HOW TO FIND
THE ANSWERS WITH YOUR ...

PORT-A-LAB 500

HOW TO FIND VSWR

1. Disconnect the antenna from the transmitter and connect it to the Port-a-Lab 500 antenna connector.

2. Connect a short 50 ohm coaxial jumper cable from the transmitter antenna connector to the Port-a-Lab 500 Transmitter connector.

NOTE: BE CERTAIN THE "DUMMY LOAD" SWITCH, LOCATED ON THE SIDE OF THE CASE, IS IN THE "OFF" POSITION.

3. Set the SELECT knob to the SWR position.

4. Turn the SWR knob completely COUNTER CLOCKWISE position.

5. Set the RANGE knob to the FWD position.

6. Key the transmitter and turn the SWR knob clockwise until the meter needle rests at the 30 mark on the Standing Wave Ratio scale.

7. Set the RANGE knob to the REV position and key the Transmitter.

8. Read the SWR directly on the Standing Wave Ratio scale.

HOW TO MEASURE RF POWER (0-10W & 0-50W scales)

1. Connect a short 50 ohm coaxial jumper cable from the Transmitter antenna to the Port-a-Lab 500 transmitter connector.

DO NOT CONNECT THE ANTENNA OR ANYTHING ELSE TO THE Port-a-Lab 500 ANTENNA CONNECTOR.

2. Set the DUMMY LOAD switch, located on the side of the case, to the "ON" position.

3. Set the SELECT knob to the RF PWR position.

4. Set the RANGE knob to the 0-10W or 0-50w position. If the power at the transmitter is not known, use to the 0-50W scale. If the reading is 10W or less, switch to the 0-10W scale.

NOTE: DO NOT USE THE 0-50W SCALE FOR VERY LONG PERIODS OF TIME, AS EXCESSIVE HEAT MAY BE GENERATED, AND CAUSE DAMAGE TO THE Port-a-Lab 500.

The Power Calibration of this meter covers the frequency range of 25 to 35 MHz +/- 10%. SWR, Field Strength, and AM modulation can be used between 2 and 200 MHz.

HOW TO MEASURE RF POWER (0-500W scale)

1. Switch the DUMMY LOAD switch to the "OFF" position; DO NOT USE THE INTERNAL DUMMY LOAD.

2. Connect the EXTERNAL RF LOAD, capable of dissipating 500 watts or more to the Port-a-Lab 500 antenna connector.

3. Connect the short 50 ohm coaxial jumper cable from the transmitter antenna connector to the Port-a-Lab 500 transmitter connector.

4. Set the SELECT knob to the 0-50W position.

5. Set the RANGE knob to the RF PWR position.

6. Key the Transmitter and read the RF POWER on the 0-50W scale (multiply the reading by 10.)

HOW TO MEASURE "IN-LINE" RF POWER

1. Connect a short 50 ohm coaxial cable from the Transmitter antenna to the Port-a-Lab 500 transmitter connector.

2. Connect a 50 ohm antenna to the Port-a-Lab 500 transmitter connector. NOTE: The antenna impedance must be 50 ohms.

3. Switch the DUMMY LOAD switch to the OFF position. (Located on the side of the case).

4. If the power of the Transmitter is NOT known, turn the SELECT knob to the 0-500W scale first, then turn to a lower scale if the power is less than 50W.

5. Key the Transmitter and read the "IN-LINE" RF power directly from the RF meter scale. If the 0-500W scale is required, multiply the 0-50 watt scale reading by 10.

CHECKING MODULATION PERCENTAGE (0-10W & 0-50W only)

1. Connect a short 50 ohm coaxial cable from the Transmitter antenna to the Port-a-Lab 500 transmitter connector. DO NOT CONNECT THE ANTENNA OR ANYTHING ELSE TO THE Port-a-Lab 500 ANTENNA CONNECTOR.

2. Set the DUMMY LOAD switch to the "ON" position.

3. Set the RANGE knob to any position.

4. Turn the RF LEVEL knob completely COUNTER CLOCKWISE.

5. Key the Transmitter and turn the RF LEVEL knob until the meter needle rests on the 100 on the Percent Of Modulation scale.

6. Without changing the RF LEVEL setting, turn the SELECT knob to the MOD position.

7. Speak into the microphone and read the Percent Of Modulation directly on the Percent Of Modulation scale.

8. Modulation and distortion may be checked AURALLY by plugging in High Impedance earphones and listening to the signal. DO NOT PLUG IN EARPHONES FOR ANY OTHER PURPOSE.