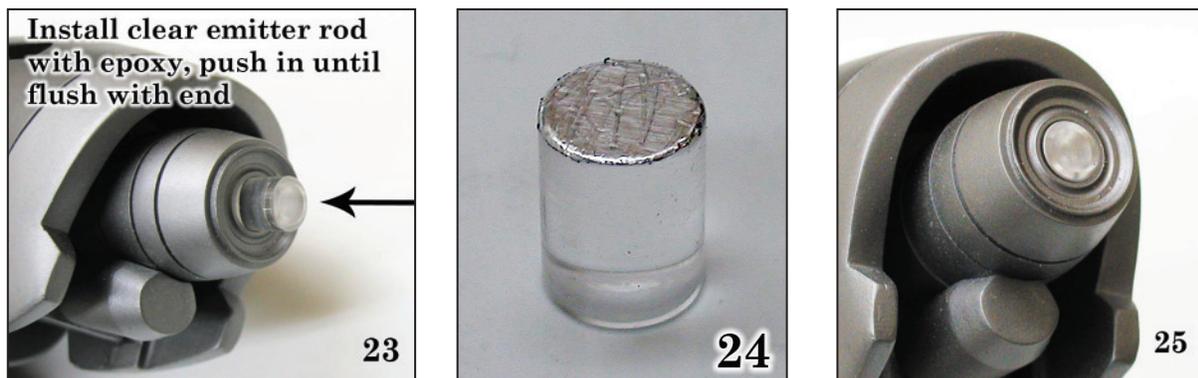
Step 13:

Screw the pistol grip/trigger assembly to the receiver (be sure it's secure, use glue if needed), then glue on the receiver interior plate.

Apply the graphics as shown on the graphics page [see Page 13]. It may be easier to do this step while the parts are still separated.

Screw the hood on and insert the power cell, and put in the two slide switches. Try the hood to see if anything interferes and if so, sand and/or adjust the affected part(s); you may need to repaint some parts if necessary. Be sure the hinge screws are only tight enough to allow easy hinging action without them being stuck out.

Place the rear top on, and note how it lines up with the hood -- try raising and lowering the hood, then glue the rear top in place on the receiver. ***Be careful the magnets aren't raising the rear end off the receiver.***



Step 14:

Apply the last silver dot to the flat end of the clear emitter insert, trim away any excess [Fig. 24], then glue it with epoxy into the emitter hole, pushing it in until it's flush with the emitter end [Figs. 23, 25]. The dot helps a lot in making the emitter reflect light on its own, but is not used if you're installing a working light.

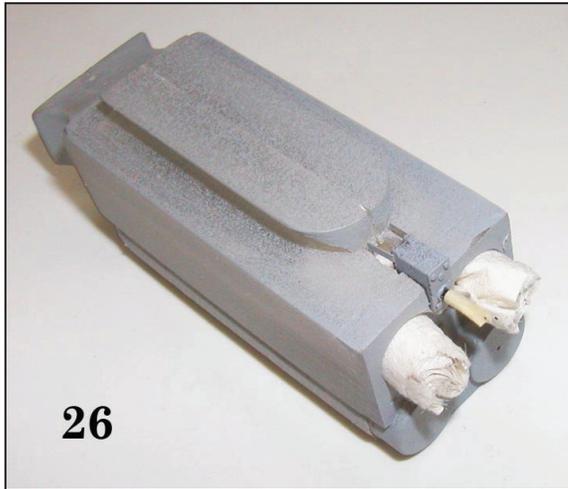
Step 15:

Glue the emitter onto the hood, and glue the five plastic strips to the upper slots on the hinged hood [Fig. 22], and the pistol is finished.

POWER CELL ASSEMBLY:

NOTE:

If you are planning on making a functioning Power Cell, you will need to inquire with Roddenberry.com about the availability of an electronic upgrade kit; there are no electronic parts included with this prop kit other than the micro push button switch that is a part of the detailing. ***As with the pistol prop; if you glue the power cell parts together as they come in this kit, you will not be able to get them apart again without damage if you decide you want working lights in it later.***

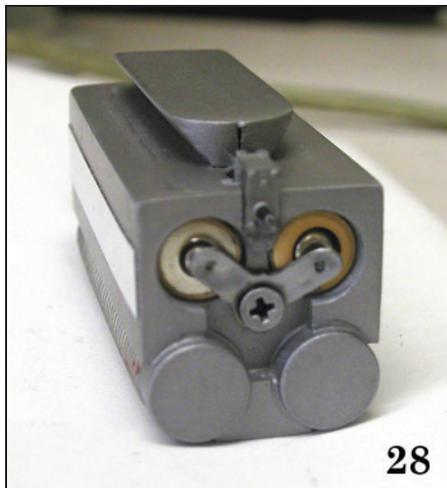


For a non-working static power cell:

After removing mold lines and so forth from all the resin parts, test fit the two shells in the dovetail block. This should slide in easily. If it doesn't, be sure the two shell halves are fitting together well before you sand either the male or female dovetails. If it's all working, glue the left and right shells together, and glue the end cap on. Glue the microswitch in place: the switch body should stick out approximately 1/32" forward. But be sure the power cell can still be inserted all the way; if the switch is out too far, you might not be able to close the pistol hood [Fig. 26].



