TELEWAVE, INC.

30 - 960 MHz

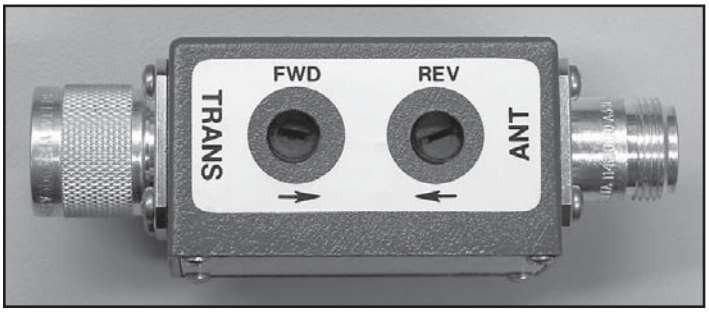
POWER MONITOR CALIBRATION

PM-1A, PM-2A

TEST EQUIPMENT MINIMUM REQUIREMENTS:

1. RF signal source capable of producing desired power level at desired frequency.
2. Calibrated inline RF wattmeter, such as Telewave Model 44AP or 44L1P.
3. 50 ohm RF load termination with suitable capability for the power levels in use.
4. Voltmeter or micro-ammeter capable of reading 0-5VDC or 0-50 uA full scale.
   Tools required: small flat-blade screwdriver, RCA cable or phono plug adapter.

PM-2A top view showing RCA output connectors.



PM-2A bottom view showing calibration pots.

TEST SETUP

Locate and remove the chrome pop-off covers on the bottom of the power monitors to access the calibration pots.

PM-1A - single direction - “FWD” only

PM-2A - dual direction - “FWD” and “REV”

Connect the inline wattmeter between the RF source and the “TRANS” connector on the power monitor. Connect a suitable RF load or the system antenna to the “ANT” connector on the power monitor.

TELEWAVE, INC.

851 - 869 MHz

POWER MONITOR CALIBRATION

PM-1A, PM-2A

CALIBRATION

For PM-1A or PM-2A: If a Telewave wattmeter panel is being used, connect the power monitor to the appropriate panel input with the RCA cable per the instructions supplied with the panel. Select the correct monitor position on the panel, and enable the RF source to produce power at the desired level and frequency.

Using a small flat-blade screwdriver, adjust the "FWD" pot until the wattmeter panel displays the same power as the inline wattmeter. Repeat this procedure for all desired power levels and frequencies that will be used.

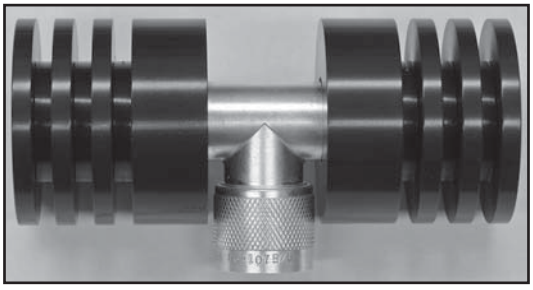
For PM-2A only: Disable the RF power source and reverse the direction of the power monitor in the line, so that the RF power source is now connected to the "ANT" input. Switch the inline wattmeter and wattmeter panel to display reverse power or reverse the wattmeter connections in the line, and enable the RF power source. Using a small flat-blade screwdriver, adjust the "REV" pot until the wattmeter panel displays the same power as the inline wattmeter. Repeat this procedure for all desired power levels and frequencies that will be used.

Alternate method for reverse power calibration:

Equipment required:
25 ohm RF termination with sufficient capability for the power levels in use.

OR

(2) 50 ohm RF terminations with sufficient power capability with a "T" connector.



(2) TWL-35 loads with tee connector.

NOTE: The RF power source must be capable of operating into a 2:1 VSWR for the duration of this calibration.

With the 25 ohm termination installed, switch the inline wattmeter to measure forward power and enable the RF power source. This termination creates a 2:1 mismatch and should generate 10% reflected power. Adjust the "REV" pot until the wattmeter panel indicates 10% of the indication on the inline wattmeter, or measure the current and/or voltage as required.

If a Telewave wattmeter panel is not available or is not used, the power monitor can be adjusted to provide a specific voltage level or levels between 0.5-5 VDC, or current levels between 0 and 50 uA. To read voltage, the FWD or REV output must be terminated with resistance equivalent to what will be encountered in normal operation. Output voltage is measured across the termination resistance.