

MODEL 44A, AP

BROADBAND RF WATTMETER



- Requires no inserts or "slugs"
- No bandswitching
- Measures 1 to 500 watts
- Five power ranges
- Five watts full scale range
- Frequency range 20 to 1000 MHz
- Measures forward and reflected power
- Shock-mounted meter movement
- Available with N or UHF Quick-Change connectors (others optional - see reverse)
- Light weight - easy to carry
- -40 dB RF sampling port optional

The Telewave Model 44A RF Wattmeter is a compact, versatile instrument used for direct measurement of forward and reflected RF power. Thanks to its wide band capability and dynamic range, no elements, inserts, or bandswitching are required.

The 20 uA taut-band meter movement is shock mounted in a rugged, diecast housing, making this instrument ideal for mobile radio installation in aircraft or vehicles, as well as base stations.

Model 44AP includes an RF sampling port, with an output 40 dB below the total transmission line level, for frequency measurement, signal injection, or spectral analysis.



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MODEL 44A, AP

Description

The Model 44A/AP bi-directional power monitor is a portable instrument used in measuring forward and reflected power in a coaxial transmission line under any load conditions.

This wide-band instrument covers the frequency of 20 to 1000 MHz with a power range of 1 to 500 Watts. The meter movement can be turned off for rough handling when not in use. A leather carrying strap is provided to facilitate portability.

Model 44AP provides an optional RF Sampling probe designed to accurately extract a low level of RF power as it passes through the instrument. This input/output port is accessed via a BNC connector located on the side of the meter. It allows injection of an input signal into the device under test, or can be used for spectrum analysis and frequency measurements without affecting the operation of the meter.

Operation

The Model 44A/AP has built-in precision directional detectors which sample forward and reverse CW power flow in a specially engineered section of transmission line. The sampled current is scaled to drive the 20 uA taut band meter. Forward and reflected power can be directly measured by using the FWD-REV switch. VSWR (Voltage Standing Wave Ratio) is easily determined by comparing these measurements and using the convenient chart on the back of the instrument.

Five power scales are provided. The 500 watt scale will test most high powered transmitters, while the 5 watt scale makes it simple to tune low powered portables. The excellent stability of this unit and the ability to switch it from one power range to another to check the calibration eliminates the need for a secondary standard to verify calibration.

SPECIFICATIONS

Full Scale Power Ranges	5, 15, 50, 150 and 500 Watts
Impedance, Primary Line	50 Ohms nominal
VSWR	1.1 maximum
RF Sampling Port (44AP)	-40 dB +/-2 dB below total power (forward + reverse)
Connectors: Input / Output	N-Female Standard, UHF, DIN, TNC, BNC optional
Sample Port	BNC-Female
Dimensions	
Height:	6.625 inches (168.3 mm)
Width:	4 inches (101.6 mm)
Depth:	3.25 inches (82.6 mm)
Weight:	3 pounds (1.36 kg)
Frequency Range, Accuracy	See Table Below

METER ACCURACY

+/-6% with correction		+/-5%	Type N Connectors +/-6% (UHF Connectors Not Specified)
20 MHz	150 MHz	512 MHz	1000 MHz

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