



Connecting a Warp Feed to an Angel

This step-by-step tutorial shows you how to easily connect your Warp Feed's external input directly to an Angel's trigger. Your Warp Feed will now be activated every time you pull the trigger. The parts you'll need for this modification are reasonably priced and readily available at [Radio Shack](#). So what are we waiting for? Let's get started!





Here are the parts you'll need from Radio Shack:

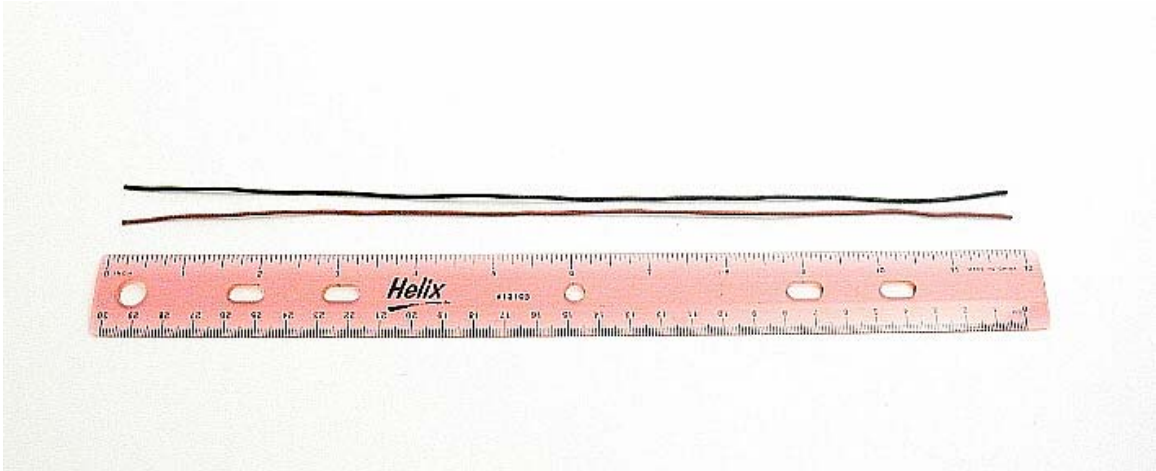
[3/32" \(2.5mm\) Phone Plugs 274-289](#)

[Stranded Hook-Up Wire 22 gauge 278-1224](#)

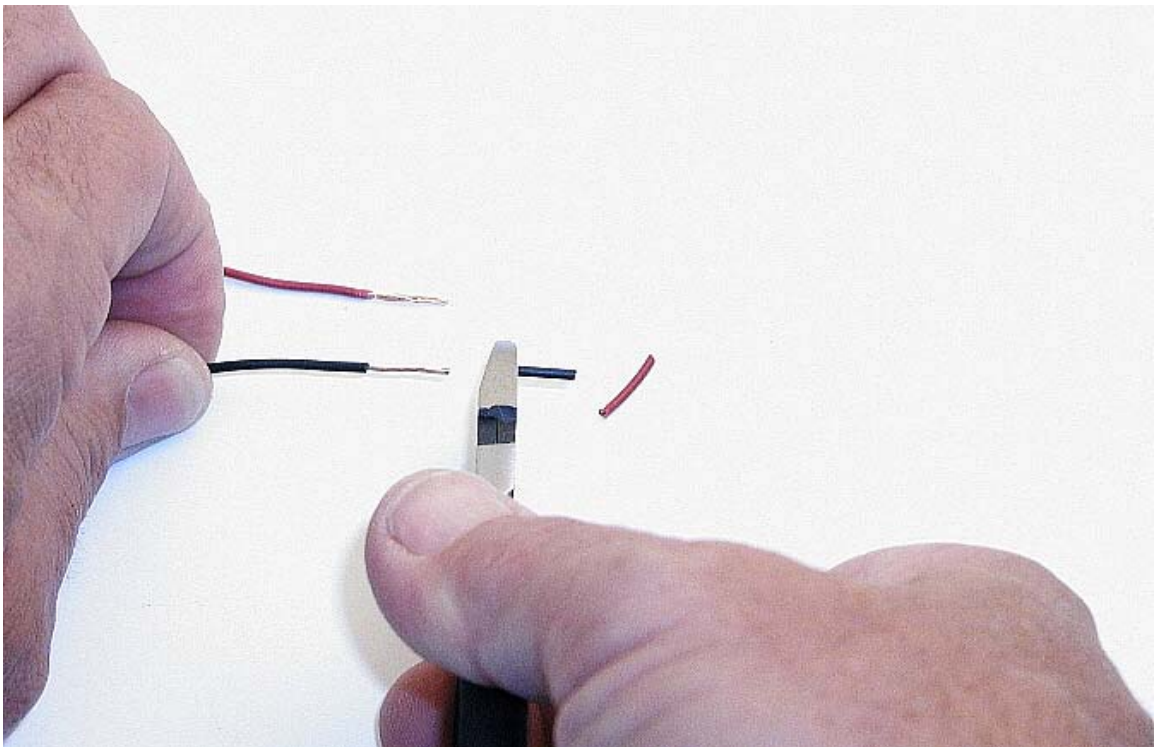
You'll also need the following tools:



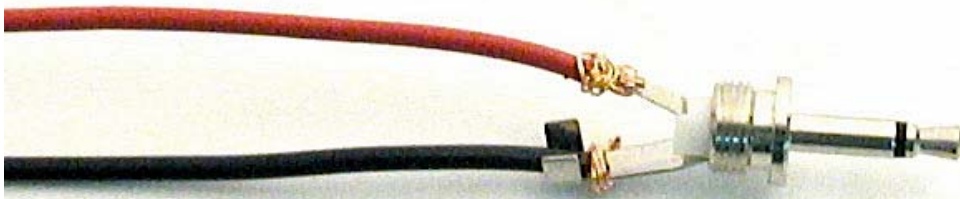
Wire strippers, Needle-nose pliers, 3/32 allen wrench, utility knife, 12 inch ruler.



