

ANTENNA MATCHING

The P-2 will also aid in decreasing the SWR as well as detecting it. In the preceding steps you have determined the resonant frequency of your antenna and also if there is an SWR greater than 1 to 1. If there is an impedance matching device at the antenna such as a gamma match, a "T" match, tuning sleeve, etc., use the following procedure with the P-2 to eliminate or lower the SWR. It should be noted at this time, that with some antennas such as beams, collinear arrays, and even dipoles a perfect match is not obtainable because of other factors such as the design of the antenna, its height above ground, nearby objects affecting the antenna, etc. In such a case, the best alternative is to lower the SWR as much as possible. To lower it, use the following procedure:

- ☐ Load the transmitter to the recommended input power and adjust the SENSITIVITY control for full scale deflection. Keep these tests as short as possible to prevent interference with other stations.
- ☐ Adjust the P-2 to indicate SWR.
- ☐ Adjust the matching system at the antenna for a minimum reading on the P-2.

For additional information on antenna matching and SWR reduction the reader is again referred to the Radio Amateur's Handbook and similar publications.

MEASURING RELATIVE POWER

The P-2 will also aid in determining the effects of modifications such as changing the bias voltage, component changes, etc. made in the transmitter. If the modifications or adjustments can be safely made while the transmitter is on the air, use the following procedure:

- ☐ Tune the transmitter to the recommended input, but do not make the modifications.
- ☐ Set the POWER switch on the P-2 to FORWARD and adjust the SENSITIVITY control for a reading of 1.0 on the REL. POWER scale.

- ☐ Make the modifications or adjustments on the transmitter, noting the effect of the change on the transmitter output directly on the P-2.

If the change results in a meter reading of 2, the output of the transmitter has been doubled. If the modifications cannot be safely made with the transmitter on the air, perform the first 2 steps of the procedure and turn the transmitter off. Make the modifications and reconnect the transmitter, but DO NOT TOUCH THE CONTROLS ON P-2. Load the transmitter to the same input and note the reading on P-2. The effect of the change will be noted in a different reading on the P-2.