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Antennas Extend Wireless Systems

Newer antenna designs are achieving smaller footprints and, at the same time, broader bandwidths, as more and more antennas are asked to handle multiple frequency bands.

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Antenna design expertise at [Kaltman Creations LLC](#) extends very low in frequency, as the firm's customers have often asked for lower-frequency antennas for such measurement applications as electromagnetic-compatibility (EMC) testing. As a result, the company recently announced new lines of extremely low frequency (ELF), super-low-frequency (SLF), and low-frequency (LF) measurement antennas. These antennas expand on the firm's higher-frequency radial isotropic and log-periodic antennas for EM compliance testing, spectrum surveys, and general research applications.

The new antennas provide frequency coverage from 3 Hz to 60 MHz (across six models). The antennas carry the company's "LoWavz Antennas" trademark and provide flat gain in both directional and omnidirectional radiation patterns ([Fig. 2](#)). according to Mark Kaltman, President of Kaltman Creations, "We have a strong customer base in the 1 Hz to 1 MHz and 1 MHz to 9.4 GHz ranges as a result of our spectrum analyzer sales. Our new LoWavz antenna line fills the need for affordable yet accurate low frequency applications covering the ELF to HF bands." Most of the lightweight antennas are designed for 50-Ω systems and provide as much as 12 dBi gain. Several models include external preamplifiers for additional signal boosts.

LoWavz antennas from Kaltman Creations provide as much as 12 dBi gain at low frequencies in the ELF to HF bands, ideal for EMC testing.