Cut one red and one black wire, each approximately 12 inches long.

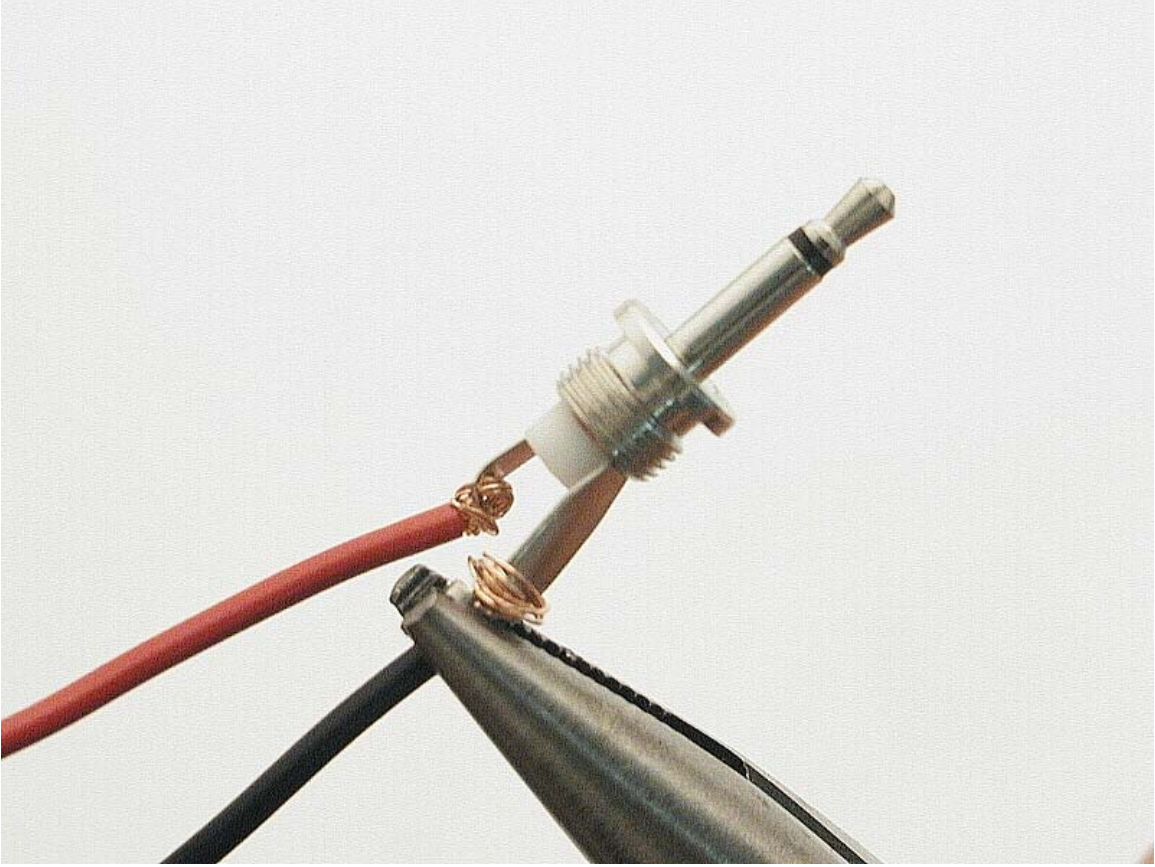


Strip $\frac{1}{2}$ inch of insulation from one end of each wire.

