



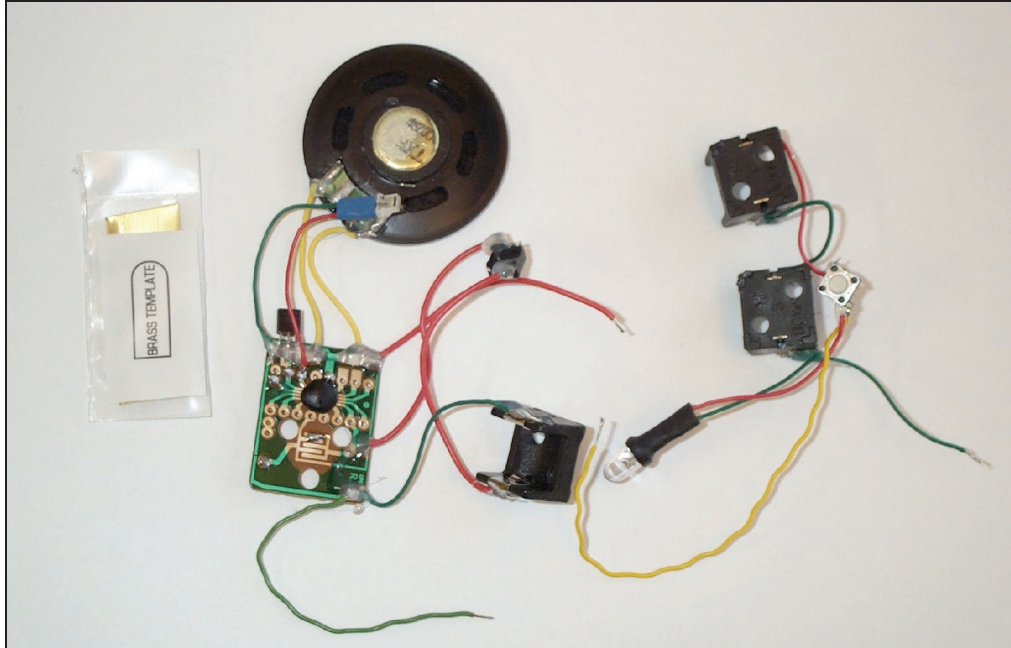
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#PRP1742E

***Star Trek*™ TOS Phaser 2 Electronic Upgrade Manual**



- **WARNING:** The small magnet used in this kit could interfere with the operation of pacemakers, hearing aids, etc. Please use caution when handling.
- This electronic upgrade requires some prop building and soldering experience.
- Please read this manual completely and familiarize yourself with these electronics before attempting to install this upgrade kit.
- This upgrade may require cutting and/or attaching wires with solder.
- Do not attempt to modify the electronic circuits in any way.
- This manual is only intended as a guide for the installation of the electronics. Please use the *Star Trek* TOS Phaser 2 Prop Kit Manual for prop assembly
- Requires 3 LR1130 batteries for hand phaser and 2 CR1/3N batteries for pistol mount.



TOOLS REQUIRED:

- Dremel or drill tool
- Soldering iron
- Scissors or metal wire cutter/stripper
- Hot glue gun and foam tape may be necessary depending on method of assembly

**EXAMINE ALL PARTS AND READ THIS MANUAL COMPLETELY
BEFORE BEGINNING ANY WORK:**

These instructions have been written so that when followed correctly, your electronics upgrade will go smoothly and the communicator will look and sound just like the prop on the show upon completion.

The wires are color coded in order to minimize any confusion.

Always match up wire colors (i.e. black/black, red/red, etc.) unless otherwise stated.

