

# POWER METER

## RF Wattmeter

# MODEL 4480A

## Element-Free. Digital-Ready.

The Bird 4480A Wattmeter is more than just a tool—it's a game-changing solution designed to meet the rigorous demands of today's RF measurement landscape. With true average power measurements for both Continuous Wave (CW) and digitally modulated signals, the 4480A ensures unparalleled precision across critical frequency spans from 2 MHz to 30 MHz and 25 MHz to 1000 MHz—without the need for traditional, cumbersome elements.

Whether you are working in telecommunications, broadcasting, industrial RF systems, or research and development, the Bird 4480A delivers unmatched accuracy and reliability in every application. Its robust design and versatile capabilities make it the ideal tool for professionals who require consistent and precise measurements in challenging environments.

### KEY FEATURES

- **Element-Free Design:** Simplifies measurement across multiple frequency bands without frequency-specific elements.
- **True Average Power Measurements:** Measures true power for both continuous wave (CW) and digitally modulated signals.
- **Wide Frequency Range:** Supports a wide frequency range from 2 MHz to 1000 MHz, making it adaptable to various RF applications.
- **High Power Handling:** Up to 10,000 Watts, making it one of the most versatile wattmeters on the market.
- **Precision Accuracy:**  $\pm 4\%$  accuracy ensures reliable power measurements for optimized system performance.



## 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.

# ELEMENT-FREE RF WATTMETER

# 4480A

# Specifications

## MEASUREMENT

|                               |                           |
|-------------------------------|---------------------------|
| <b>Frequency Range</b>        |                           |
| Low Band                      | 2 MHz to 30 MHz           |
| High Band                     | 25 MHz to 1000 MHz        |
| <b>Power Range</b>            |                           |
| 2 MHz to 30 MHz               | 10 W to 10 kW, low band   |
| 25 MHz to 1000 MHz            | 1 W to 1 kW, high band    |
| <b>Accuracy</b>               | ±4% of reading (±0.18 dB) |
| <b>Peak to Average Ratio</b>  | 10 dB max.                |
| <b>Directivity</b>            | 25 dB min., 30 dB typ.    |
| <b>Impedance</b>              | 50 Ω nominal              |
| <b>Input Attenuator Range</b> | 0 to 30 dB, 1 dB step     |

## SYSTEM

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

## ENVIRONMENTAL

|                              |                                      |
|------------------------------|--------------------------------------|
| <b>Operating Temperature</b> | 0 °C to 50 °C, (32 °F to 122 °F)     |
| <b>Storage Temperature</b>   | -40 °C to 71 °C (-40 °F to 159.8 °F) |

## PHYSICAL

|               |  |
|---------------|--|
| <b>Size</b>   | 5 in W x 7.3 in H x 2.65 in D<br>(127 mm W x 185.42 mm H x 67.31 mm D) |
| <b>Weight</b> | 2.9 lb (1.32 kg) typical, including batteries                          |

## CERTIFICATIONS

|                       |                |
|-----------------------|----------------|
| <b>MIL-PRF-28800</b>  | Class 3        |
| <b>Certifications</b> | CE, RoHS, UKCA |

## CONNECTORS

|                      |   |
|----------------------|---|
| <b>RF Connectors</b> | <b>Input:</b> Type N(f); QC type, field changeable<br><b>Output:</b> Type N(f); QC type, field changeable |
|----------------------|---|

## STANDARD ACCESSORIES

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

## OPTIONAL ACCESSORIES

|                  |                          |
|------------------|--------------------------|
| <b>4480A046</b>  | Transit Case             |
| <b>5A2416UK</b>  | Cord, International (UK) |
| <b>RPK7000-2</b> | Battery Replacement Kit  |

### Power Measurements

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

Accurate measurement of forward and reflected power, as well as VSWR, is essential for ensuring reliable communication and system performance.

### Three-button Interface

**On/Off, Switch High and Low Band, Backlight:** The device's interface is designed for easy use in various conditions, allowing operation with gloves and in low light. It simplifies interactions to ensure a smooth and efficient user experience.



### Integrated Battery Life Indicator

**Readiness:** Users can ensure their equipment is always ready for use, which is essential for operational success.

### 240x128 pixels Backlit LCD display:

Provides a balance between display resolution and power efficiency, making it suitable for a wide range of applications where information needs to be conveyed clearly and reliably.

### QC Series, Quick Change Connectors:

The ability to quickly change or replace components can be critical, allowing many types of radios to be measured with ease.

In dual-band systems, power measurements at both frequencies are essential for maintaining optimal performance, ensuring reliable communication, and adapting to dynamic conditions.

## [birdrf.com/products](http://birdrf.com/products)

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