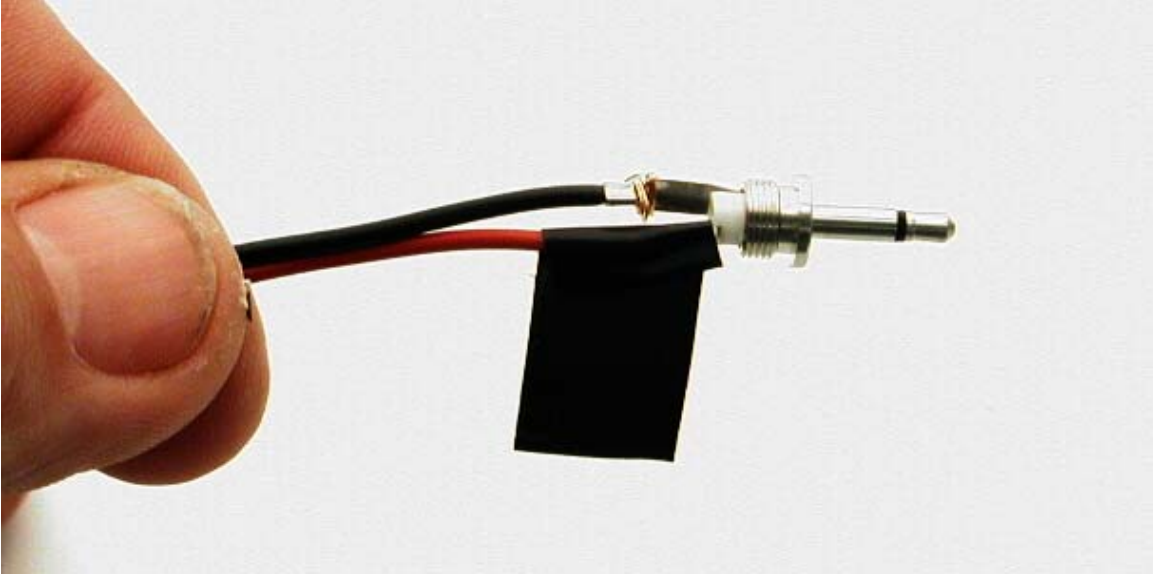


Unscrew the plastic cap from the phone plug and attach the two wires as shown: the red wire to the short (inside) terminal, the black wire to the long (outside) terminal. Feed each wire through its terminal hole and then wrap it around tightly to insure a positive connection.

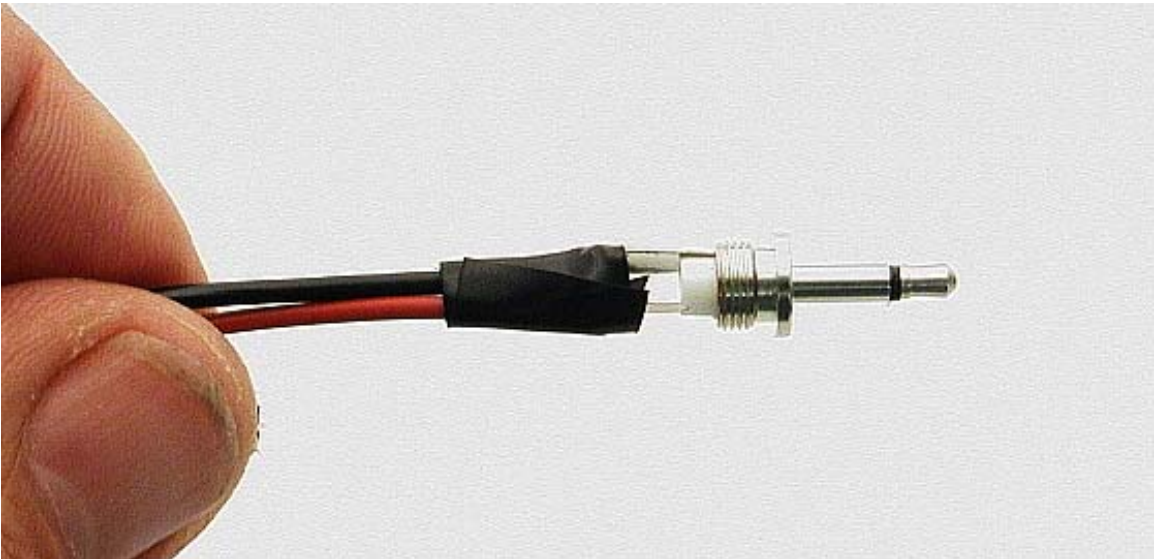
We recommend that these connections be soldered, but adequate results can be obtained without solder.



Now crimp the restraining tab around the black wire.



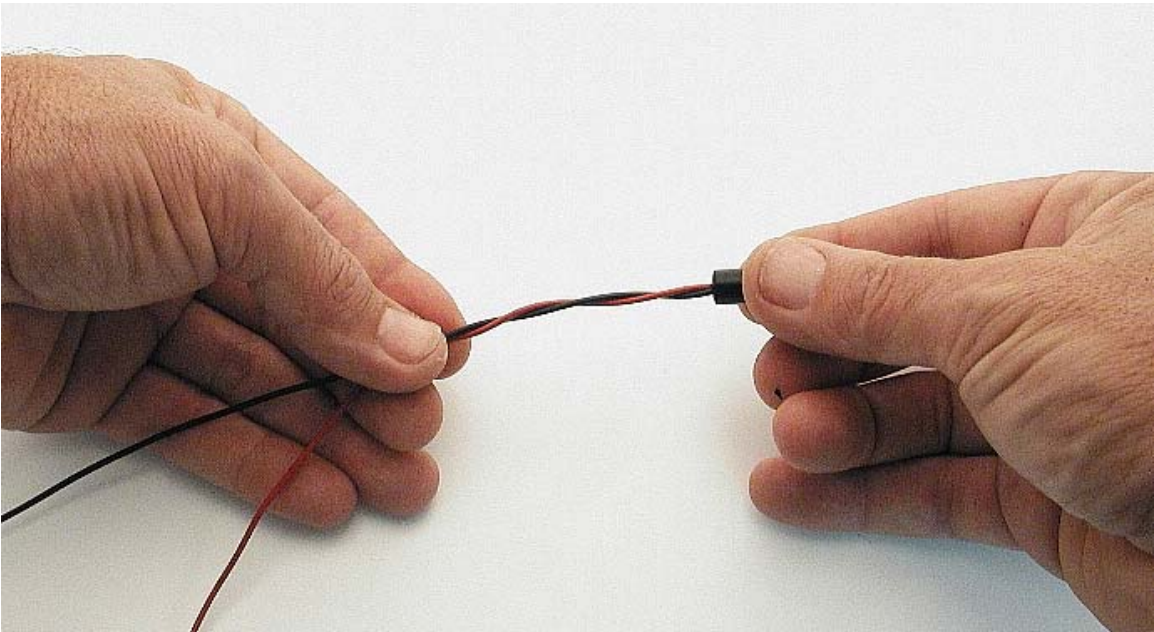
Start a small piece of tape around the inside terminal. The idea here is to isolate this terminal from the outside terminal.



