

If drift has been a problem, the following starred (*) steps should be accomplished. However, if no trouble of this type has been encountered, the steps should be by-passed and the next conversion sequence observed. Any change in a perfectly working circuit may tend to cause trouble rather than make further improvement. Drift characteristics may be considered normal if warm up drift time is ten minutes or less. The tuner should be perfectly stable after this period of time.

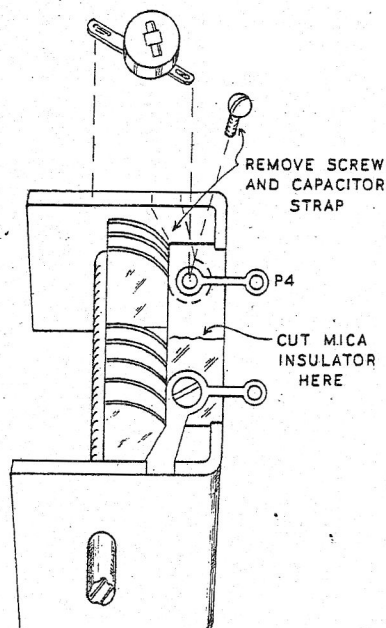


Figure 2 A

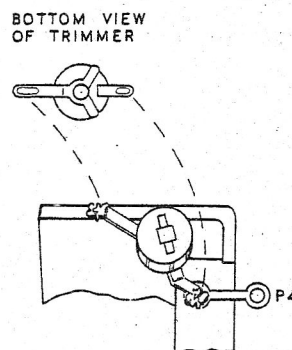


Figure 2 B

- * () Remove the capacitor between P4 and P5 on the tuning assembly. This is best done by cutting the capacitor off, leaving about 1/4 inch of lead connected to the tuning assembly at each end. Bend a hook or eyelet in each of these wire ends to provide a convenient connecting place for the replacement capacitor.
- * () Cut the leads of the 10 $\mu\mu\text{f}$ N750 capacitor to a length sufficient to reach and bend each wire end into a hook. Engage these leads with the hooked ends previously made on P4 and P5 on the tuning assembly and securely crimp the leads together with pliers. Solder both connections.
- * () Observe Figure 2 and identify the oscillator trimmer, which is the one nearest the chassis. Remove the screw completely. Remove the metal tab which is fastened to the tuning capacitor frame by cutting it off, or pulling it loose with a pair of pliers. Next, cut away just the portion of mica insulation that was previously under the oscillator trimmer. Take care that the mica under the outer RF trimmer is not damaged.
- * () Install the NPO 3-12 ceramic trimmer capacitor as shown in Figure 2. Before mounting the unit, inspect the bottom and note that one lead is connected to the center bearing. This lead must be connected to the tuning capacitor frame and the other to the metal plate which is part of tuning assembly P4. Solder both ends securely. Check to be sure that none of the leads on the trimmer are shorting to any part of the tuning capacitor frame. Modification of the tuning assembly is now complete.

An additional pilot lamp is required to provide even lighting over the new glass dial which will be installed later. The additional lamp is installed as follows:

- () Open up lugs 3 and 4 of rectifier socket A so that one additional wire can be accommodated in each lug. This is best accomplished by heating the socket pins with a soldering iron and at the same time pushing an opening in the pin with a sharp pointed tool such as a soldering aid or an ice pick. See Figure 1.

- () Cut two wires to a length of 4 inches. Strip all four ends and holding one end of each wire even, twist the wires together.
- () At one end of the twisted pair, connect one lead to rectifier socket A3 (S) and the other to A4 (S).
- () At the opposite end of the twisted pair, connect one lead to extra pilot lamp socket EF lug 1 (S) and the remaining lead to EF lug 2 (S). The lugs can be identified by reference to Figure 3. It is not necessary to mount the pilot lamp socket yet.

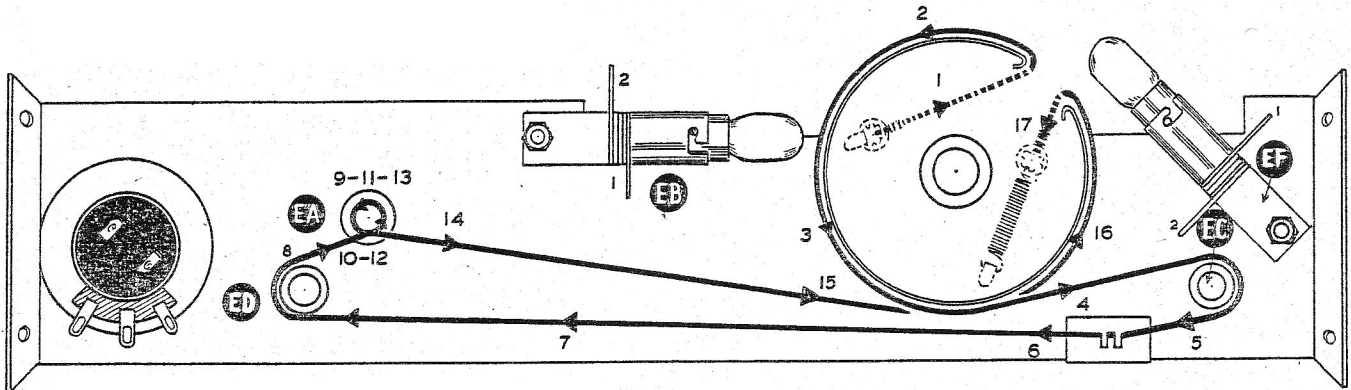


Figure 3

Circuit stability and noise characteristics may be improved by incorporating a radio frequency filter at the output of the power rectifier. The necessary parts are installed in the following steps.

- () Remove the wire which is connected from 6X4 socket A7 to terminal strip M1. While removing the wire, leave openings in both of these terminals to accommodate the resistor to be added in the next step.
- () Connect the 100 Ω 1 watt resistor (brown-black-brown) from terminal strip M1 (S) (use sleeving) to 6X4 socket A7 (NS) (use sleeving).
- () In the fashion described before, make an opening in tube socket B4 to accommodate one additional wire.
- () Connect the .001 μ fd 1 KV (1000 volt) capacitor from socket A7 (S) to socket B4 (S). Dress the capacitor close to the chassis, making sure that the lead connected to A7 does not touch any other terminal or wire.

Final assembly of the converted tuner is completed in the following steps. Reference to the original construction manual will help in completing the unit.

- () Remove the large pulley from the tuning capacitor drive shaft and turn it around so that the bushing is away from the capacitor frame. With the capacitor plates fully meshed, orient the opening in the outer edge of the pulley so that it is toward ground lug N on the chassis. The edge of the pulley must be flush with the end of the tuning capacitor shaft when the set screw is tightened.
- () Hold the new dial plate (the long black painted metal part) close to the rest of the tuner and mount pilot lamp socket EF at the location shown in Figures 3 and 4, using the 6-32 screw, nut and lockwasher furnished. Orient socket EF as shown, making sure that it does not interfere with the action of the dial string pulley.