Supplemental Instructions for the AlfaSPID Mount

The Small Radio Telescope (SRT) kit no longer uses the H-180 motors and now ships with an AlfaSPID AZ/EL motor unit. These supplemental instructions are for the wiring and mounting of the AlfaSPID on a user provided 3 inch schedule 40 (3.5 inch O.D.) pipe which need to extend about four feet above the ground.

Please make sure the following pieces were part of the AlfaSPID shipping box.

- One AlfaSPID Az/El motor unit
- One Ring Arm Adapter (two-hole connection)
- One Ring Arm Adapter (one-hole connection)
- One Mast adapter (w/ six bolt tighteners)

Assembly

- Mount the AlfaSPID on the mast and finger tighten the bolts clamping it to the mast.

- Remove about 2 inches of the outer jacket from the 9 conductor cable. Strip about ¼ inch insulation from each of the conductors and solder the tips for all except the red, orange, and blue wires.
• Remove the wiring cover from the front of the AlfaSPID unit and force the 9 conductor cable through the large grommet. The small grommet should have two black wires from the unit grounding post, a blue and red wire form the AZ limit switch unit, and a 2 conductor cable for the calibrator already running through it. The wire ends are then inserted into their respective wiring block and held in place by set screws.

• The 9 conductor cable is then wired according to the following table.

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Red wire from AZ limit switch</td>
</tr>
<tr>
<td>Red/black</td>
<td>Black wire on AZ block</td>
</tr>
<tr>
<td>White/Black</td>
<td>Brown wire on AZ block</td>
</tr>
<tr>
<td>Black</td>
<td>Yellow/Green on AZ block</td>
</tr>
<tr>
<td>Green</td>
<td>Blue on EL block</td>
</tr>
<tr>
<td>Green/Black</td>
<td>Copper (or black) on EL block</td>
</tr>
<tr>
<td>White</td>
<td>Brown on EL block</td>
</tr>
<tr>
<td>Orange</td>
<td>Calibrator White</td>
</tr>
<tr>
<td>Blue</td>
<td>Calibrator Black</td>
</tr>
</tbody>
</table>

![Wiring Diagram](image-url)
• Carefully stuff the wire assembly back into the AlfaSPID housing and reattach the cover plate.

Note: This would be a good time to test the AlfaSPID with the controller and software.

• To test the AlfaSPID mount under the control of the SRT software, make sure you **uncomment** the **SIMULATE RECEIVER** keyword in the **srt.cat** file.

• If you do test the controller and software, make sure you return the AlfaSPID to the stow position before proceeding.

After the controller test

• The next step is to attach the ring adaptor arms. It may be easier to install the mount when the SPID is in the zenith position. If the SPID is hooked up to the controller, command it to the zenith by entering the Az/El combination 92 90. With the SPID in the zenith position attach the ring arms as shown. Finger-tighten the bolts clamping the arms to the SPID unit.
• Attach the adaptor ring with the bolts provided to the attachment arms on the inside of the ring. Slide the arms in or out to fit the ring.

• Next attach the counter weights using the bolts, washers, and spacers provided.

• Tighten all the clamping bolts for the attachment arms and for the AlfaSPID on the mast.

• Orient the longer clamping bolt on the mast adaptor to point due east as this will be the hard limit location for the mount.
Next lower the dish onto the ring and attach using bolts washers and nuts provided.

- With all the clamping bolts tightened, command the dish to the stow position.

This finishes the supplemental instructions for the AlfaSPID motor drives.

**Continue with the rest of the installation as detailed in the installation manuals.**