



## Watt Meter

The Watt Meter will operate over a 100 kHz to 10 MHz frequency range and up to 2,000 Watts full scale. Each Watt meter is enclosed in a small plastic enclosure with RF input and output connectors, a DC power connector, and two output connectors for the average and peak power signals. One output signal provides a calibrated DC voltage proportional to the average power level. The other signal provides a calibrated voltage that follows the envelope and represents the peak envelope power.

### Watt Meter Selection Matrix

MODEL	DISPLAY	SAVE AS LOG FILE	POWER SCALE (Watts)	RESOLUTION (Watts)	CALIBRATION POINT (Watts)
21A	4.5 digit LCD		0 - 200	0.025	10
22A	4.5 digit LCD		0 - 2,000	0.25	100
23A	Desktop GUI via USB	√	0 - 200	0.025	10
24A	Desktop GUI via USB	√	0 - 2,000	0.25	100

### Universal Technical Specifications

Output data: Average power and peak envelope power

Sample rate: 10 Samples/second (up to 48K Samples/second with custom software)

Signal scaling: 0.001 Volt per Watt (0.200 V at 200 W) on 200 W range 0.0001 V/Watt (0.200 V at 2000 W) on 2000 W range

Frequency range: 100 kHz to 10 MHz (min.)

Loss thru meter: <0.5%

Filter corner frequency: Switch-selectable, 3.2, 10.6 or 32.7 kHz, for peak envelope power output

Calibration point: 100 Watts into 50 Ohms at 850 kHz, on 2000 W range

RF connectors: BNC female in and out

Load impedance: 50 Ohms (nom.), 10 – 250 Ohms OK

Power supply: Desktop-style modular AC adapter, 100-240 VAC 50-60 Hz input, 6VDC output (Supplied with meter)

### Watt Meter Selection Matrix

MODEL	Test Power Level High Resolution (Watts)	Test Power Level High Power (Watts)
21A	2.5, 5.0, 10.0, 15.0	20, 50, 100, 150
22A	25, 50, 75, 100, 150	50, 100, 150, 250
23A	2.5, 5.0, 10.0, 15.0	20, 50, 100, 150
24A	25, 50, 75, 100, 150	50, 100, 150, 250

### Optional Detailed Calibration

Optional Watt meter calibration is performed using an absorbing-type RF Wattmeter as a reference standard. An included test report will include plots of the Watt Meter's frequency response and linearity.

Reference meter: Agilent/HP EPM-441A RF Power Meter

Agilent/HP 8482H RF Power Sensor, calibrated 0.1 MHz – 4.2 GHz, 3.5 Watts maximum input power

Bird model 8322 RF attenuator 200 Watts continuous, 30 dB, 50 Ohms