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**#PRP1769**

# ***Star Trek: First Contact* Phaser Rifle Prop Kit Assembly Manual**



Thank you for your purchase of the **Roddenberry.com *Star Trek: First Contact* Phaser Rifle Prop Kit**, also as used in *Star Trek: Insurrection* and as the base for the modified rifle from *Star Trek: Nemesis*.

This is the first time a kit of the *First Contact* “round-nose” rifle produced using the original master tooling has been made available, and will produce a static non-electronic prop that’s light in weight due to casting the rifle hollow.

**Neither electronics nor a carry strap are included. Details for purchasing and installing simple electronics with modification of the phaser rifle are at Page 6 of the instructions.**

**Modifications to make a *Nemesis* rifle are not covered in this kit or instruction book.**

*Optional instructions not strictly necessary for the completion of the basic rifle prop are in blue italics.*

## BASIC INVENTORY:

### Parts List:

Hollow-cast "round-nose" phaser rifle casting  
 Buttstock carry strap cover  
 Scope with scope bottom cover  
 2 force-setting buttons  
 Clear target sight block  
 Orange scope detail  
 Scope flashlight reflector (resin casting)  
 Metal front carry strap loop  
 Power display and target sight graphics  
 Red transparent plate for left side  
 Additional left side plate for  
     optional electronics installation

### Hardware included:

6 @ 2-56 x 3/16" screws  
 4 @ 4-40 x 1/2"  
 3 @ 0-90 x 1/8"  
 2 @ 5/8" wood screws

### Tools and Supplies needed:

Sandpaper (220-320 rough grit, 400-600 finish grit)  
 Auto body spot  
 Putty  
 Bondo plastic filler or similar  
 Cyanoacrylate (CA) glue with glue accelerator  
 5-minute epoxy  
 Drill with 3/32" bit  
 Countersink bit  
 Masking tape (blue painter's tape recommended)  
 Small hobby paint brush  
 Small Philips screwdriver

### Spray Paints needed:

Primer (sandable-type recommended)  
 Plastikote 7173 or medium metallic gray equivalent  
 Plastikote 7179 or darker gunmetal metallic gray  
     equivalent  
 Semi-flat black  
 Metallic silver or chrome aluminum

### Optional Parts (not included):

Carry strap (may use plain black 2" seat belt  
     webbing screwed onto the rifle or a retractable  
     seat belt assembly -- the original used was the  
     "Superior" #46-2050B replacement seat belt,  
     modified to fit in the rifle stock -- other retractable  
     belts or mechanisms may also work as the original  
     belt mechanism may no longer be available)  
 1 @ 1 3/4" and 1 @ 1/4" "Chicago" two-piece post  
     screws (available at hardware and leather supply  
     stores)  
 Washer(s) for carry strap loop  
 Silver metal tape for scope parts

### Optional Tools:

Dremel moto tool with assorted bits  
 3/64" or a #56 drill bit  
 Taps in 4-40 and 0-90 threads

### Other Paints needed:

Semi-gloss or gloss black hobby jar paint  
 Hobby jar (Buff) or spray can light beige or off-white  
     (Krylon Almond or Ivory or similar)

### IMPORTANT NOTE:

The general rule of thumb whenever you are gluing anything to painted parts is to scrape away any paint in your gluing joint (without it becoming visible beyond the glued part!), as parts glued to paint won't stick as well -- resin-to-resin is the strongest.



## PREPARATION AND ASSEMBLY:

*Wash all your resin castings using soap and water to clean off any traces of mold release which might interfere with the eventual paint finish.*



### Step 1:

Start by sanding all mold lines and other spots from the edges of the castings [Fig. 1]. Test fit the scope, and the two other scope parts, make sure they work well. Also try the fit of the carry strap cover.

