Model PT-340 TUNER-TUNER<sup>TM</sup>

## OPERATOR'S MANUAL

PALOMAR ENGINEERS Installation. Connect the Tuner-Tuner to the transceiver antenna jack and to the TRANSMITTER or TRANSCEIVER jack of the antenna tuner. If you are using an amplifier connect the Tuner-Tuner between the transceiver and the amplifier. Connect a 9-volt transistor battery to the battery strap on the rear of the Tuner-Tuner and slip it into the battery clip. An alkaline battery is best. Turn the panel switch to TUNE position and observe that the panel lamp flashes. Turn the switch to OFF.

Operation. Tune the receiver to the frequency on which you want to operate. Turn off the receiver AGC or watch the meter to see the noise level. Turn on the Tuner-Tuner. There ill be a loud noise about S9 on the meter. Adjust your antenna tuner for a null (a drop in the noise). Continue to adjust the tuner until the noise is as low as you can get it. The SWR is now 1:1. Turn the Tuner-Tuner off. If you have a dummy load tune your transmitter using it. Then switch back to your antenna and you are ready to transmit. Everything will be tuned up correctly even though you have not transmitted a signal on the air!

Caution. The basic principle in using the Tuner-Tuner is:

DON'T TRANSMIT WHEN IT IS IN TUNE POSITION. The flashing warning light and the clicking noise in your receiver are to remind you that it is turned on. When it is turned off you can put any amount of RF power (up to 3000 watts) through it. Someday you may make the mistake of transmitting when the Tuner-Tuner is turned on. No smoke will come out of it but the noise output will be weak and the null will be at a wrong setting of your tuner. Remove the two black screws on the side of the case and take off the cover. Replace the fuse in the clip on the circuit board. Use an AGX 1/100 amp. fuse. One spare fuse is sent with the Tuner-Tuner. Do not use a heavier fuse as it may not protect the Tuner-Tuner.

Maintenance. The Tuner-Tuner has top quality components including a ceramic switch and stainless steel hardware so it needs only fuse and battery replacement to give many years of reliable service. Battery drain is 35-ma but the operating time is short so battery life is quite long.