

OHR WM-2 Wattmeter

ALIGNMENT

Locate the molded power cable assembly. The *POSITIVE* lead is connected to the center pin of the molded plug. Use your ohmmeter to identify the *POSITIVE* lead. Be sure this *POSITIVE* lead connects to the *POSITIVE* terminal of your power supply. If the positive terminal of your power supply is not fused, you should add an in-line fuse holder with a $\frac{1}{4}$ A fuse in the positive supply line.

- () Attach the BLACK lead from your digital voltmeter to chassis ground. Carefully attach the other lead to the "TEST LOOP". You can use an alligator clip type jumper lead to connect to the test point if it is difficult to connect your probe directly to the test loop.
- () Attach the molded power cable to your power supply observing the correct polarity. Connect the molded plug to the WM-2. You can also install the 9V battery and forget the power supply. The WM-2 will operate with a voltage from 9 - 13.6 VDC.
- () Apply power to the wattmeter. Select the power source you have elected to use with the rear panel slide switch.
- () Be sure the WM-2 is in the off position. Check the position of the meter needle. If it is not resting on the zero mark, use the zero adjustment screw on the meter face plate to zero it.
- () Place the switch on the front panel of the WM-2 to the 10W position. Adjust pot R6 for a reading of 2.56V on the voltmeter. Adjust pot R8 for a full scale reading of 10W on the wattmeter.
- () Adjust pot R6 for a reading of 0.800V on the voltmeter. Adjust pot R11 for a full scale reading of 1W on the wattmeter.
- () Adjust pot R6 for a reading of 0.251V On the voltmeter. Adjust pot R14 for a full scale reading of 100mW on the wattmeter.
- () Turn the WM-2 to the off position. Without disturbing any of the pot settings, very carefully cut jumper JP1. JP1 is right next to pot R6. *DO NOT CUT THE TEST LOOP*. Remove your voltmeter lead from the test loop. Alignment is now complete.
- () Position the cover over the chassis and line up the two holes on the sides. Secure the cover with the two black $\frac{1}{4}$ " sheet screws. This completes the assembly and alignment of your WM-2.