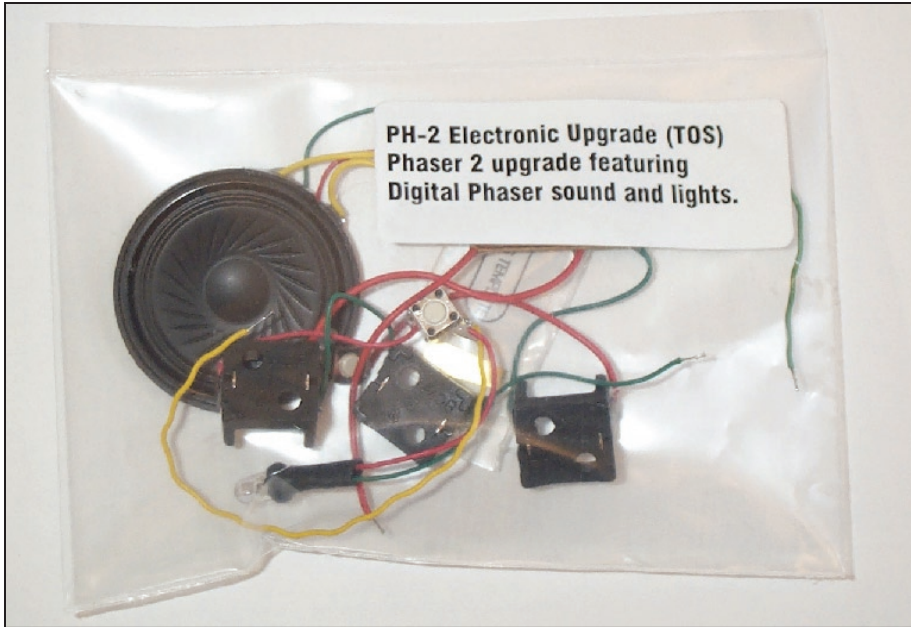
Do not solder or modify the electronic circuit board in any way.

Begin by taking the electronics out of the package and lay them out similar to the picture above.

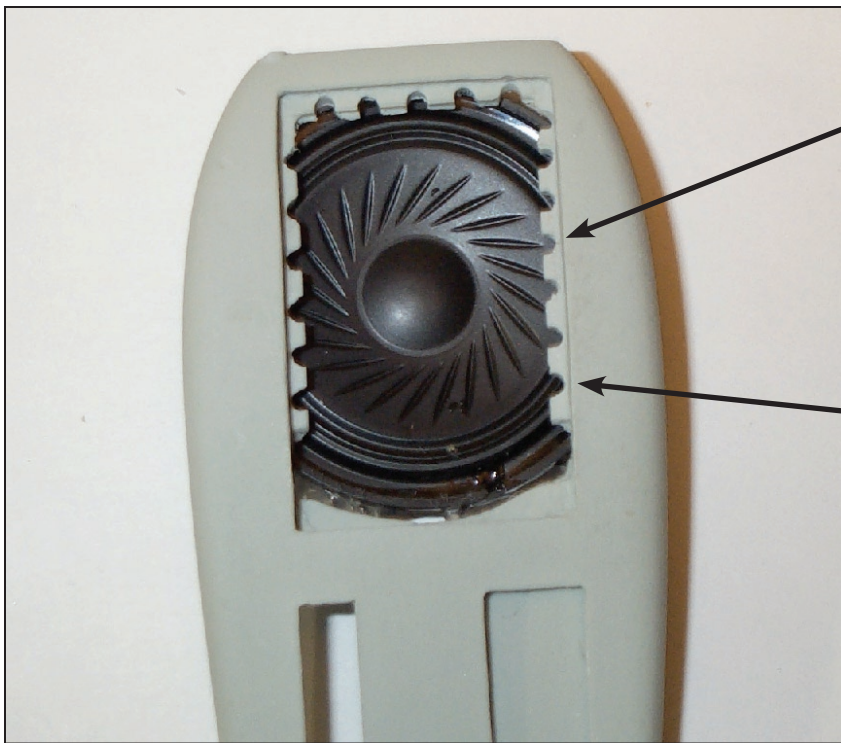
To start with, it is best and easiest to prepare for installing the electronics by drilling, cutting, or filling any required holes BEFORE doing anything else. That way you will be familiar with a plan, and also each installation step can be done without having to stop and drill or cut at those points during the build up.

The following steps and pages will go into more detail for electronics installation.

Use the prop building instructions as the “main” source for prop assembly, in conjunction with steps from these manual pages.



