Etherwave Standard ESPE01 Installation Protocol

1. Remove the antennae and cover from the Etherwave.
2. Desolder the wires leading from the circuit board to the antennae sockets.
3. Remove connector CN1 and remove the screws holding the circuit board in place.
4. The module will be soldered onto the solder pads on the back of the circuit board. Some Etherwaves have a diode soldered between pads Ground and +12V. If your Etherwave has this diode, it must be removed and the holes opened up for the ESPE01. Place the diode close by so that it can be replaced later.
5. Capacitors C2 and C6 need to be partially de-soldered. First, locate and mark these on the back side of the circuit board. The leads that need to be detached from the circuit board are the ones closest to the center of the board. With C2, the lead **furthest** from the solder pad needs to be cut, and with lead C6, the lead **closest** to the solder pad needs to be cut. With your soldering iron, melt the solder around the lead and push the lead upward as far as possible without using too much force. With a small cutting tool, carefully snip the lead as close to the circuit board as possible, so that as much free lead as possible is still attached to the capacitor. Then, gently bend the capacitors upwards a bit so that the free leads stick up into the air. If a capacitor has become damaged, remove it completely and replace it with one of the capacitors shipped with the ESPE01.
6. Examine the ESPE01 module. You will notice 3 leads grouped together next to a 4th single lead. The single lead should go in the hole that is marked “Ground”. The 3 grouped leads go into the holes marked “-12V”, “+12V” and “Audio”. Insert leads all the way into the circuit board until the ESPE01 module is resting on the circuit board. Carefully turn the circuit board over then solder the 4 leads to the bottom of the circuit board. Re-solder the diode removed earlier to the back of the board. The ring side of the diode should be soldered to the +12V pad, and the other end to the Ground pad. Trim away the excess leads from the module, then turn the circuit board back over to right side up.
7. Select the 2 wires connected to the ESPE01 module. They are cut to exactly reach the free leads of capacitors C2 and C6. Solder the shortest wire, labeled “Fix” on the ESPE01 to the free lead of capacitor C2. Solder the longer wire, marked “Var” on the ESPE01 to the free lead of capacitor C6.
8. Screw the circuit board back down, connect CN1, and re-solder the antenna leads into place.
9. Place the theremin onto its stand (cover off), away from obstructions. Re-attach the antennae and power and audio lines. Turn on the power switch and check for tone.
10. Retune the theremin. Set the pitch control knob to 12 o’clock and then insert the plastic hex tuning tool provided by Moog into Inductor L6. This is the variable coil located closest to the middle of the circuit board. Hold your hand at about 4 inches or 10 centimeters from the pitch antenna, and tune for zero beat by gently turning the hex tuning tool. Replace the lid and test to see if your preferred pitch tuning is somewhere between 10 and 2 o’clock on the pitch knob. If not, repeat the tuning process until a reasonable position is obtained. Replace the screws holding the lid to your Etherwave in place.
11. That’s it…..Have some fun! (Thanks, Thierry!) jcn