

POWER METER

RF Wattmeter

MODEL 4480A

The **RF** Experts

Element-Free. Digital-Ready.

The Bird 4480A Wattmeter redefines RF power measurement with precision and simplicity. Its element-free design delivers accurate true average power measurements for Continuous Wave (CW) and digitally modulated signals from **2 MHz to 30 MHz** and **25 MHz to 1000 MHz**. Switch between Watts and dBm effortlessly. With added Return Loss (RL), plus Forward Power, Reflected Power, and VSWR, it consolidates critical data for seamless operation and performance.

Ideal for telecommunications, broadcasting, industrial RF systems, research and development and more, the 4480A is built for demanding environments, offering unmatched **accuracy ($\pm 4\%$)** and **power handling up to 10,000 Watts**.

KEY FEATURES

- **Element-Free Design:** Perform measurements across multiple frequency bands without managing separate elements, saving time and effort.
- **True Average Power Measurements:** Ensure accurate power readings for both CW and digitally modulated signals in one device.
- **Wide Frequency Range:** Measure signals from 2 MHz to 1000 MHz, accommodating a broad spectrum of RF applications.
- **High Power Handling:** Measure up to 10,000 Watts, providing capability for high-power applications.
- **Precision Accuracy:** $\pm 4\%$ accuracy ensures reliable power measurements for optimized system performance.
- **Customizable Readings:** Display measurements in either Watts or dBm, tailored to your application.



Beyond Simple Signals: Master
Digitally Modulated Formats

APPLICATIONS

- **Telecommunications:** Ensures optimal performance in wireless systems like cellular, satellite, and Wi-Fi.
- **Broadcasting:** Maintains signal integrity in TV and radio transmission.
- **Military Communications:** Ensures reliable performance of tactical and strategic RF systems.
- **Aerospace & Defense:** Supports precision in complex communication and radar systems.

MEASUREMENT

Frequency Range	
Low Band	2 MHz to 30 MHz
High Band	25 MHz to 1000 MHz
Power Range	
2 MHz to 30 MHz	10 W to 10 kW, low band (40 dBm to 70 dBm)
25 MHz to 1000 MHz	1 W to 1 kW, high band (30 dBm to 60 dBm)
Accuracy	±4% of reading (±0.18 dB)
Peak to Average Ratio	10 dB max.
Directivity	25 dB min., 30 dB typ.
Impedance	50 Ω nominal
Insertion	0.1 dB max
VSWR	1.2:1.0 max
Input Attenuator Range	0 to 30 dB, 1 dB step

SYSTEM

LCD Display	Transflective, white LED backlit
Battery Type	Internal, NiMH 6-AA
Battery Operating Time	Minimum 8-10 hours
Battery Charge Time	6-8 hours typical (Recharge on or off)
Calibration Interval	Recommended interval of 12 months
Power Supply	DC 12V, 2A (0.6A max. draw)

ENVIRONMENTAL

Operating Temperature	0 °C to 50 °C, (32 °F to 122 °F)
Storage Temperature	-40 °C to 71 °C (-40 °F to 159.8 °F)

PHYSICAL

Size	5 in W x 7.3 in H x 2.65 in D (127 mm W x 185.42 mm H x 67.31 mm D)
Weight	2.9 lb (1.32 kg) typical, including batteries

CERTIFICATIONS

MIL-PRF-28800	Class 3
Certifications	CE, RoHS, UKCA

CONNECTORS

RF Connectors	Input: Type N(f); QC type, field changeable Output: Type N(f); QC type, field changeable
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STANDARD ACCESSORIES

4480A152	Charger, Type-DC Jack, 110/220V AC, DC 12V, 2A
4421-055	Standard Power Cord

OPTIONAL ACCESSORIES

4480A046	Transit Case
5A2416UK	Cord, International (UK)
RPK7000-2	Battery Replacement Kit

Power Measurements

- Forward (FWD)
- Reflected (RFL)
- Voltage Standing Wave Ratio (VSWR)
- Return Loss (RL)

Accurate power and VSWR measurements with a display toggling between Watts and dBm for flexible readings.

Three-button Interface

- Backlight & W/dBm Switch
- On/Off Switch
- High / Low Band Switch

This three-button layout delivers quick access to critical features, making it ideal for fast-paced or challenging work settings.



Integrated Battery Life Indicator

Readiness: Provides real-time battery status, enabling users to monitor power levels and ensure the equipment is always ready for critical operations.

240x128 pixels Backlit LCD display:

Ensures clear visibility of measurements and operational information, even in low-light environments

QC Series, Quick Change Connectors:

Enable fast and effortless connector swaps, providing compatibility with various radio types and ensuring seamless measurement versatility.

In dual-band systems, measuring power at both frequencies is crucial to maintain optimal performance, ensure reliable communication, and adapt to changing conditions effectively.

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