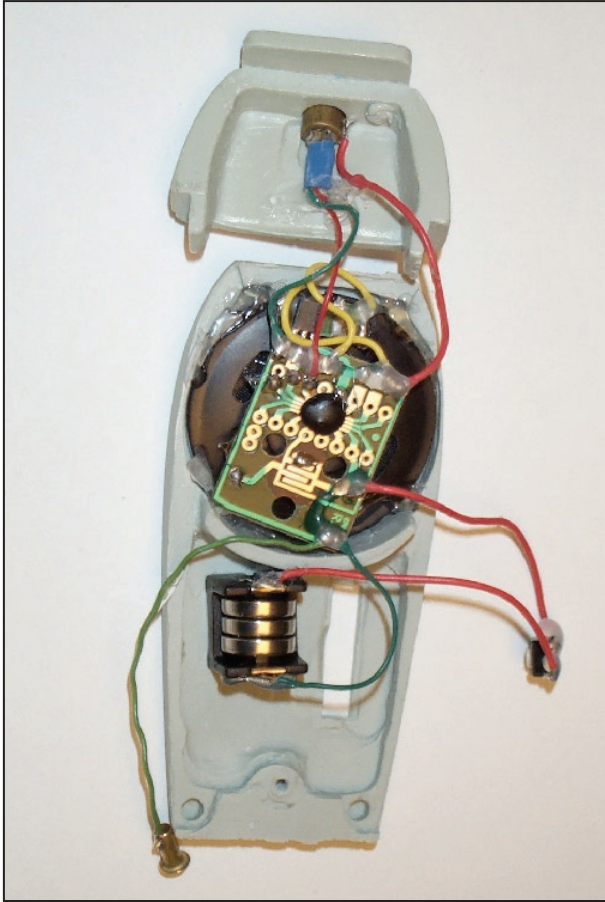
Step 1: Test the electronics using 3 LR1130 button cell batteries or equivalent. Please note the proper polarity of the button cells. The battery holder is marked inside with a "+" and "-" to orient batteries properly. Cup the speaker with your fingers and press the small trigger button to hear the digital phaser sound.



Holes for venting the sound

Holes for venting the sound

Step 2: Using a dremel tool, carefully drill "holes" to vent the sound. When the Aspirator Grill is in place, the holes will be almost completely covered.

