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on Electrical and
Mechanical Specs and
Azimuth and Elevation
Images.**

The CBR (Cavity Backed Radiator) antenna offers ideal characteristics to FM stations desiring the advantages of combined station operation or to stations requiring special directional coverage.

The CBR antenna consists of a crossed dipole radiator fed in phase quadrature and mounted within a circular cavity. The signal emanating from the cavity is right-hand circular. Cavity size is principally determined by beam width requirements. A beam width of 90 degrees is required for a 4-around array and 120 degrees is required for a 3-around array. When operating in dual mode (IBOC/analog) this antenna is designed for common amplification or high level combining.

The cavity used in the Dielectric circularly polarized FM antenna is a welded galvanized steel grid. The cavity grid is supported from a center mounting plate, which also serves as a mounting for the dipole assembly and for attachment of the unit to the supporting structure. The use of grid cavities and aerodynamic design significantly reduces weight and wind load requirements of the supporting structure. This often represents substantial savings in support structure cost compared with other panel style antenna designs.

Multi-station FM operation where two or more stations share the same antenna has increased in popularity due to the inherent cost savings. Multi-station operation can be achieved only with the wide bandwidth characteristics the Dielectric CBR antenna offers. These characteristics are achieved through the use of a broadband radiating element in conjunction with high power hybrid junctions.

For omnidirectional operation, the shape of the standard azimuth pattern will vary by less than ± 2.0 dB for both, the three-sided and the four-sided tower configurations. Stations employing directional arrays will find one of the several standard patterns available to be ideally suited to their specific needs. In case standard patterns are not suitable, pattern optimization can be done to derive the desired pattern.

Specifications:

- Ideal for multi-station operation
- Designed for analog and IBOC signals combined with common amplification or high level combining
- High power handling
- Very low VSWR
- Wind load minimized
- Available in one, two, three or four around configurations
- Designed for -10dB IBOC
- Superb horizontal circularity
- Vertical pattern control to ensure uniform coverage
- Made from corrosion resistant materials; galvanized steel, stainless steel, brass and copper
- Full assembly and testing available at our full capability antenna test range