## ZM1/ZM1P/ZM2N

The Model ZM1, ZM1P & ZM2N are unique test and measurement instruments that are useful to every sound contractor or installer.

The ZM1 measures the impedance of loudspeakers and entire distributed loudspeaker systems as well as individual components (resistors, capacitors, inductors). It will also calculate the wattage that will be produced on an installed loudspeaker system.

The ZM1P has all the features of the ZM1 but adds an Overload Protection Circuit that prevents the meter from being damaged from amplifier output overloads up to 120VAC and a Tone Generator to improve system testing and performance.

These are rugged hand held battery powered instruments with special circuitry to prolong battery life. They come complete with high quality test leads.

The ZM2N takes the advanced features of the ZM1P a step further. Incorporating all the features of the ZM1P, the ZM2N provides a higher level tone output - ideal for use in noisy environments. The ZM2N is battery powered and it can also be powered from any 115VAC or 220VAC\* source and comes in a virtually indestructible, crushproof carry case. The lid is removable to allow access into tight spaces. The case employs compound latches, a locking feature and stainless steel hardware is used throughout. High quality test leads are supplied.

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SPECIFICATIONS Test Frequencies 100Hz, 330Hz, 1kHz, 10kHz

Voltage Ranges 25Vac - Some USA public schools and institutions 50Vac - International 70Vac - USA Industrial Standard 100Vac - International

Impedance Measurement Ranges 0 - 199.9 ohms

0 - 1999 ohms

0 - 19.99k ohms

Wattage Measurement Ranges 0 - 19.99 watts

0 - 199.9 watts

0 - 1999 watts

Accuracy (typical) Impedance  $\pm$  3% / Wattage  $\pm$  2%

Connectors All Models: Load / Output - Banana Jacks ZM2N Only: Tone / Line Input - 1/4" Phone TS 10Kohm

Display 3½ Digit LCD with Battery Low Indicator

Test Tone ZM1 - Not available ZM1P - 400mv (-6dBu) ZM2N - 70Vac rms Nominal

Power Requirements ZM1 / ZM1P - Eight "AA" Alkaline Batteries. ZM2N - Sixteen "AA" Alkaline, Nicad or Nickel-Metal Hydride Batteries or 115VAC. Also available in 220VAC\* configuration.

\* Order 220VAC as ZM2N.2

Expected Battery Life ZM1 / ZM1P - Impedance Mode - 35 hours continuous ZM2N - Impedance Mode - 70 hours continuous ZM1 / ZM1P - Calculated Watts Mode - 23 hours continuous ZM2N - Calculated Watts Mode - 50 hours continuous

Approvals: - ZM1, ZM1P, ZM2N

Emissions: - EN 55022 B - FCC Class B

Immunity: - EN 55024 B

Size ZM1 / ZM1P - (W x H x D) 3<sup>1</sup>/<sub>4</sub> x 8 x 2<sup>1</sup>/<sub>4</sub> ZM2N - (W x H x D) 10<sup>1</sup>/<sub>4</sub> x 5 x 9<sup>1</sup>/<sub>2</sub>

Weight ZM1 / ZM1P - 12 oz. ZM2N - 5 lbs.

Case Material ZM1 / ZM1P - High Impact ABS ZM2N - Fiberglass Reinforced ABS

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