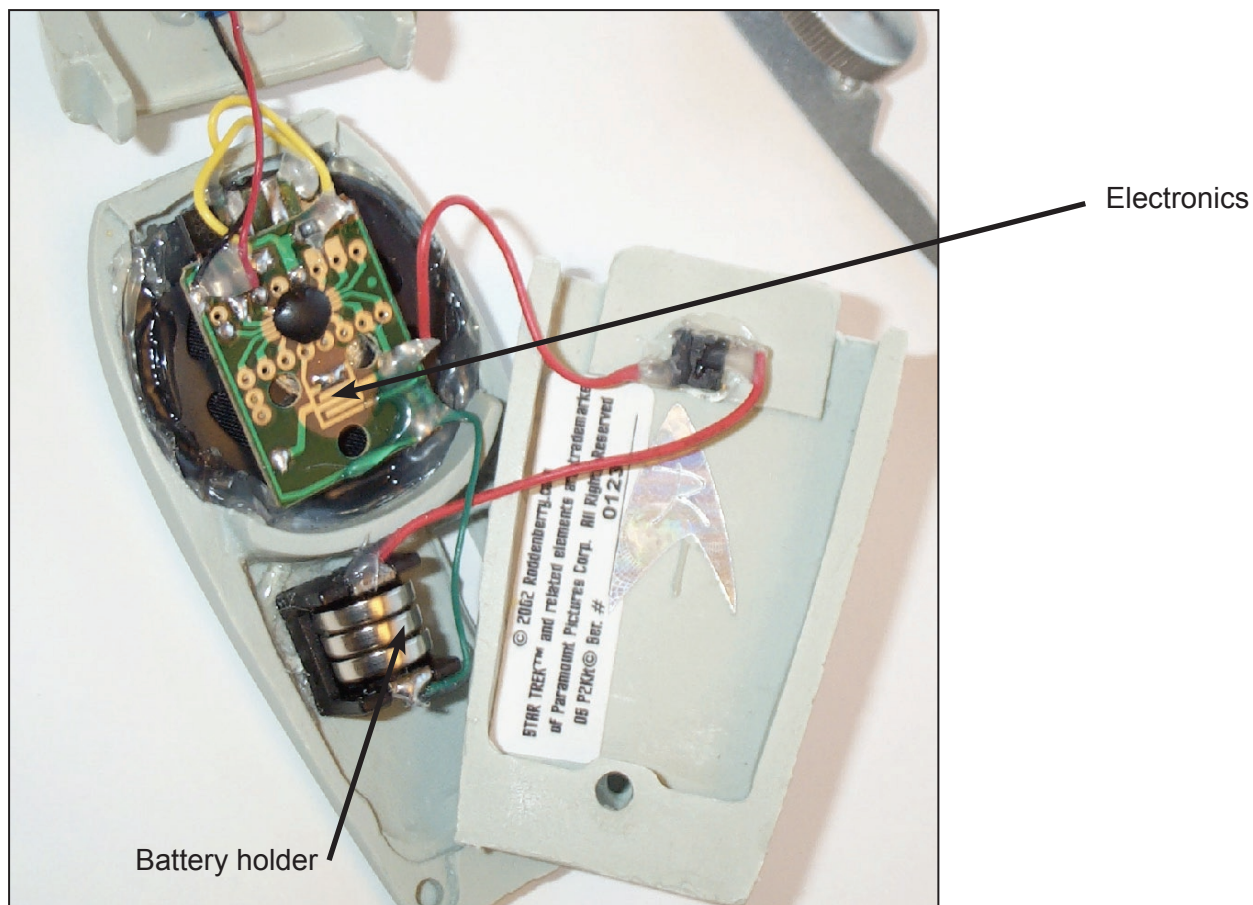


Step 3: Hot glue the speaker in place. NOTE: you can place metal side rails on before gluing.

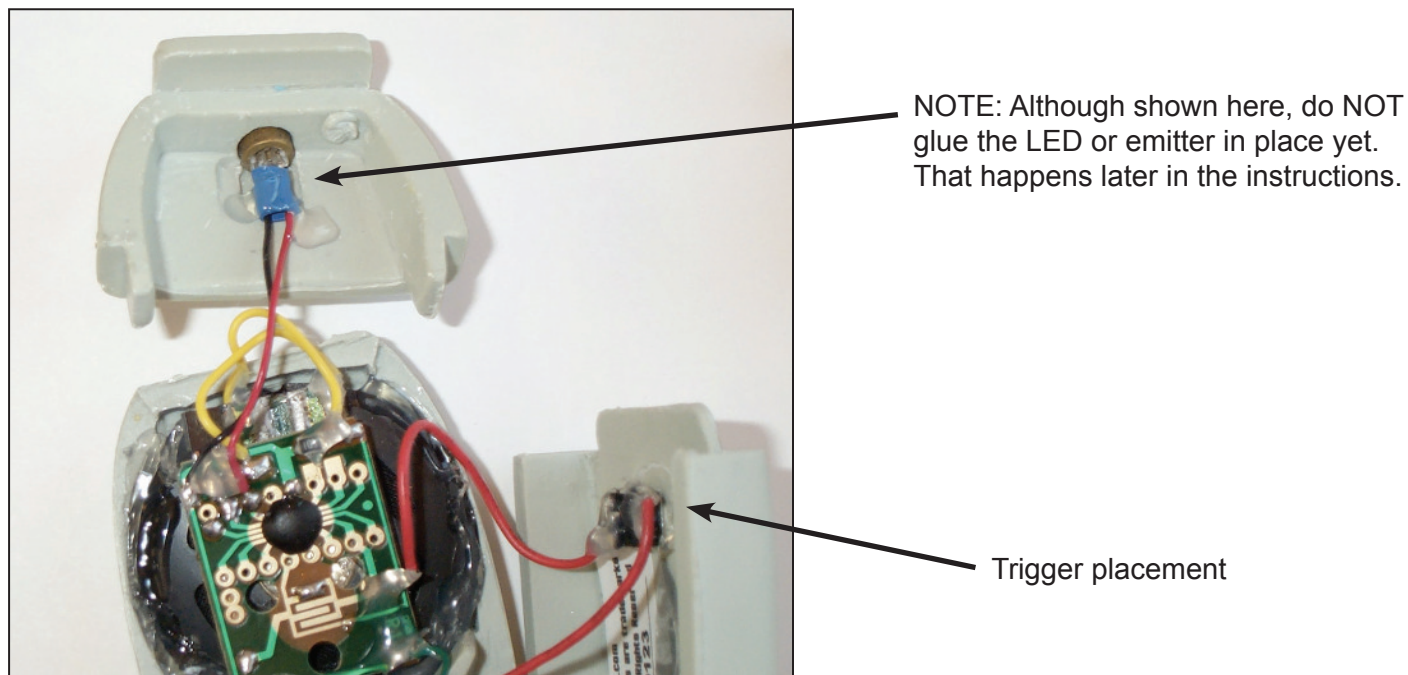


Hole for the trigger switch.

