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**RFlimited PW5000 Owner's Manual**

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The model PW5000 is a high quality test instrument for measuring the performance of all HF radio stations. The PW5000 simultaneously measures: 1-transmission output power 2-AM percent modulation 3-antenna SWR through 3 separate meters. The PW5000 employs a newly designed low-loss transient type power meter. It may be permanently kept "in-line" for continuous monitoring.

When operating the PW5000 be sure to connect it with a 12-15 VDC power source.

## FEATURES:

### Power meter

- Operator may select average power (AVG) or modulated peak power, PEP (peak) readings with the flip of a switch.
- Four ranges of 30w, 300w, 1kw or 5kw are provided to meet the needs of small and high power applications.

### Percent modulation meter

Provides highly sensitive AM modulation measurements. (minimum power requirement: 5 watts)

### SWR meter

Displays accurately your antennas standing wave ratio.

## OPERATION

Measurement of transmission power

- Select the desired Power Range.
- Set the MODE switch either to average power (AVG) or modulated peak power (PEAK).

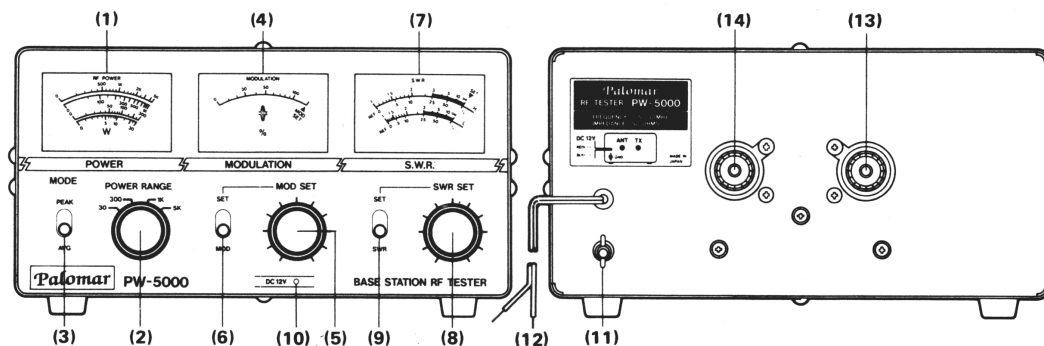
## IMPORTANT

Read this prior to operation:

This meter is factory tested and calibrated for optimum performance. Do not remove the outer cabinet or adjust any internal controls, it will invalidate all warranties. The RF sensor incorporates high-frequency circuitry and cannot be adjusted using conventional instruments.

Make sure all connections are tight and proper connectors are being used. Use caution especially when generating in excess of 1 kilowatt, a great deal of heat will be present. IF GENERATING MORE THAN 250 WATTS PEP MAKE SURE ALL COAXIAL JUMPERS AND TRANSMISSION LINES ARE MADE UP OF RG8 or LARGER CABLE.

### Description of panel controls



- Power meter**  
Measures RF transmission on four separate ranges 30w, 300w, 1kw, 5kw to full scale.
- Power range switch**  
4 position switch selects any of the 4 power ranges.
- Mode switch**  
Selects either average power (AVG) readings or modulated peak power, PEP (PEAK) readings. PEAK reading is used in SSB or AM mode only.
- Percent modulation meter**  
Displays an AM transmitters percentage of modulation.
- MOD SET control**  
This variable control is tuned when checking percent modulation.
- SET MOD switch**  
Used in conjunction with mode set control to find the percent modulation of a transmitter.
- SWR meter**  
Indicates the standing wave ratio of an antenna system. The H scale is used when the transmission power is in excess of 30 watts and the L scale, when it is below 30 watts. The REF scale (reflected power) measures the ratio of reflected power to SWR.
- SWR set control**  
Used for determining the SWR of an antenna system.
- SET SWR switch**  
Used in conjunction with SWR set control for determining SWR.
- 12 V.D.C. indicator**  
Illuminates when PW5000 is connected to 12-15 V.D.C. power source.
- GND**  
Connect ground when using in excess of 500 watts PEP.
- 12 V.D.C. power leads**  
Red lead connects to + or positive black lead connects to - or negative lead.
- TX SO-239**  
Used to connect exciter (transceiver) to PW5000.
- ANT SO-239**  
Used to connect antenna system to PW5000.

### Measuring percent modulation

- Select the AM mode of your transmitter, turn on the transmitter. Flip the MOD SET switch to the set position and turn the MOD SET control until the MODULATION meter needle points to the "▲ MOD SET" on the dial.  
Now speak into the microphone using a strong steady tone or whistle. The meter will display the transmitters modulation calibrated in percentage.

### Measuring SWR (standing wave ratio)

- Turn the SWR SET control all the way counterclockwise.
- Flip the SWR SET switch to the SET position.
- Turn on the transmitter and rotate the SWR SET control clockwise until the meter needle points to the SET position.
- Flip the SWR SET switch to the SWR position, the meter will now be displaying the antenna SWR. NOTE: When transmission power is in excess of 30 watts read the H scale. When the power is lower than 30 watts read the L scale.

### CAUTION:

The RF sensor incorporated in the PW5000 is very sensitive and accurate. Be careful when handling, avoid excessive shock or vibration.