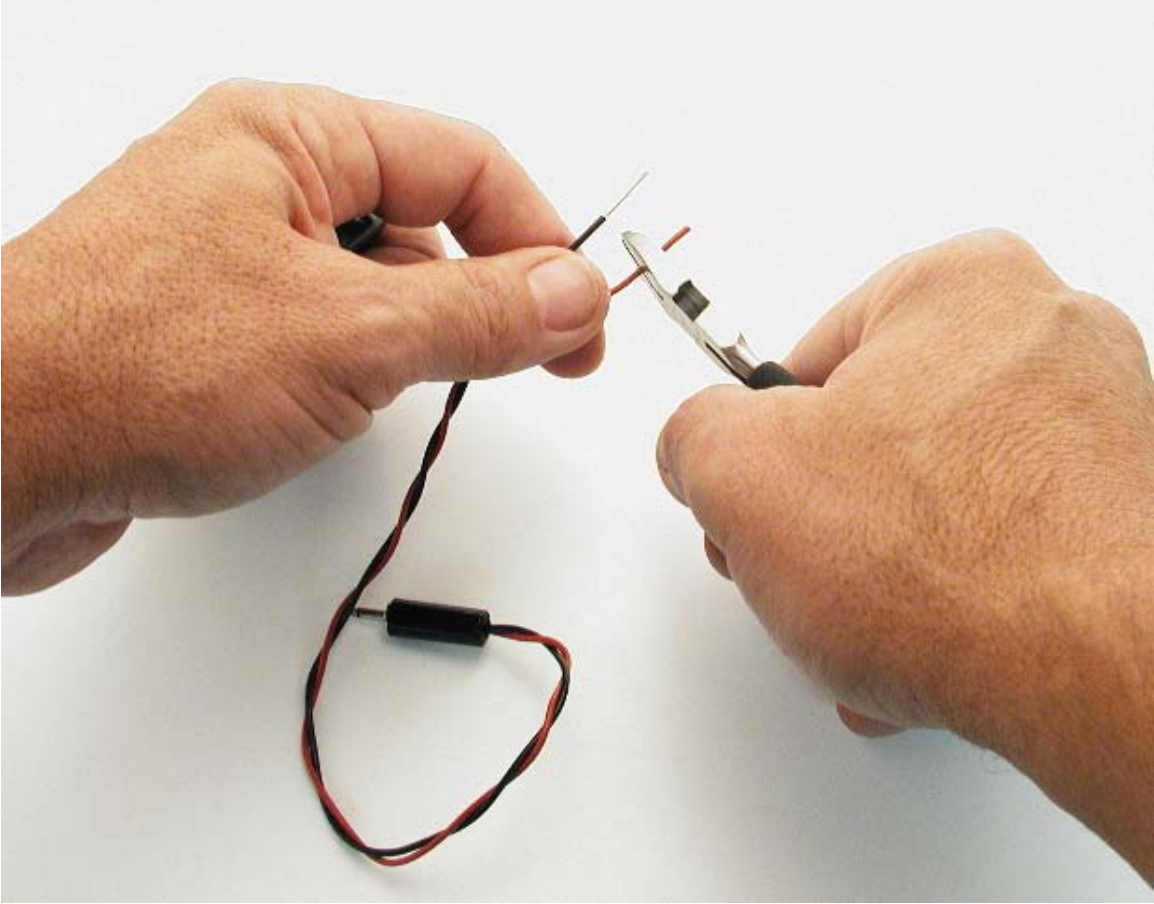
Wrap the remainder around both of them.



Screw the plastic cap back on.



Twist the wires up.