**A carrying strap is not necessary for the ultimate finished look of your phaser rifle prop, and one is not included in this kit.**

*If you plan to install a carrying strap, note that because of the hollow-cast construction, any screws you put in might be going into a thin wall, and will be a weak point if your strap is anything other than a decorative detail. Regardless if you're installing a regular length or a retracted dummy strap -- or a functioning retractable one, you will want to make all the preparations for its addition **before you paint the rifle**, and that also goes for any modifications you wish to make to the sight or rifle for electronics.*

*Details for installing both strap and electronics begin at [Page 9](#) of the instructions. If you plan to install either a strap or electronics, skip to [Page 9](#) and then come back to Step 2 for painting.*



### Step 2:

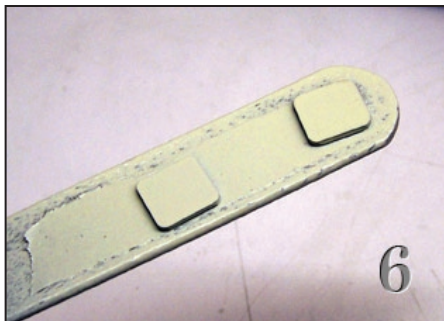
Prepare the resin parts by sanding the surfaces to roughen them up slightly, fill in any objectionable spots or bubbles with spot putty or bondo [Fig. 2 and 3], then sand smooth and spray all of the rifle with primer -- repeat if you find any flaws you missed previously [Fig. 4].

**Step 3:**

Drill the four 3/32" holes in the left side rifle stock for securing the carry strap cover -- there are 4 divots for location. A tap is not necessary for screwing the 4-40 x 1/2" screws, but it may come in handy. Drill the countersinks in each of the holes in the carry strap cover, test the screws so they appear as flat as possible, and don't go too deep!

**Step 4:**

Primer, then spray in metallic silver or chrome aluminum the scope flashlight reflector, then set aside [Fig. 5]. Also primer and paint in black the carry strap loop.

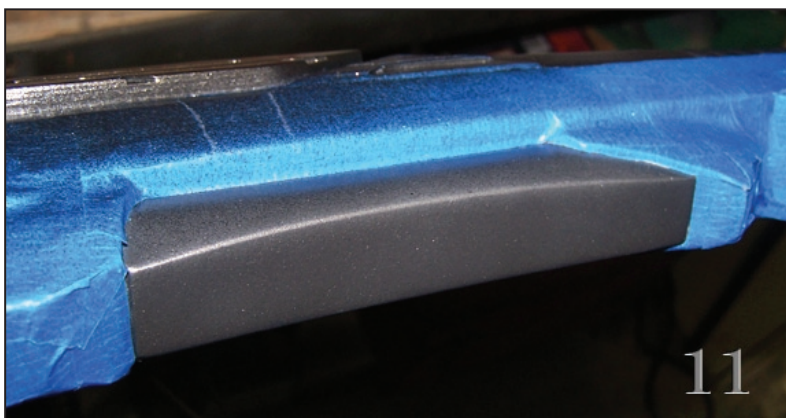
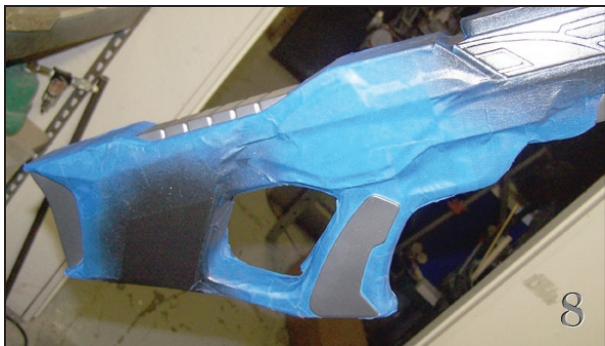
**Step 5:**

Primer and paint in light beige/off-white the two forcesetting buttons [Fig. 6].

