INTRODUCTION

The MFJ-267 is a versatile station accessory. It combines a true-peak reading SWR/Wattmeter and a 50 ohm dry dummy load with a frequency coverage of 1.8-54 MHz. The wattmeter allows you to read truepeak or average power with just a push of a button. It also displays forward/reflected power and SWR on the cross-needle meter. The MFJ-267 has two power ranges that are switch selected. Power ranges are 300/3000 watts forward and 60/600 watts reflected. The meter reads SWR from 1:1 to 8:1. The wattmeter can be switched between the dummy load or an external antenna.

The 50 ohm dummy load works for DC trough 60 MHz. The SWR is below 1.3:1 at 30 MHz. It is capable of handling 100 watts for 10 minutes or 1.5 kW for 10 seconds.

INSTALLATION

1. A power source must be connected for the power meter to operate. Connect a 12 Vdc power source to the back of the tuner marked 12VDC. This method will supply power for the meter. The rear panel jack accepts a 2.1 mm coaxial plug with the center conductor positive (+) and the outer sleeve negative (-) for powering lamps and metering circuitry.
2. Locate the wattmeter in a convenient location at the operating position.
3. Install the MFJ-267 between the transmitter and the desired antenna. Use good quality coaxial cable (such as RG-8/U) to connect the transmitter (or amplifier) to the rear panel connector marked INPUT.
4. Connect the antenna to the connector marked OUTPUT.

THE WATTMETER

The MFJ-267 must have a power source, or the meter will not function. Power can be provided by an external 12 Vdc supply (negative ground only)

Full scale forward and reflected power range is controlled by the HIGH/LOW switch selecting HIGH (3000 watt) or LOW (300 watt). If your transmitter runs more than 300 watts of peak output power, set this switch to the HIGH (3000 watt) position (in). If your transmitter has less than 300 watts of peak output, set this switch to the LOW (300 watt) position (out). Peak envelope power (PEP) is measured by placing the PEAK/AVG push-button in the PEAK (in) position.

Peak and average power values are equal with steady unmodulated carriers such as closed-key CW, RTTY, FSK, or FM. The meter reading on these modes will be the same in either peak or average modes. On SSB, the ratio of PEP to average power varies with different voice and modulation characteristics. With most voices, the PEP reading is three to five times higher than the average voice power reading.

Forward power is displayed on the left-hand forward meter scale. This scale is calibrated from 0 to 300 watts and is read directly in the LOW (300 watt) position. Each picket (scale mark) represents 5 watts below 10 watts, 10 watts between 10 and 100 watts, and 25 watts between 100 and 300 watts. In the HIGH (3000 watt) position, multiply the forward power scale 10 times (EXAMPLE: 50 = 500 and 150 =1500 watts).

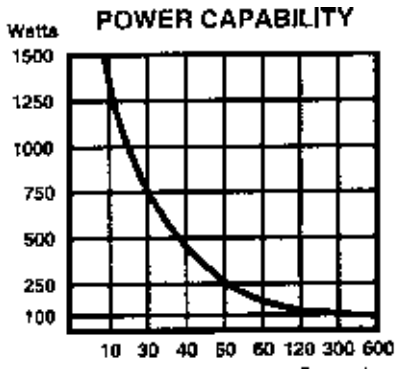
Reflected power is read on the right-hand reflected meter scale. Full scale reflected power is 60 watts when the meter switch is in the LOW position and 600 watts in the HIGH position. This scale is marked with a picket every one watt below 10 watts and every 5 watts above 10 watts. This scale is also multiplied by 10 when using the HIGH meter power position.

Power readings are most accurate over the upper half of the meter scales. When measuring power with a less than perfect match, subtract reflected power from forward power. The result will be the true power.

SWR is read directly from nine red SWR curves that range from 1:1 to infinity. SWR is measured by observing the point where forward and reflected meter pointers cross. The SWR is indicated by the red curve closest to the pointer crossing point. No cumbersome or time consuming SWR sensitivity adjustments are required with this method.
The power meter is backlit with an internal lamp. The meter requires power from an external 12 Vdc source. A rear panel jack accepts a 2.1 mm coaxial plug with the center conductor positive (+) and the outer sleeve negative (-) for powering lamps and metering circuitry. A ON/OFF switch turns the meter lamp off and on.

THE DUMMY LOAD

The MFJ-267 has a dry air-cooled resistive dummy load. This resistor load is capable of handling high short-term RF loads. A reasonable cool down period is needed to keep the resistor from becoming permanently damaged. The cool down period needs to be about 10 to 20 times the load usage.
Before operation, become familiar with the POWER CAPABILITY curve so that overheating of the resistor can be avoided.



IMPEDANCE: 50 OHMS

VSWR: Less than 1.3:1 at 30 MHz

POWER DISSIPATION: 1500 Watts for 10 seconds

100 Watts **for 10 minutes**

When using the dummy load, make sure the DUMMY LOAD/ANTENNA switch (located on the back of the unit) is in the DUMMY LOAD position.

WARNINGS:

1. **Do not let the dummy load resistor get hot enough to glow red. The resistor can be permanently damaged. If the dummy, load resistor starts to glow red, turn the transmitter off immediately and allow the dummy load to cool down.**
2. **Never operate this load while it is immersed in any liquid.**