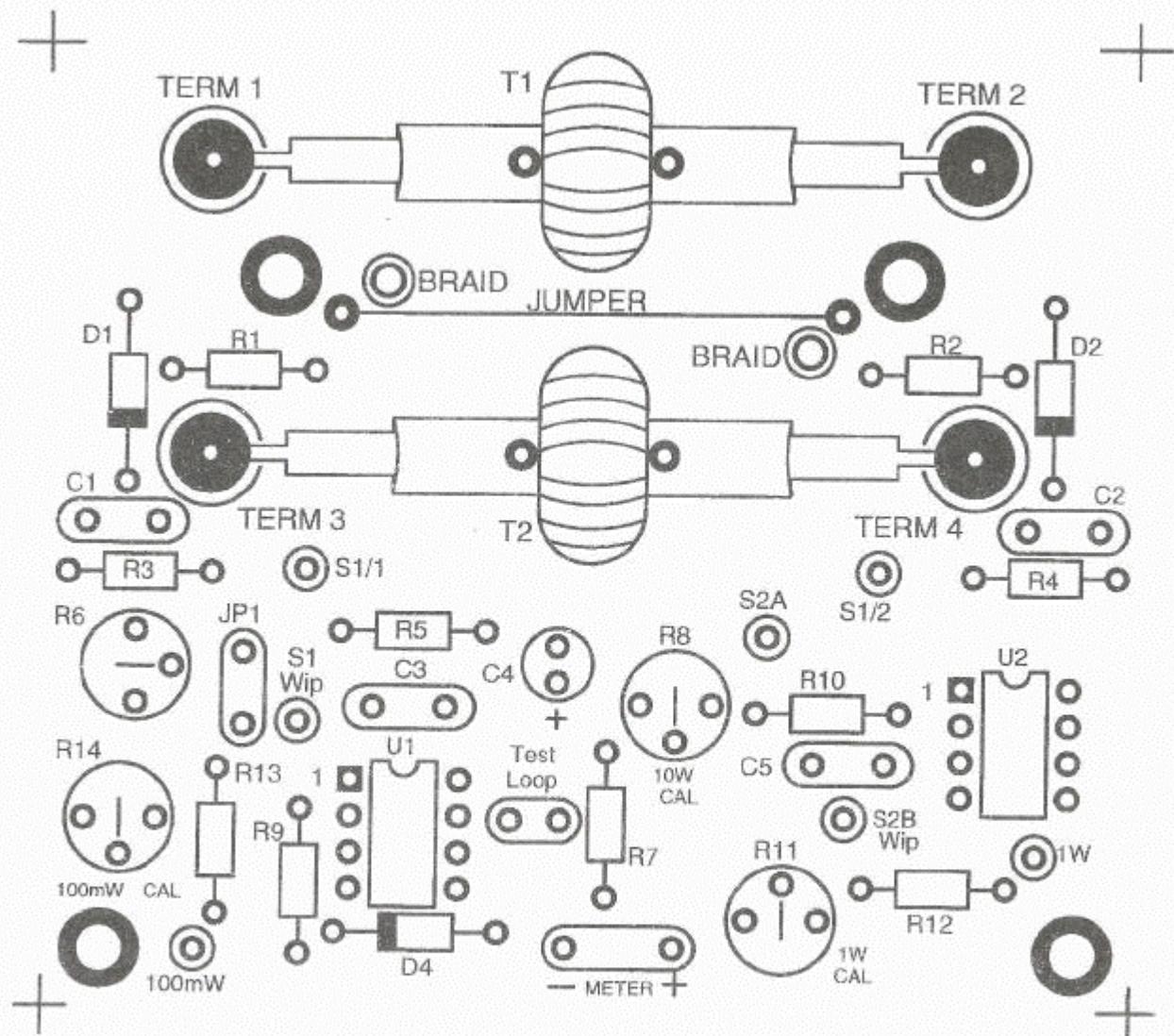
OPERATION

The operation of the WM-2 is very easy and straightforward. Always start a measurement with the wattmeter in the 10W position and then switch to a lower position. To measure power, select the appropriate scale. Put the FWD/REF switch in the FWD positions to read the reflected power, simply set the switch to the REF position. The power flowing in the line is the forward reading minus the reflected reading. To adjust a transmatch, put the WM-2 between the transmitter and transmatch and adjust the transmatch for the lowest reflected power.

This directional wattmeter can do anything an SWR meter can do, and much more. Because you can measure power anywhere in a system, you can use the wattmeter to find cable and transmatch losses, measure transmitter power, measure power at various points in a transmitter during the building process and much more.

The WM-2 will operate on any voltage between 9 - 13.6VDC. The meter circuit draws very little current, typically 1.2mA on stand-by. The input and output impedance is 50 ohms.

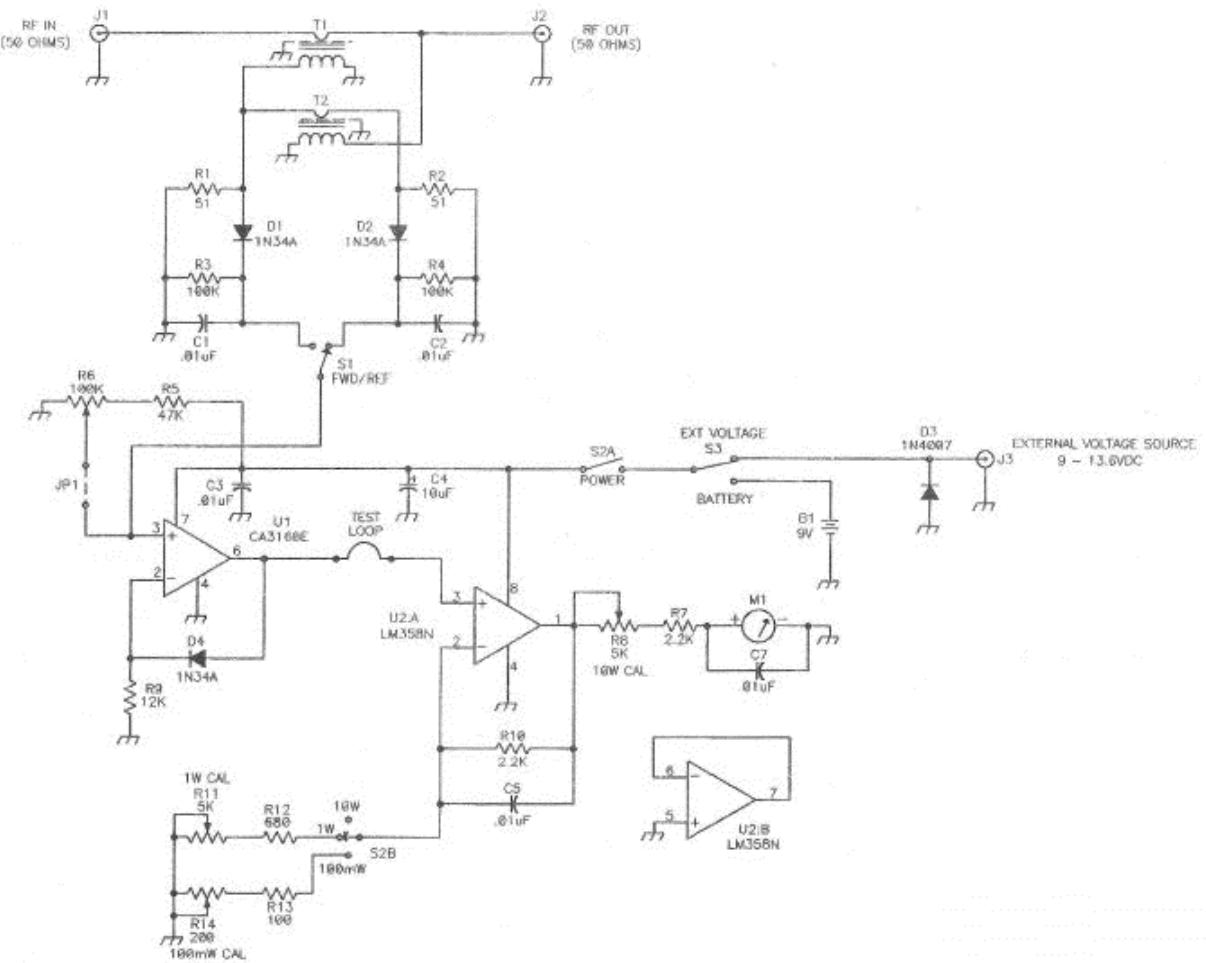
I hope you have enjoyed building the WM-2 and that it provides many years of reliable service.



PARTS OVERLAY

40-205

WM-2



OHR WM-2 Schematic