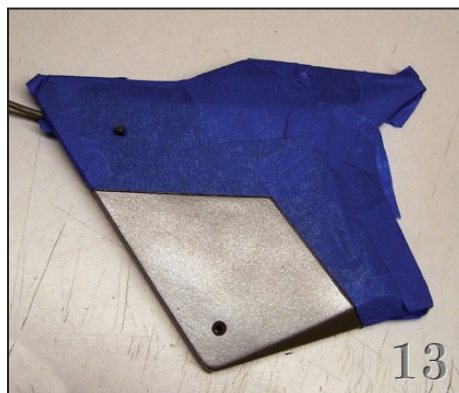
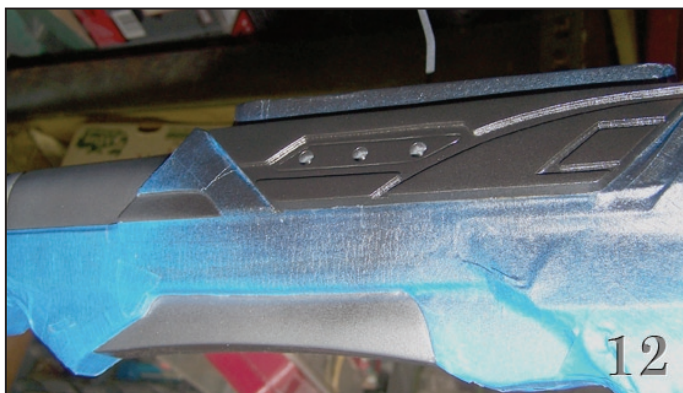
**Step 6:**

When ready, paint the entire main rifle body, scope, and carry strap cover in Plastikote 7173/medium metallic gray or its available equivalent [Fig. 7].



**Step 7:**

When dry enough to where you're sure masking tape won't lift paint off (you may be waiting a few hours or even until the next day in between painting the different colors -- taking your time with this step makes all the difference in the world in achieving a professional-looking prop), mask where shown in Figs. 8 to 13 to expose all of the contrasting color panels. Spray in semi-flat black the handgrip panels, the "foregrip" area underneath in front of the trigger guard, the large squared detail on top of the body, the rear shoulder stock region, and the front barrel.

**Step 8:**

When the black paint is dry, mask over the black areas, leaving the other areas exposed (the lower front of the carry strap cover and its opposite side on the right, the two middle trapezoidal areas, and the small trapezoid regions left and right in between the larger side detail and the black barrel as shown in **Figs. 12 and 13**). Then spray in Plastikote 7179/darker gunmetal metallic gray. Remove all masking when dry and set aside to let the paint cure out.



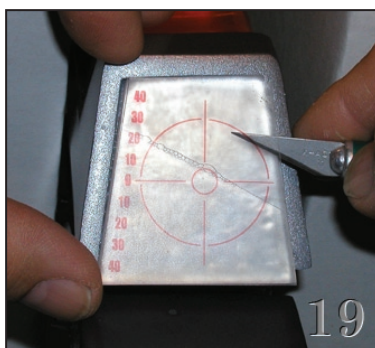
**Step 9:**

Paint with a brush the sunk-in detailing on the two large inverted trapezoids on both sides of the rifle [Fig. 14]. Apply epoxy to the red plastic cover to the left side, covering the three holes [Fig. 15], *(or LEDs if you are lighting up this detail).*

**Step 10:**

Scrape the paint from the back of the scope where the target block is glued to. Note that the block will fit into its space only one way due to its angles. Epoxy or CA glue the block to the sight [Figs. 16 and 17].

**Note:** if you're not making the scope light up with electronics, you may use a piece of silver metal tape or white paper or plastic on the inside surfaces of both the clear block and orange top to make them appear to light from within.