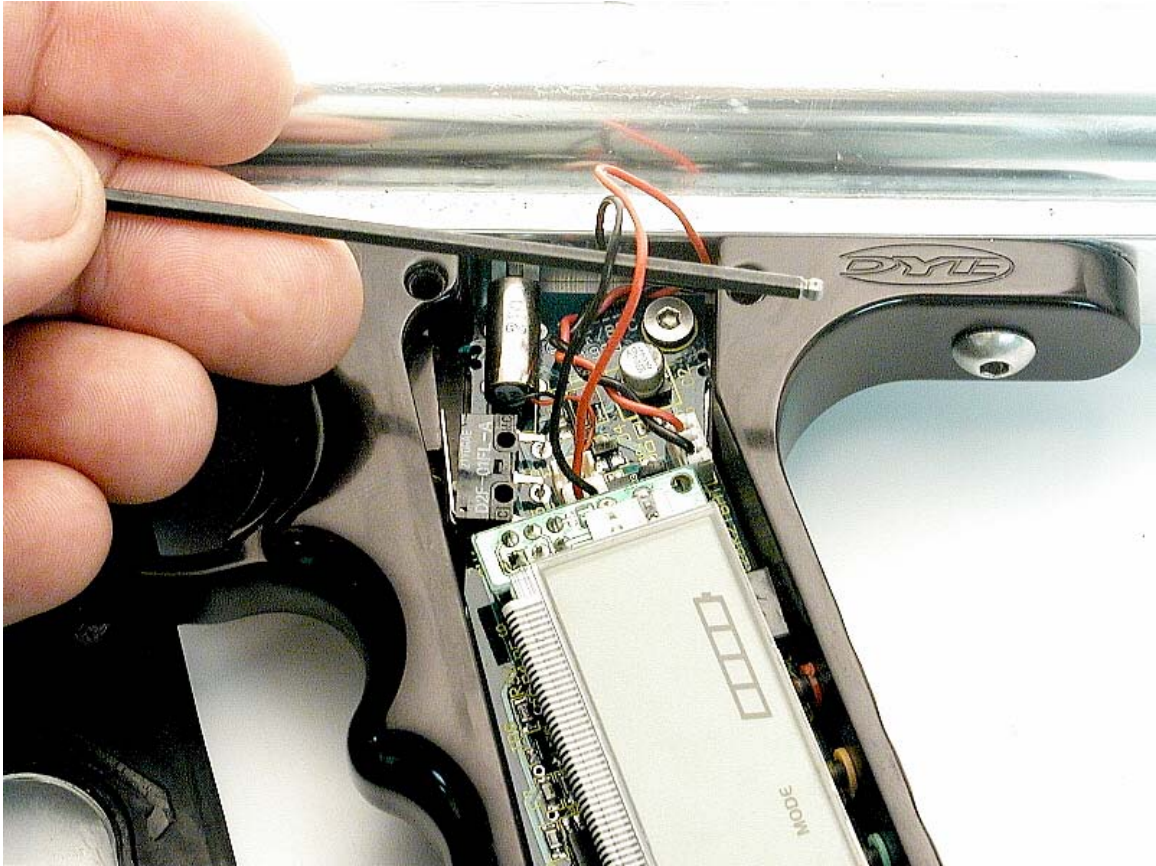
Strip about $\frac{1}{2}$ inch off the remaining ends and set this aside for a minute.



Remove the three screws from the LCD side of the grip.



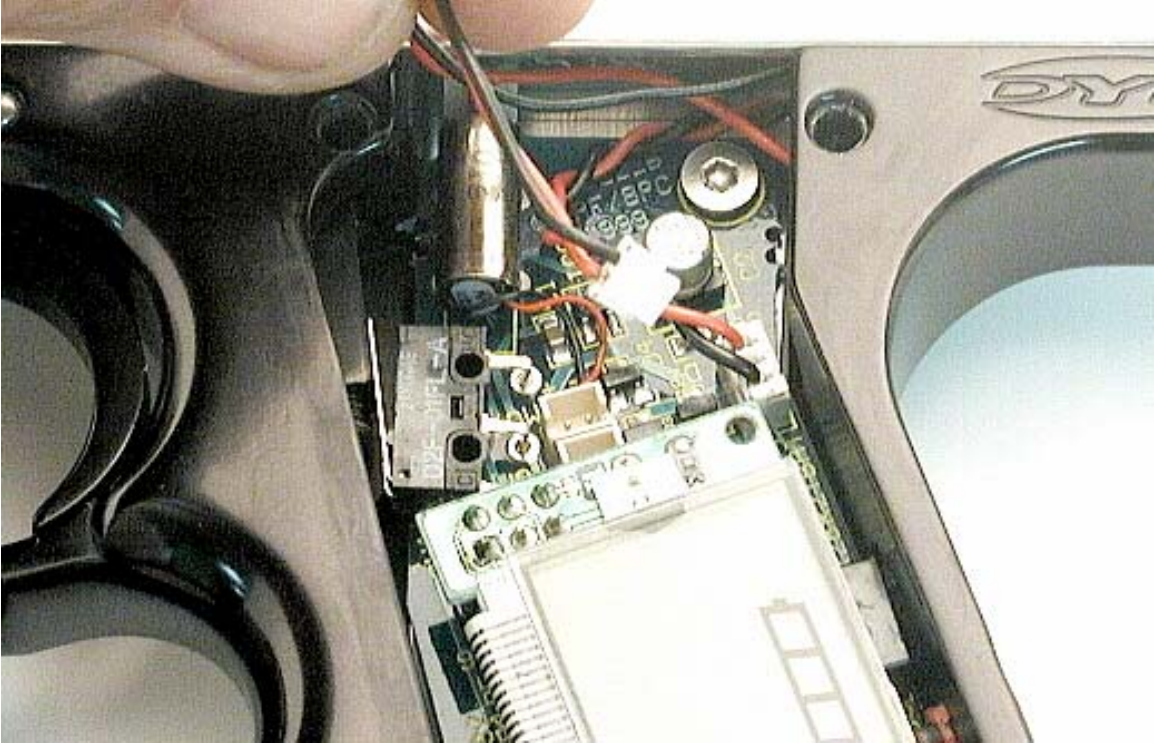
Move the grip under the trigger to get it out of the way.



