



## Features - USP-50

- ◆ Analog Reading
- ◆ 0 to 30 Watts Range
- ◆  $\pm 3\%$  + One Count Accuracy
- ◆ 2.5 Second Integration
- ◆ 0.05 Watt Display Sensitivity
- ◆ 10 lbs Light Weight
- ◆ Digital Reading
- ◆ Continuous or Pulsed Power
- ◆ Integrated Carrying Case
- ◆ RS232 Output
- ◆ 0.1 to 30.0 Watt Range,  $\pm 5\%$  Accuracy
- ◆ 1 to 10 MHz Frequency Response
- ◆ 3" Max Transducer Diameter
- ◆ Built-in Transducer Holder
- ◆ Degassed Water is the Testing Medium
- ◆ Eight AA Batteries or 120 VAC power
- ◆ Compact Size of 8" H x 8" W x 8.75" D
- ◆ Unit Weight is 11 lbs

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**USP-50**

The Portable Ultrasound Power Meter, Model USP-50, is designed to measure the ultrasound power output of diagnostic or therapeutic transducers up to 30 watts. The power meter comes complete with all accessories (clamp assembly, cone assembly, power supply, and tank) in a sturdy foam padded carrying case (picture right). The water tank requires only one pint of de-gassed distilled water. If de-gassed water is not available, use distilled water.

The principle of measurement is the radiant force method. The meter uses a positioning clamp to hold the transducer in de-gassed water above a conical target. The ultrasonic energy passes through the water to reflect off the target and is then absorbed by the rubber lining. The radiant power is directly proportional to the total downward force (weight) on the target. This weight is then transferred through the target support assembly to the electro-mechanical load cell inside the scale. The cell is in a computer-controlled feedback loop and produces a digital readout in watts of power (custom units) or grams of force. The choice of units (grams or watts) is selected by front panel pushbutton.

## USP-50 SPECIFICATIONS

Power Range	0 to 30 Watts
Resolution	+ 50 mW
Minimum Detectable Power	50 mW
Display Sensitivity	0.05 Watt
Accuracy	± 3% + One Count
Stabilization	2.5 Second Integration
Maximum Weight Capacity	400 Grams
Maximum Transducer Size	3" Diameter
Transducer Operating Frequency	0.5 to 10 MHz
Test Media	Degassed Water
Computer Interface (Optional)	USB or RS-232
Default Baud Rate	1200
Power Supply	120 VAC to 15 VDC, 100 mA adapter with 6-Ft. Cord. 240 VAC optional.
EMC	Conforms to EN 61326-1, EN 61326-1 ClassB
Electrical Safety	Conforms to EN 60950, EN 61010
Size	5.0" x 10" x 8.5" (H x L x W)
Weight	10 lbs. Net w / case

### OPTIONAL & REPLACEMENT PARTS:

Positioning Clamp Assembly  
Cone Assembly  
120 VAC power adapter #  
MKD-351500100  
USB Cable #YADAP-USB  
RS-232 Cable #YADAP-RS



Ultrasonic Wattmeters

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