**Step 11:**

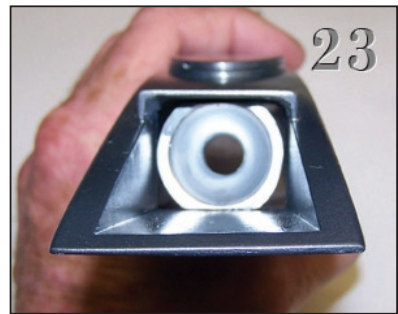
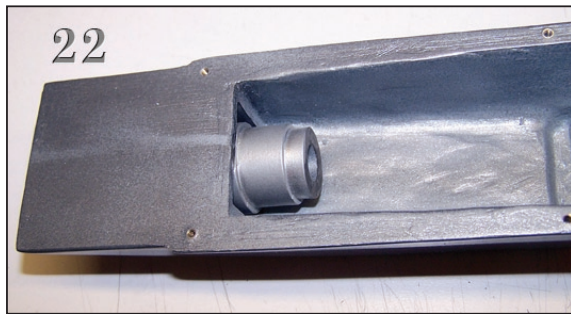
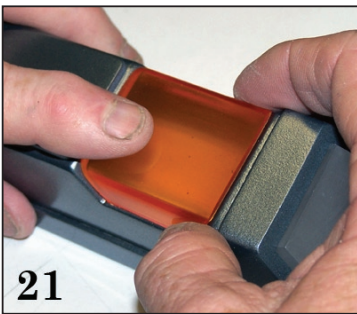
Cut out the vinyl target sticker with an X-acto knife and a ruler, or a pair of scissors, and apply to the clear block. It is recommended you use a mild solution of soap and water and a Q-tip for application, this allows you to position the sticker exactly and also to eliminate air bubbles behind the sticker [Figs. 18 and 19]. Avoid getting water on the outside of the sticker if you can -- while there is a protective matte finish on the sticker, it is possible it could get damaged.



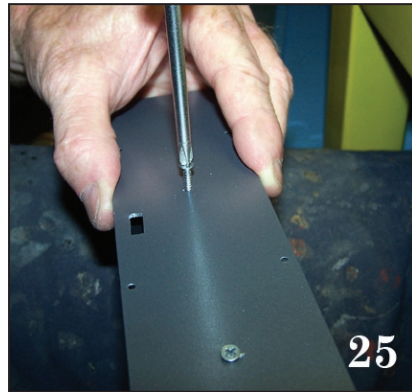


**Step 12:**

Apply the paper bargraph graphic, and glue on the two force setting buttons [Fig. 20].

**Step 13:**

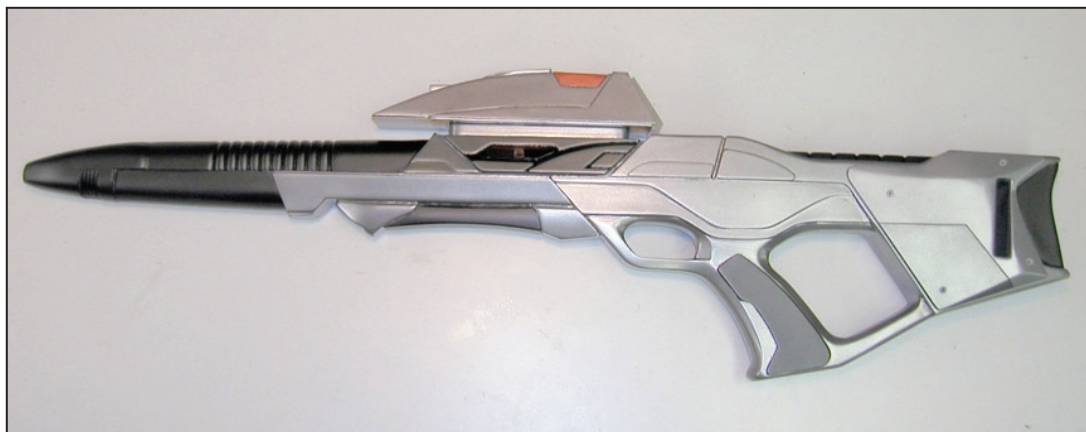
Glue the orange scope detail to the top of the scope using epoxy or CA [Fig. 21]. Also glue the flashlight reflector to the front of the scope [Figs. 22 and 23].

**Step 14:**

Place the scope's bottom plate on the rifle. Be sure it's straight to the main body and with the back edge of the plate directly over the angular corner at the top of the body behind the raised scope mount oval [see Fig. 26 and elsewhere], with the slotted hole to the left side and the smaller end to the front. Hold in place and drill two screw holes (or one at a time) [Fig. 24], then screw the plate in place with the two wood screws [Fig. 25]. Screw the scope onto the plate using 6 @ 2-56 x 3/16" flat head screws [Fig. 26].

*Glue may be used for added strength along with the screws for the scope, but it will make it very difficult to take the scope apart without damage if you want to install electronics later.*

Screw the carry strap cover on the stock using the 4 @ 4-40 x 1/2" screws.



The basic First Contact Phaser Rifle is finished!