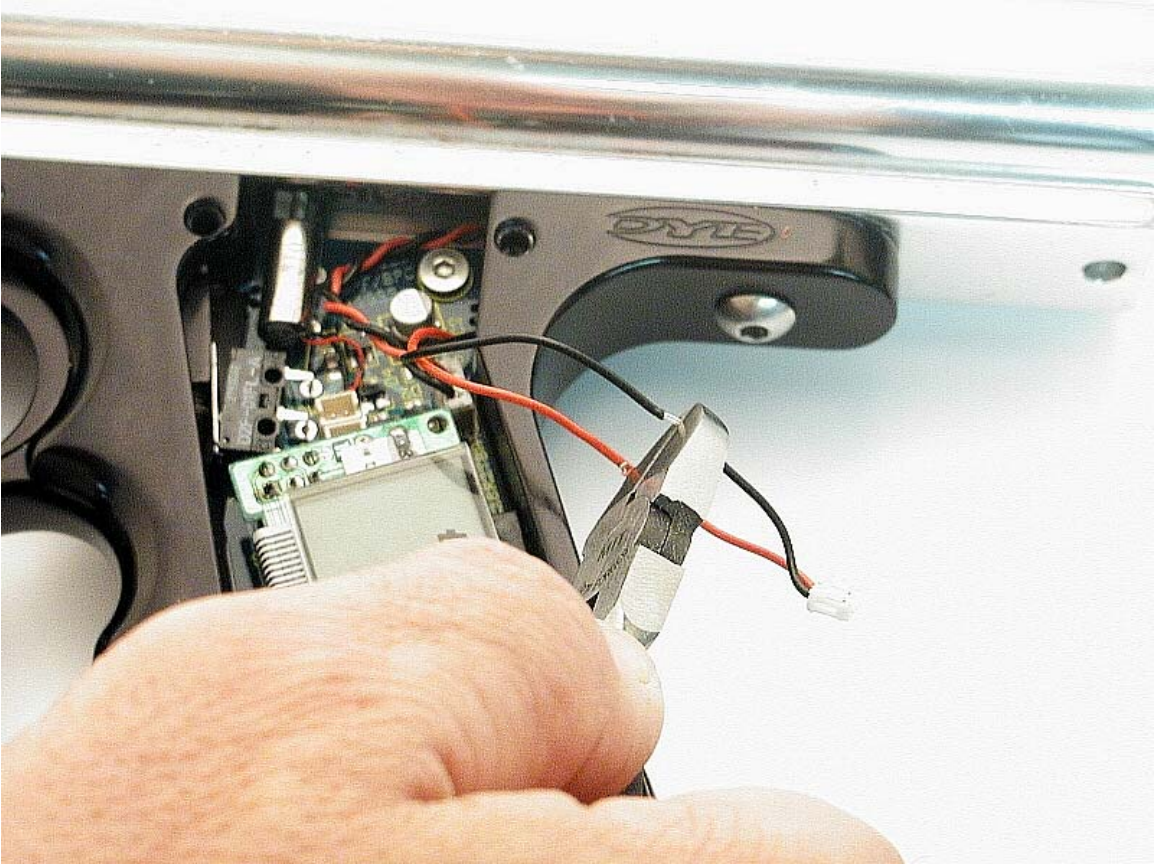
Here are the two wires that we will tap into. We will accomplish this by just skinning the insulation back and not cutting the wires themselves.



Note that the wires are plugged into a double socket and the side nearest the display.