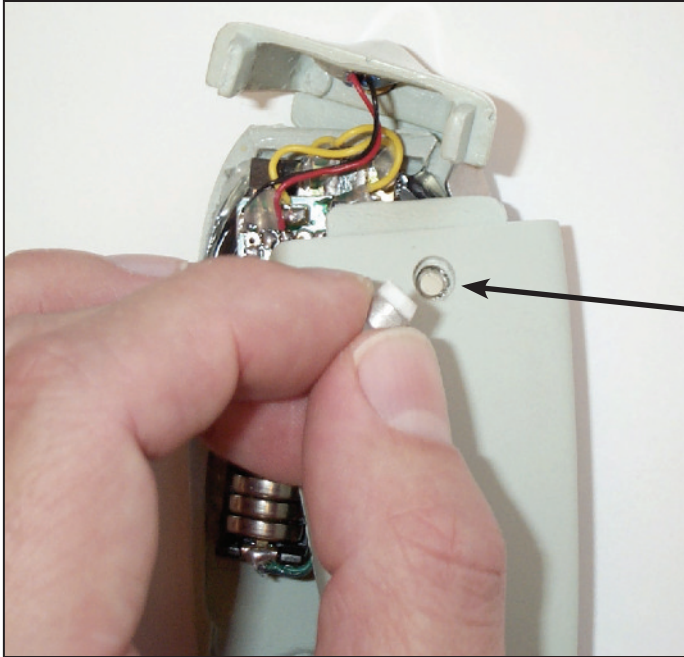
Step 4: Drill a hole for the trigger switch.



Step 5: Glue the battery holder and electronics in place.



Step 6: Mount the switch using a strong glue, but be careful to glue the switch case only to the phaser lower body.



The trigger switch is visible through the hole in the body.

Step 7: Mount the metal switch top (from the Phaser Kit) to the switch. You can use foam tape, or you can glue with Goop or Rubber Cement. Be very careful not to get adhesive anywhere except the switch activator top. If using foam tape, be sure to use a heavy duty tape. Cut as pictured and attach. This step can be done toward the end of assembly.

NOTE: Place trigger button/switch top *AFTER* painting.

