



**Palomar
Engineers™**

LA-1 Loop Amplifier



MODEL LA-1 LOOP AMPLIFIER AND PLUG-IN LOOPS

INSTALLATION

1. Connect a 9-v battery to the clip on the rear of the loop amplifier and place it in the battery holder.

2. Connect a shielded cable between the loop amplifier output connector and the radio's antenna connection. The loop amplifier end requires a PL-259 "UHF" plug. The radio end varies depending on the model of radio used. Some radios have screw terminals requiring no plug. In this case, the center conductor goes to the ANT terminal and the outer shield to the GND terminal. Shielded cable with connectors can be obtained at your local Radio Shack store.

3. Some radios have a built-in loopstick for the AM broadcast band and do not have an external antenna connection that works on this band. In this case the LC-1 Loop Coupler must be used to connect the loop amplifier to the radio for the 530-1700 KHz loop.

4. Plug the loop into loop amplifier.

OPERATION

Press the front panel switch to turn on the loop amplifier. The red lamp on the panel should glow and there should be a slight increase in the radio's noise level. Adjust the tuning control for a peak in noise or signal. Tuning must be readjusted when you change receiver frequency.

The plug-in loops rotate in azimuth (compass direction) and elevation (tilt). To null a station or unwanted noise start with the loop horizontal (0° elevation). Rotate the loop in azimuth for minimum signal. There are two identical nulls 180° apart. Then to get a deeper null tilt the loop. The deep null occurs on only one of the two nulls. If you do not get a deeper null rotate in azimuth 180 degrees and try again. The elevation for deepest null will vary with each different station. Usually it will be 40° or less for radio stations. Sometimes much higher for local noise.

For the most accurate direction finding leave the loop horizontal. When you obtain a null the station is in line with the white tube of the loop. There are two possible opposite directions. To find which is correct get the deepest null as explained above. The end of the white tube that then points above horizontal shows the station direction.

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