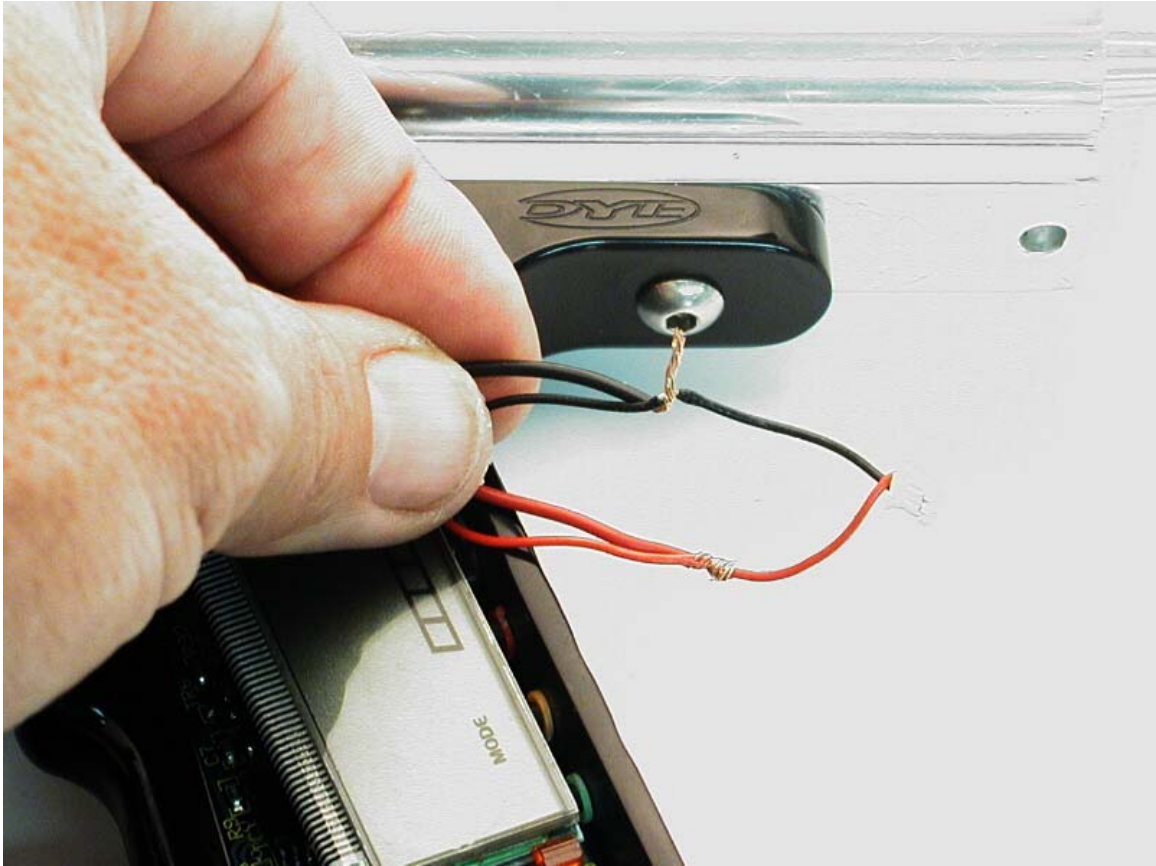
Remove the plug, but don't pull it out by the wires!



Carefully expose the conductor by stripping back a small section of insulation about an inch away from the plug.



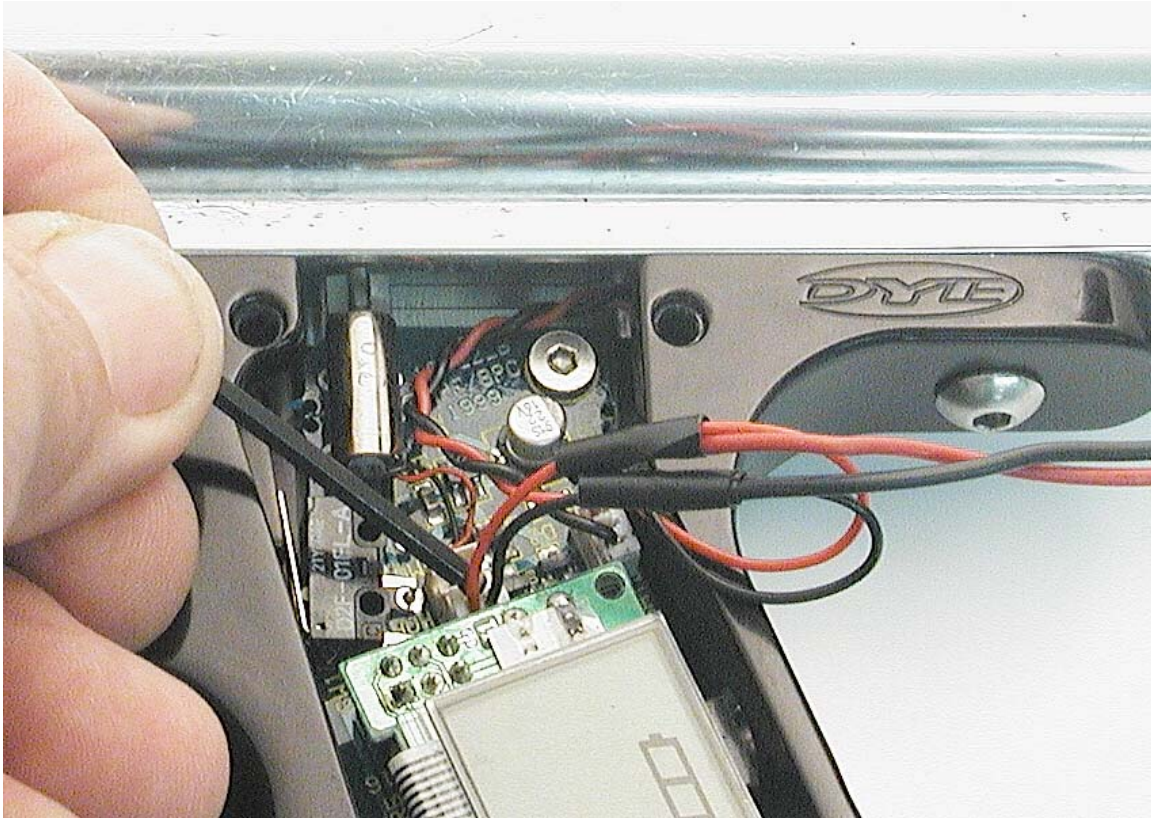
That's enough, now do the same to the red wire.



Now connect the ends of the harness to these two stripped back sections: black to black and red to red. Once again, it wouldn't hurt to solder these connections.



Make sure to tape up these connections adequately and separately.



Reconnect the plug. Note that the plug only goes in one way! (The red wire on left in this view.)



