

506 Conical Monopole Antenna

The Model 506 family of conical monopole antennas utilizes a new class of radiating structure which, when combined with structural innovations, results in an extremely simple installation and a broader operating bandwidth than previous versions of this type of antenna. The novel TCI radiating configuration maintains the pattern close to the ground over a six-to-one bandwidth. The pattern of conventional conical monopoles rises after a four-to-one bandwidth has been covered.

Simplify installation while enhancing bandwidth and pattern control.

In the 506, guys perform their usual structural function and serve as part of the radiating structure as well. No "spreader tubes" or difficult rigging tolerances are involved. The 506 series is entirely aluminum. No dissimilar metals are employed anywhere in the antenna.

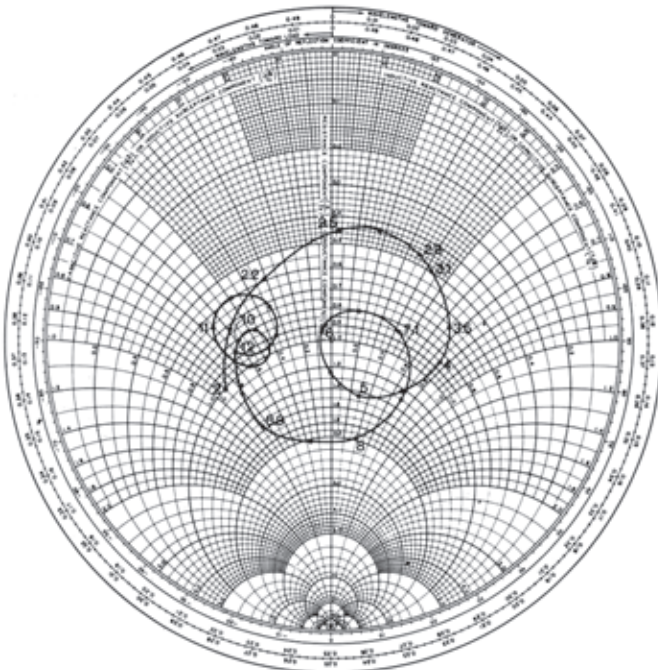
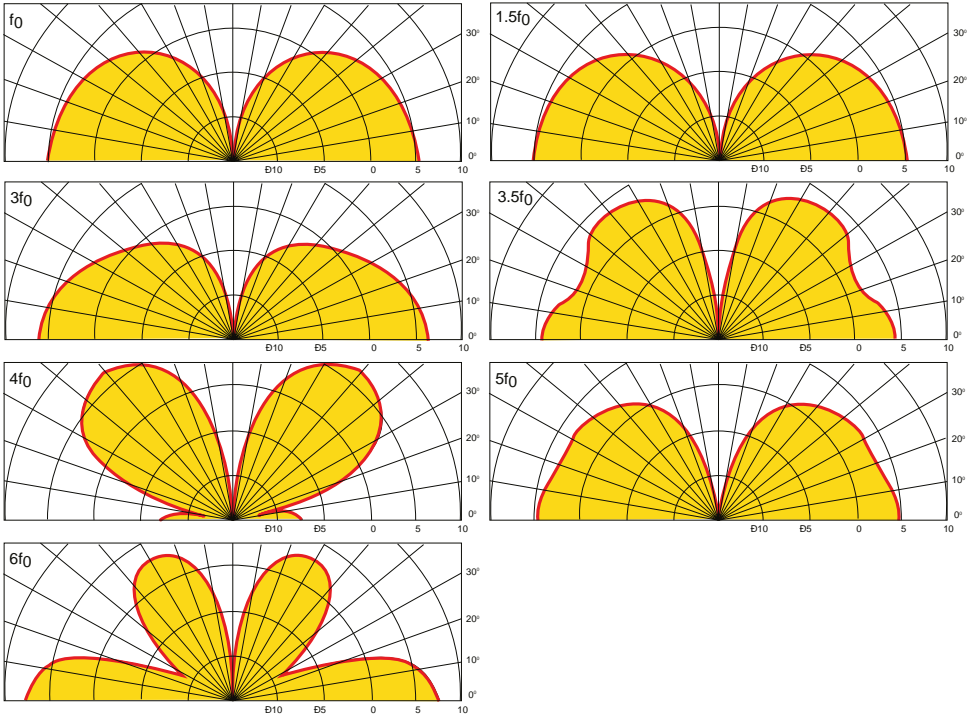
All TCI antennas share the same high-quality, exhaustively tested components and materials. All radiators, feedlines, and catenaries are Alumoweld, a wire composed of a high-strength steel core and a highly conductive, corrosion-resistant, welded coating of aluminum. All feedline and radiator tip insulators are made of high-strength glazed alumina, a material with an extremely low loss tangent (0.001), which is virtually impervious to the effects of ultraviolet radiation, dirt, and salt spray.

KEY FEATURES

- › Up to 7:1 impedance and pattern bandwidth
- › Lowest total installed cost
- › 2.5:1 VSWR max

506 System Details

Model 506 Elevation Patterns and Impedance Data



Model 506

Specifications

Polarization	Vertical
Azimuth Plane Pattern	circular within ± 0.5 dB
Nominal TOA	suitable for shore-ship; see patterns
VSWR	2.5:1 Max
Power Handling Capability	up to 100 kW Peak with special end seal
Bandwidth	up to 7:1
Environmental Performance	Designed in accordance with EIA Specification RS-222C to withstand forces of 225 km/h (140 mi/h) wind, no ice 145 km/h (90 mi/h) wind, 12 mm (1/2") radial ice.

> Size

Model Number	Frequency Range	Height		Length or Width	
		ft.	m	ft.	m
506-1-N	2–14 MHz	82	25.0	162	49.4
506-2A-N	3–21 MHz	52	15.8	108	32.9
506-6-N	5–30 MHz	32	9.8	66	20.1
506-7-N	4–24 MHz	42	12.8	80	24.4

* Measured from extreme guy points

> Power and Impedance Data

Model Number	Input Impedance	Power	Connector
506-N-02	50 Ω coaxial	Receive	Type N Female
506-N-03	50 Ω coaxial	1 kW avg/2 kW PEP	Type N Female
506-N-28	50 Ω coaxial	5 kW avg/10 kW PEP	7/8" EIA Female
506-N-03	50 Ω coaxial	10 kW avg/50 kW PEP	1-5/8" EIA Female
506-N-04	50 Ω coaxial	20 kW avg/70 kW PEP	3-1/8" EIA Female



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