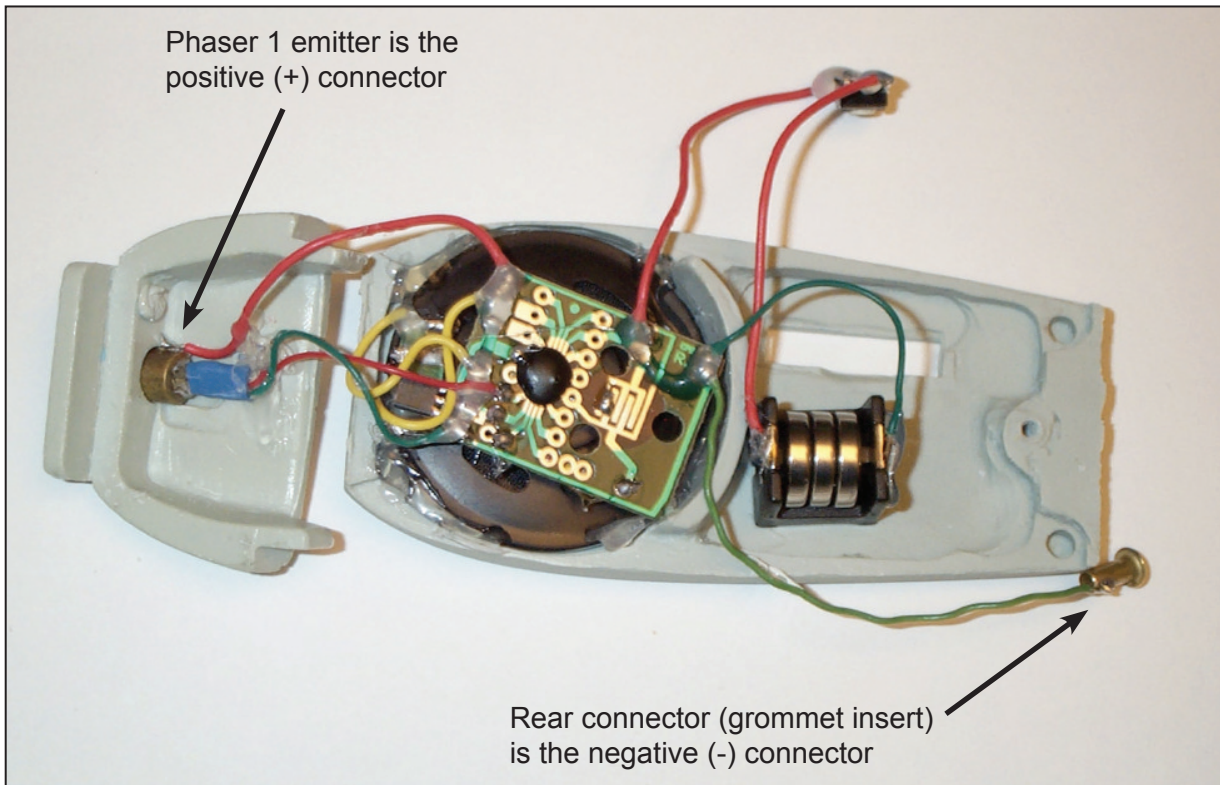


Step 8: The front emitter connector is made from the supplied piece of brass. Bend the cut piece of brass to resemble the photo on the left (1/4" from the end of the piece).

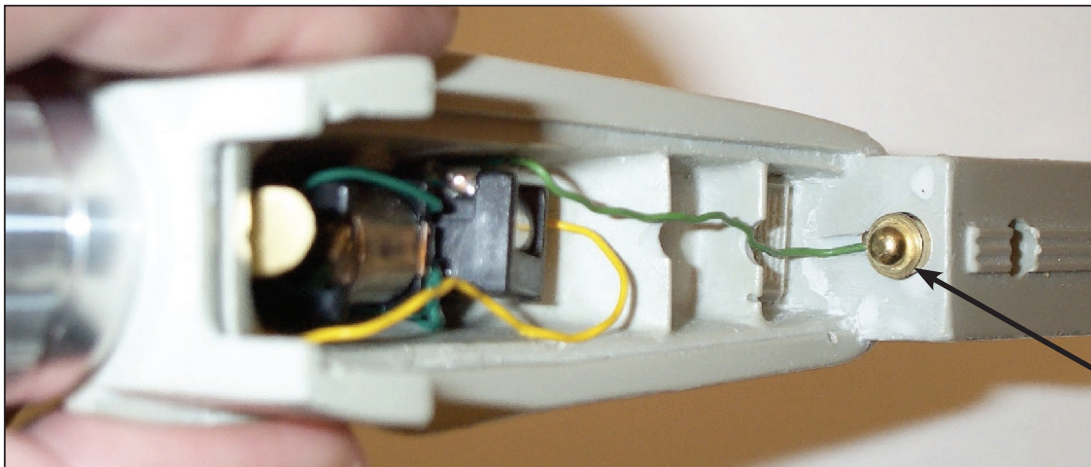
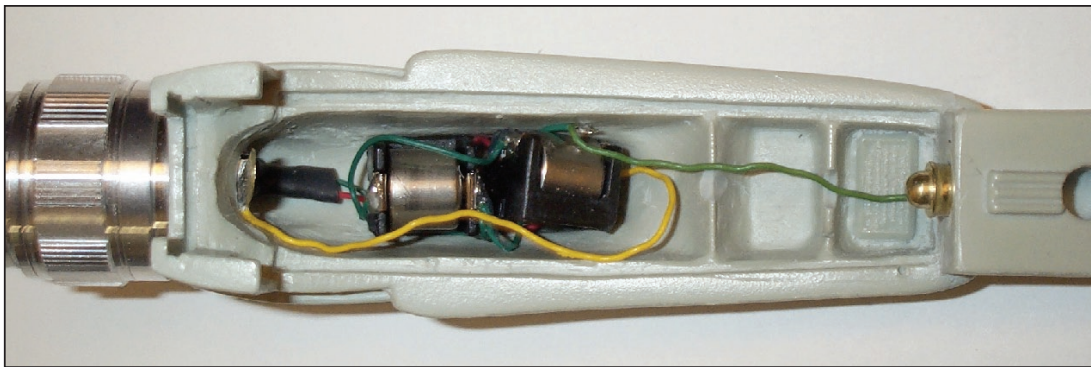
File a "notch" in the Phaser 2's emitter nozzle receiving hole as pictured in the middle photo. Test fire the brass piece to resemble how it is shown in the photo on the right. This brass piece will make contact with the Phaser 1's brass emitter. When completed, the Phaser 2's battery pack will control the electronics. When mounted properly, the Phaser 2's trigger will activate the Phaser 1's digital sound and light.