With the utility knife, carefully make a small “V” shaped notch $\frac{1}{2}$ inch long on the inside of the grip as shown. Be careful not to cut all the way through!





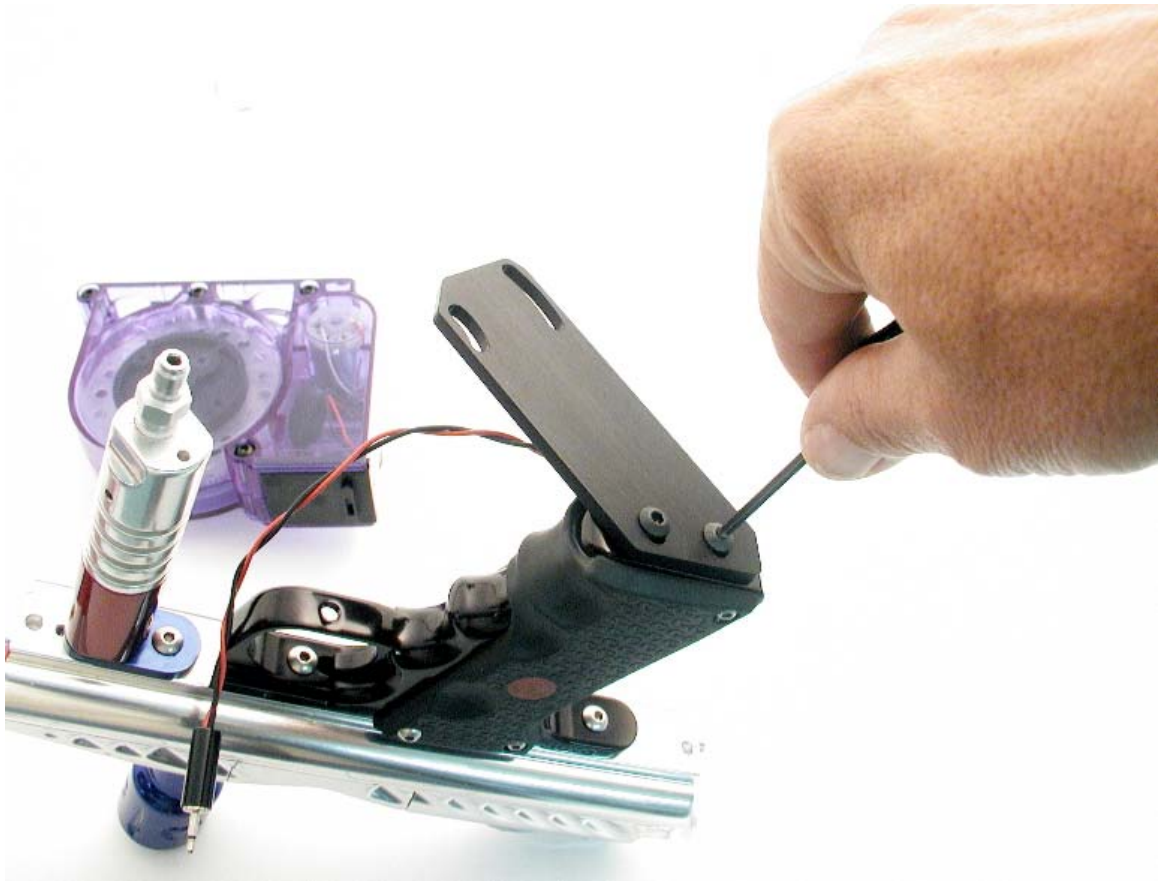
Test fit the harness wires and adjust the cut as necessary. The notch should be a bit smaller than the width of the harness wires to help prevent it from being pulled out.



Run the harness down and towards the front of the grip as shown. Close up the grip while aligning the wire with the notch you made.



Install the three grip screws.



We are setting this marker up for a right handed player and hanging our Warp off the left hand side of the marker. Note the un-slotted side of the Warp Mounting Bracket connects to the grip frame. You would normally bolt on your air system here too, but we have omitted it for clarity.



The slotted end of the mounting bracket allows you to adjust the position of the Warp.



Make sure your Warp is jumpered for positive input; the jumper in the three position header should be in the middle position. Plug it in, turn on the marker and it should spin every time you pull the trigger!

******* POTENTIAL PROBLEM !!! *******

If you have hooked everything up correctly and the Warp does not spin, then you have to reverse the black and red leads hooked to the Angel's harness. The harness manufacturer sometimes gets the wires mixed up. This has no effect on the Angel's solenoid, but will cause your voltage signal to the Warp to be backwards.



Proceed to hookup your feed hose in any manner that fits your playing style. Most players loop it forward and feed it into the vertical feed through a 90 degree adaptor. Adaptors are available through [Pro-Team Products](#) or [Airgun Designs](#).

Ya know something? The Warp makes this Angel a DEVIL OF A MARKER!

See our other instruction manuals and picture how to's on our [Manual Page!](#)

Visit our forum at [Automags.org](#) for 24-hour help and information. Read hundreds of posts every day from our friendly members, including Airgun staff members.

DISCLAIMER: Airgun Designs does not manufacture or warranty the Angel paintball marker. This information is provided for your convenience only! While we have successfully done hundreds of these conversions we are NOT responsible for any damage to your marker.

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