### **IMPORTANT NOTES:**

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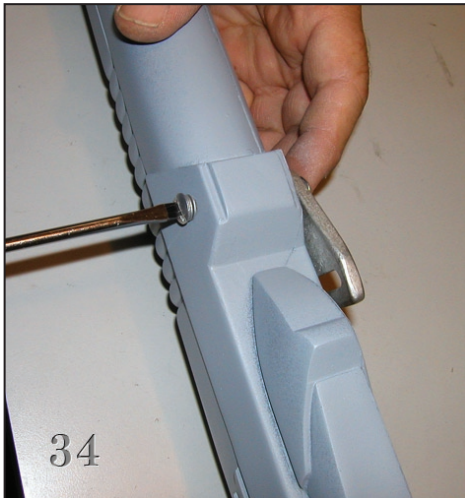
## OPTIONAL STRAP INSTALLATION [before painting]:

*The following options are for more experienced prop and model makers, which should be completed before painting...*



### Step 1:

Probably the best way to secure the front end of the optional strap on this rifle (either retracting or dummy) is to use a two-piece post screw (aka Chicago screw) that's 1/3/4" in length, which will be enough to go through the rifle and allow the carry strap loop to hang on the exposed post with swivel action. Drill a hole the diameter of your post through both left and right sides of the rifle where the strap will go, or cut in a much bigger hole with your dremel tool and fill in the local cavity with bondo. Then sand smooth and drill your post hole -- which will make that entire area stronger. You will end up with an exposed post head or screw on the right side which can be left as is or painted to match, and both post and strap loop can be added later after painting **[Fig. 33]**.



### Step 2:

Insert one end of the strap in the carry strap cover (inside-to-out) and screw to the inside of the buttstock cavity, or install your retracting mechanism, then screw the cover onto the rifle **[Fig. 34]**. If it is a retractable, be sure you don't lose the loose end into the mechanism. Loop the other end of the strap around the strap loop and secure with a 1/4" max. length Chicago screw as was originally done, or you can use glue such as Barge contact cement or by sewing or pop-riveting it...preferably before you screw the strap loop on, as it can be difficult enough to work with the strap while on the painted rifle, let alone with an already attached front end.

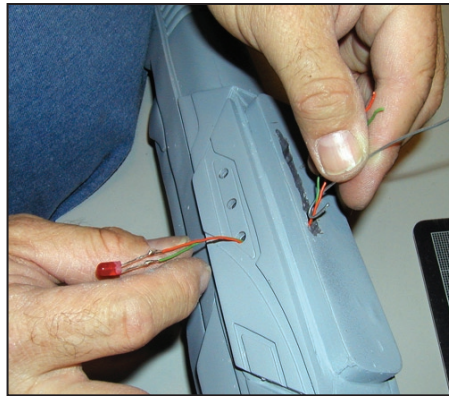


## OPTIONAL ELECTRONICS INSTALLATION [before painting]:

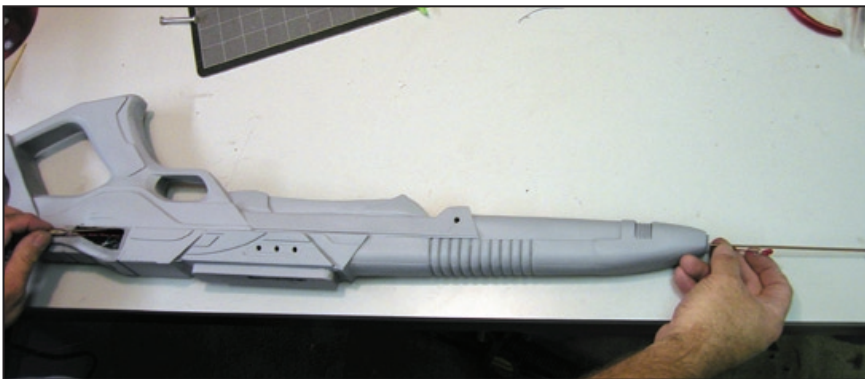
*The following assumes you have a minimum rudimentary knowledge of wiring electronic circuits to connect up LED lights with a switch and a battery power supply...*