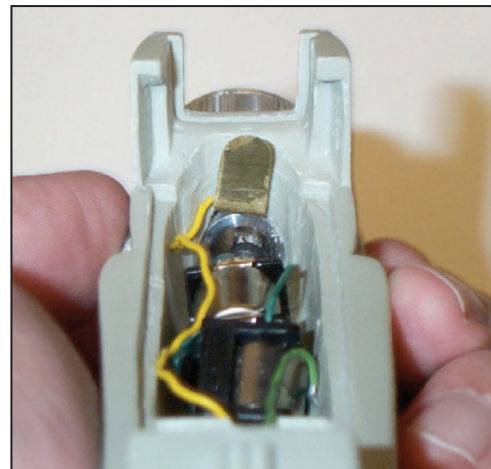
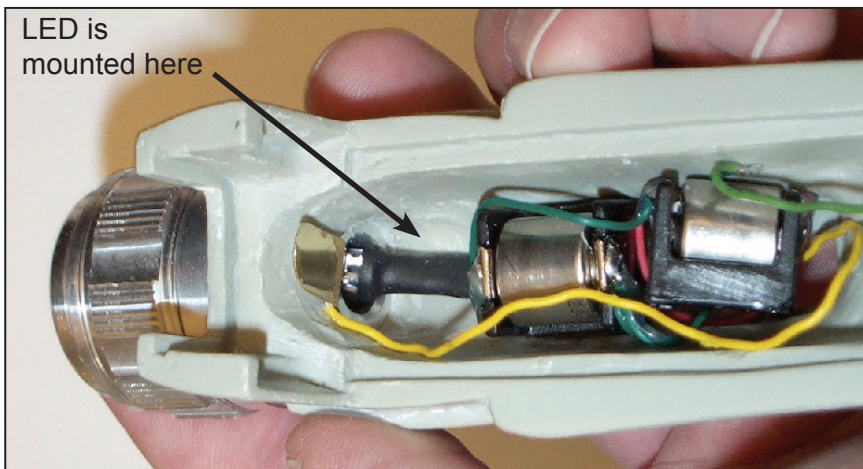
Step 9: Following the Prop Kit's instructions, place the Phaser 2's trigger into the trigger hole. The upgrade activation switch will mount behind the metal trigger. You will need to scratch build a small housing to hold the switch inside the Phaser 2's body. You can use hot glue to hold in place if desired. Using foam tape or glue, adhere the metal trigger to the switch.



Step 10: The Phaser 2 Electronic Upgrade will allow the Phaser 1 to be separated from the Phaser 2's pistol mount and still function. This is accomplished by using connectors that are supplied in the Phaser 2 Kit. Solder the red (+) lead coming from the circuit board to the brass emitter. Solder the longer (-) lead to the grommet insert. These connections will power the Phaser 1 remotely from the pistol mount.



Step 11: Strip the tips and solder the piece of loose wire (supplied in the Upgrade) to the rear bullet catch. Solder the unused end of the loose wire to the green wire coming from the battery holder assembly. This is done to (hopefully) make inserting the bullet catch a little easier. You are just connecting the bullet catch to the battery holder's negative side.



Step 11: Solder the longer wire coming from the (+) side of the battery holder assembly to the brass piece you've cut from the supplied template.

Mount the Phaser 2's LED so the light will show through the emitter nozzle.

The following page shows photos of the Phaser 1 mounted into the Phaser 2's pistol body with the brass piece properly installed.