Mask the two ribbed tube details with masking tape...these are clear in the finished prop [Fig. 27]. Mask the switch rod and stick masking into the two battery holes so paint doesn't sneak inside, leaving everything else exposed. Spray primer the power cell and the brass "V" piece, then spray both parts in Magnesium Metalizer; and when dry, apply the chrome graphic detail tape as shown on the graphics page [Page 13].



Lastly, screw on the brass “V” piece using the 2-56 Philips flat head screw [Fig. 28].

For added detail, you may install two AAA batteries. But if you don’t have an electronics upgrade kit, you won’t get the terminal springs to push the batteries out where they should be -- they are not included with the standard build-up kit. You can get a pair of springs and put them in, or glue the batteries in permanently, or wrap a little masking tape around the batteries and shove them in that way. But note that if you do any of that, it may be impossible to get the batteries out again -- batteries in a non-functional power cell serve as added detailing only [Fig. 28].

Insert the power cell, close the hood, and your *Star Trek: Enterprise Phase Pistol* is finished!

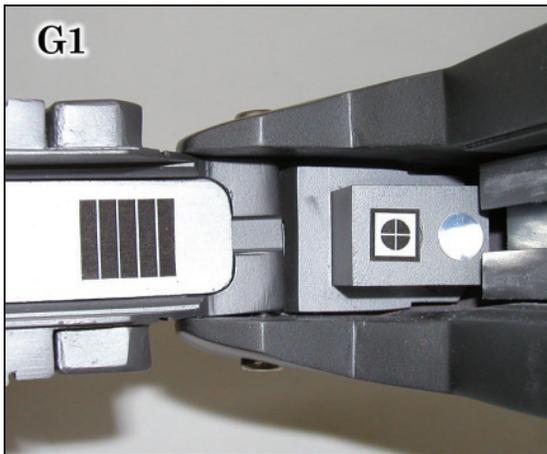
IMPORTANT NOTES:

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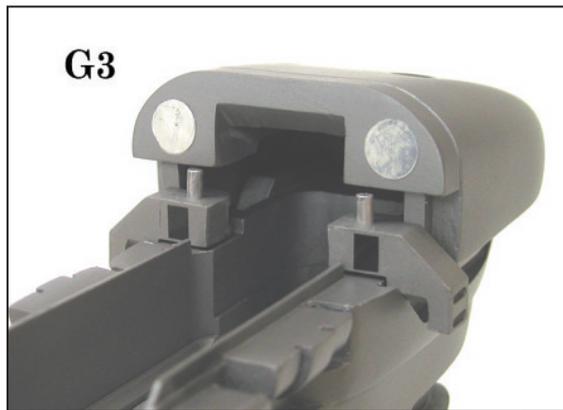
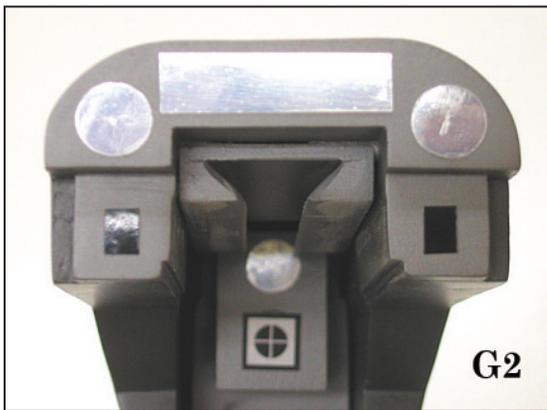
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GRAPHICS PLACEMENT:



Place the dashed sticker on the interior plate, the “target” sticker on the power cell stop block’s magnet, and one chrome dot above it and just under the dovetail’s end [Fig. G1].



Place one chrome dot each on the other two magnets on the hood and the rear top, and on their corresponding areas for symmetry; one black rectangle each on the two force setting sliders and their opposite areas on the hood; and the 1” chrome strip on the hood above the dovetail [Figs. G2 and G3].



On the power cell, place the 2” chrome strips on the two major sides, and the chrome square in the middle of the thumbgrip end [Fig. G4].