

# MFJ-815B Deluxe HF Peak Reading SWR/ Wattmeter



The MFJ-815B DELUXE HF PEAK READING SWR/WATTMETER utilizes a cross-needle meter so that peak or average Forward power, Reflected power, and SWR can be read. Forward power is in Two ranges from 200 watts to 2000 watts. SWR is read from 1.1:1 to 5:1. Frequency range is from 1.8 to 60MHz.

## Installation

1. Connect the coax connector labeled TRANSMITTER to the transmitter with RG-58/u cable. Use PL-259 connectors.
2. Connect the coax connector labeled ANTENNA to the antenna with RG-58/u cable. Use PL-259 male connector.
3. If a lighted meter is desired, a 12Vdc power supply such as the MFJ-1312B must be connected. Use a standard 2.1mm coax with the center positive and the sleeve ground. The METER LAMP ON/OFF switch will activate the meter lamp.

## Forward & Reflected Power

1. Set the desired power range by using the switch on the front panel labeled METER HI/LOW. The high range is 2000 watts maximum.
2. The Peak Reading feature may be switched on/off by using the push button on the front panel labeled METER PEAK/AVERAGE.

## SWR Measurement

SWR is indicated by the crossing point of the two meter pointers. While transmitting, read the SWR from the SWR line nearest the crossing point.

Note:

No SWR setting is needed at any range.

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## Calibration

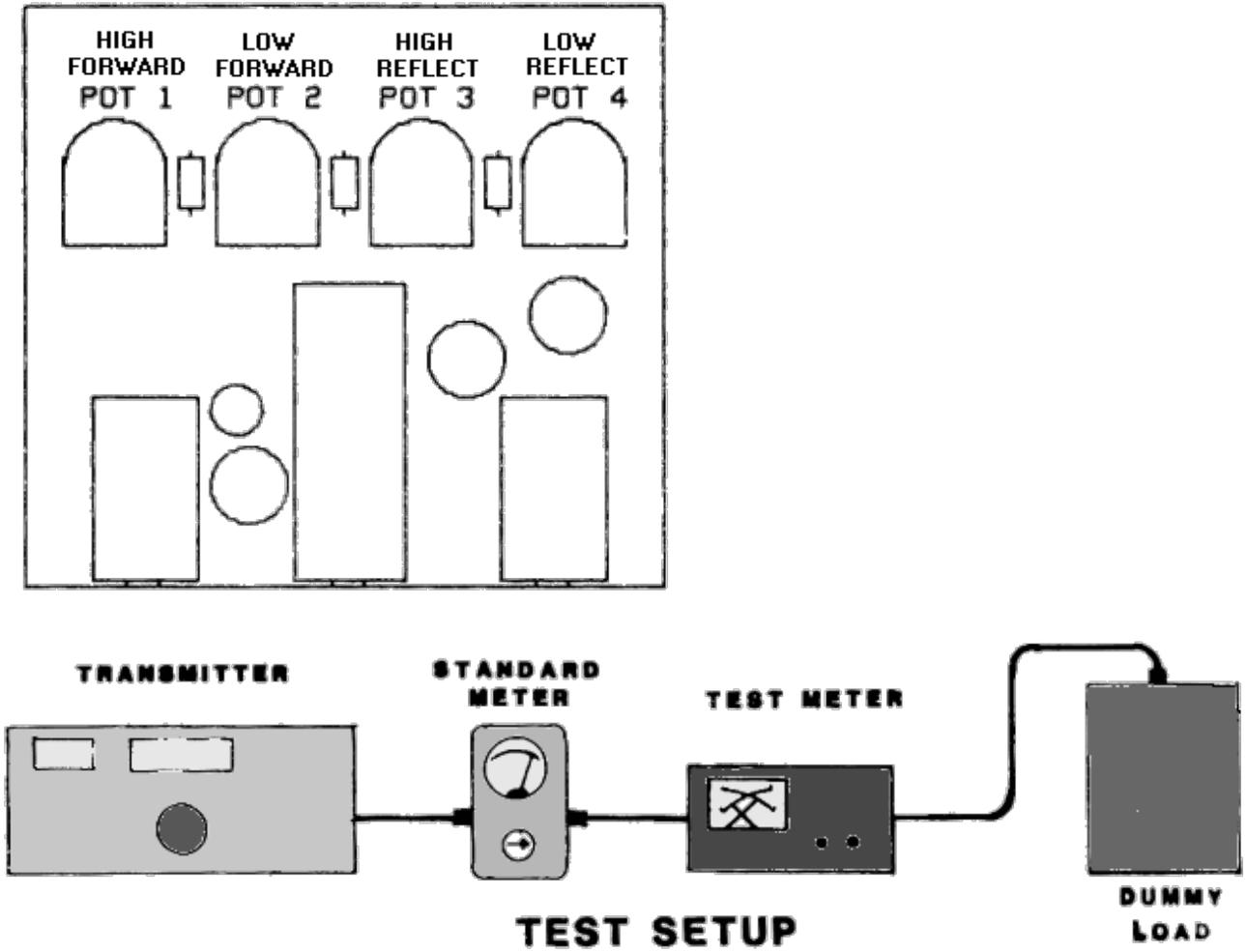
The MFJ-815B has been calibrated at the factory. If it should ever need to be recalibrated, then follow this procedure:

### Equipment Needed

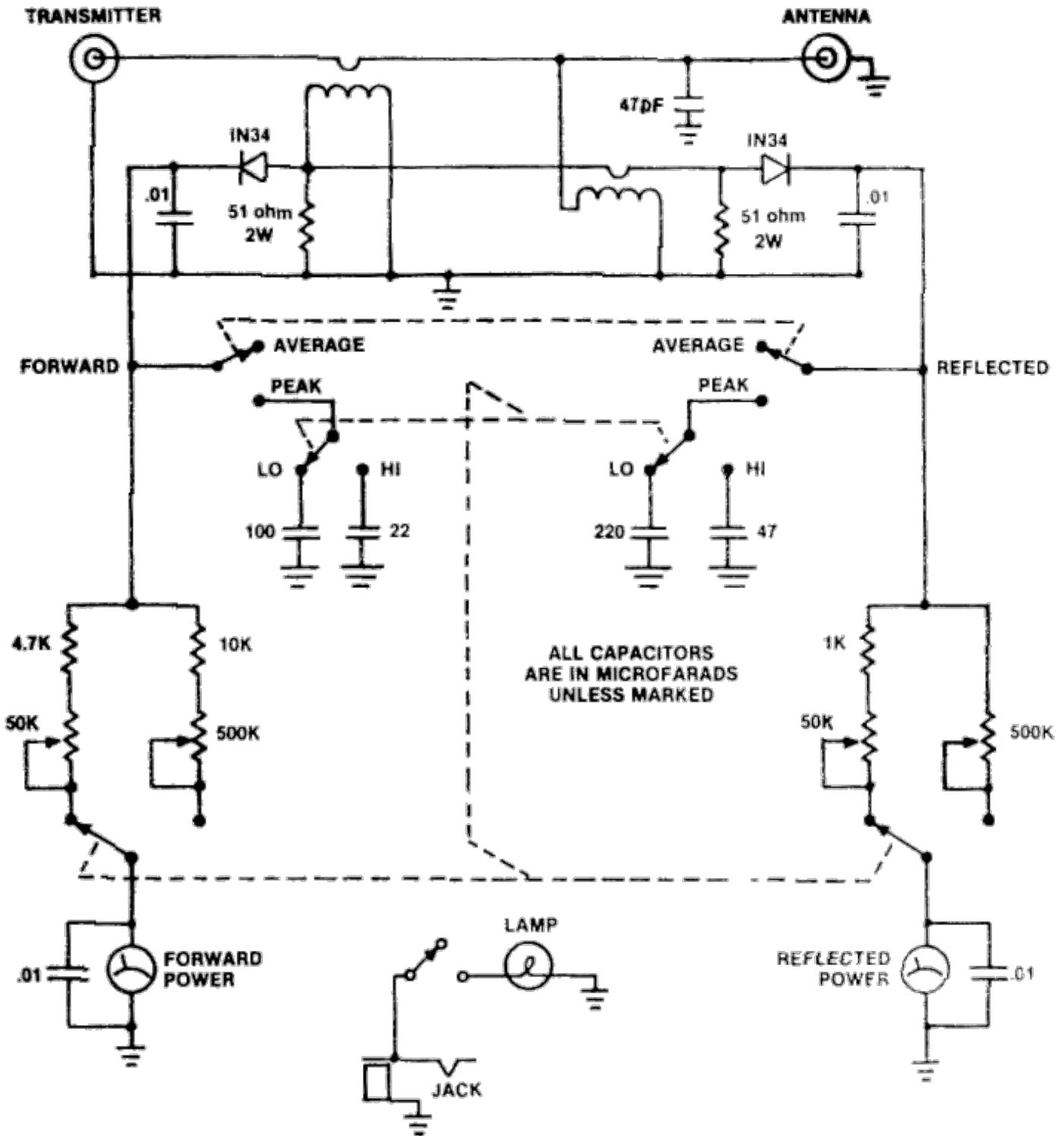
1. Transmitter capable of supplying enough power to obtain 1/2 to full scale reading at 14 or 21 MHz.
2. 50 ohm dummy load that is capable of handling full power that the transmitter can put out and has better than a 1.15:1 SWR.
3. A power meter of known accuracy. The calibration will only be as good as the standard meter.
4. 50 ohm cables capable of handling the power. RG-58/U is recommended. DO NOT USE RG-59 or RG-11.

### Meter Calibration-refer to PC layout for trimpot location

1. Remove the top of the 815B.
2. Connect the equipment as shown in the diagram. Use 50ohm dummy load for the antenna. Set the transmitter to 14MHz band.
3. Transmit about 100 watts as indicated on the reference meter. Adjust LOW FOWARD to set 100 watts on the foward power scale. Next set the pushbuttons to the 2000 watt power scale. Transmit 1000 watts as indicated on the reference meter. Adjust HIGH FOWARD to set 1000 watts on the foward scale.
4. To set the reflected power, interchange the transmitter and coax cable so that the transmitter is connected to the antenna connector and the dummy load is connected to the transmitter connector. Set the range switch to the 200 watt range. Transmit 10 watts as indicated on the reference meter and adjust LOW REFLECT to indicate 10 watts on the reflected scale of the 815B. Next set the range switch to the 2000 watt scale. Transmit 100 watts according to the reference meter and adjust HIGH REFLECT to indicate 100 watts on the reflected scale.
5. SWR requires no calibration.



## Schematic



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