

## Features - USP-50SP

- ◆ RESOLUTION: 50mW (150 mW in grams mode)
- ◆ MEASUREMENT RANGE: 0 TO 30 WATTS
- ◆ FREQUENCY RANGE: 0.5 TO 10MHZ
- ◆ MEASURES PULSED OR CONTINUOUS POWER
- ◆ SELECTABLE READOUT IN WATTS OR GRAMS
- ◆ BATTERY OR LINE-POWERED
- ◆ DIGITAL LIQUID CRYSTAL DISPLAY
- ◆ AUTOMATIC ZEROING & STABILIZATION
- ◆ FIVE POINT CERTIFICATION (NIST TRACEABLE)



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# Ultrasound Wattmeter

## BC Biomedical USP Series

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### USP-50SP

Ultrasound watt meters have been used worldwide since 1977 and are a widely accepted standard for documenting the power output of medical transducers. The Model USP-50SP Ultrasound Power Meter was developed to test therapeutic and diagnostic transducers. The compact and light weight Model USP-50SP meets all the requirements of a portable test instrument with the reliability and proven performance of the ULT-Series. The Model USP-50SP uses a 5" diameter, 3 1/2" high test tank.

The most reliable and repeatable means of measuring ultrasound power is by the radiation force method. The transducer to be tested is centered above a 45° air-backed cone target in de-gassed water. The coupling is made to a precision balance capable of resolving  $\pm 0.15$  watts. When acoustic energy is applied to the cone, the resultant force is directly proportional to the total radiated power. The test tank is lined with sonic absorbent rubber to prevent acoustic reflection. The balance is programmed to convert milligram magnitude forces direct to a readout in watts with good resolution. Measurement accuracy of the power meter can be verified by placing a calibrated weight on the cone's support arm. (The supplied 1 gram calibration weight equals 14.7 watts.)

# BC Biomedical USP-50SP

## USP-50SP SPECIFICATIONS

<b>Measurement Range</b>	0 to 30 Watts, 0.05 watts minimum detectable power
<b>Resolution</b>	± 50 mW, ± .01 gram (150 mW)
<b>Accuracy</b>	± 3% @10 Watts, 25°C
<b>Transducer Frequency</b>	.5 to 10 MHz
<b>Maximum Transducer Diameter</b>	4 1/2" Inches
<b>Ultrasound Test Media</b>	Degassed Water
<b>Integration Time</b>	2.5 seconds
<b>Display</b>	7 segment 6 Digit 0.6" (15mm) high LCD
<b>Line Power</b>	120 VAC to 12 VAC 500 mA adapter with 6 Ft. cord
<b>Battery Operation</b>	4-AA: battery life over 40 hrs Battery Level Indicator
<b>Dimensions</b>	6"H x 16 3/4"L x 12.0"W
<b>Weight</b>	9.75 lbs (Polyethylene)



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