*Electronics for the rifle originally was done for the scope and the force indicator bargraph; there was no light for the emitter nor was there a trigger. The flashlight reflector for the scope can have one or more white LEDs added to make it shine out like the original flashlight, or you can substitute a real flashlight head if desired. Glue on translucent diffusion sheets or plates over the existing voids and light these from within with LEDs. These can all be activated with a slide switch which is show accurate -- there's a place in the laser cut plate for the switch; you will have to make room in the scope body for whatever size slide switch you choose to use.*



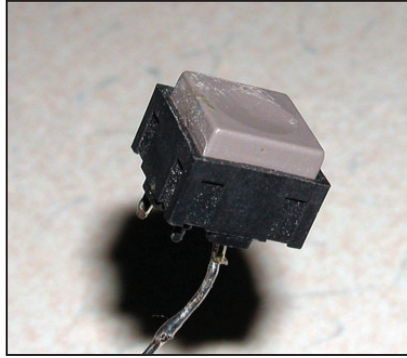
*If desired, you can also light up the red plate on the left side of the rifle, using 3 red LEDs wired to the scope circuit -- use a wire hook to pull wires out from inside the rifle. The 3 LEDs should have the bottom flange step sanded off to make it easier to install.*



*You may also put in an emitter LED and a trigger; for this one, be sure you use enough wire, and pull through using at least a 2 foot length of 1/8" metal rod -- it's possible you won't be able to get a wire through because of unavoidable blockage from casting or the strap installation.*

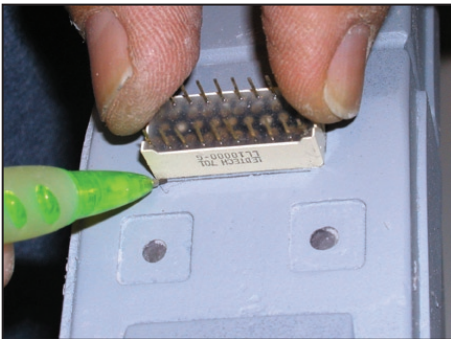






A push button trigger may be installed (originally it was a flat “tactile” switch): dremel in a hole where the trigger goes and glue a wired trigger in place.

(Note that on original rifles, actual trigger switches were found on the “square-nose” rifle used only in First Contact, and this only turned on the scope lights -- there were no emitter lights nor were there any trigger switches on the round-nose or the twin-handled “exo” rifles. The switch used is pictured above.)



The bargraph (available at online stores or certain electronic supply or surplus stores) has its own power source with a separate switch; and all that's needed for a light-up display is a 5-count circuit board like those used for t-shirts and so forth, a 3V power supply, and a slide switch. The bargraph should be wired so it counts from the center-out, or set for “random” flashing using your circuit board -- this simulates the “rotating phaser frequencies” to keep the Borg drone defenses guessing. Sources for the circuit board include: the original which was available at Michael's as the “Darcy” brand tshirt LED counter, any cheap electronic toy “ray gun” or similar that has a flashing 5-sequencing light circuit, etc.

The bargraph on original rifles is a 10-element LED block with 5 LEDs each of red and green -- Radio Shack sold this one in the past, but it may no longer be available there. Any of the other color bargraphs may be substituted if you can't find the half red-half green version. Mark where the bargraph should go on the rifle with a pencil, and dremel out the space until you can fit the bargraph in place --pre-wire the bargraph before final installation!

Included in the kit is a plate to replace the one on the left side below the bargraph, this may be secured with the included 3 @ 0-90 screws, so you'll need to cut a hole in the left side smaller than the laser cut plate, completely removing the remaining raised detail. Drill the 3 mounting holes with a 3/64” bit, or a #56 bit. You should secure the battery pack so it's not hanging loose in the rifle (there's enough room for a 2-cell AAA pack or smaller), you may want to add plastic to make a interior box and/or use soft foam stuffed in there. The slide switch is then secured to the plate, which is then screwed to the rifle. The screws should thread into the resin so threading the holes with a tap is unnecessary.

The two force-setting buttons are not functional on original rifles, but of course you can make them work if you want.

