



NEW PRODUCT ANNOUNCEMENT

ROTOTILLER® Shared Aperture FM Antenna

Shared Aperture FM Antennas for Simulcast FM HD Radio™

ERI Shared Aperture FM antennas for simulcast analog and IBOC digital transmission operation are an antenna configuration utilizing the industry leading ROTOTILLER® Series FM antennas, with an installed base, worldwide, larger than any other FM antenna type or design. The system is capable of implementing the proposed increase to digital IBOC effective radiated power (ERP) levels of up to 10% (-10 dBc) of authorized analog ERP.

The shared aperture antenna system is available in a large variety of configurations and utilizes construction methods that yield analog to digital isolation ratios of -40 dB, for single frequency applications. The antenna systems are also available in arrays that are suitable for multiplexing two or more signals into a common antenna and transmission line. In addition, to multiplexed designs the shared aperture FM antennas are available as directional FM arrays and can be measured and optimized for best radiation performance on ERI's full scale antenna test range.

The key benefits of the shared aperture approach, versus other methods of combining analog and digital signals for simulcast include:

- The analog and digital antennas can be mounted at the same, or nearly the same, height above average terrain to maintain coverage symmetry.
- The arrays can be configured for very high power handling capability to accommodate the requirements of grandfathered super power FM facilities.
- Shared aperture arrays, as is true of ERI's unique LYNX™ Dual Input FM Antenna, is a low loss method of combining analog and digital FM signals which does not waste digital or analog power into reject loads, as is required with hybrid injectors.
- Shared aperture arrays can be configured to transmit combined FM signals and as directional FM antennas.
- The shared aperture antenna design consumes little or no additional tower space and the analog and digital arrays are fed with independent transmission line, which enhances overall system reliability.



HD Radio is a trademark of iBiquity Digital Corporation.