

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.

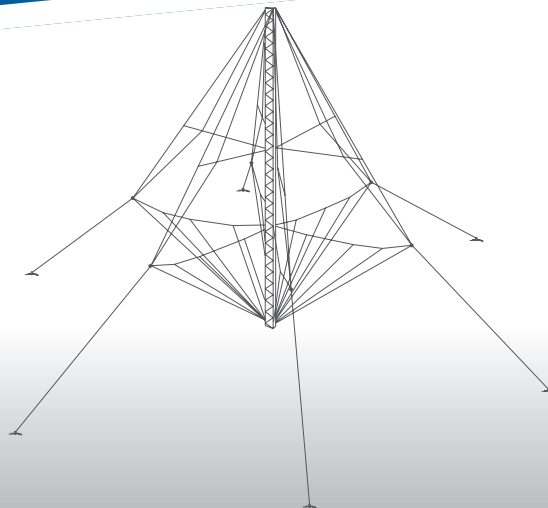
Simplify installation while enhancing bandwidth and pattern control.

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) and 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 Conical Monopole Antenna Specifications

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 or 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 |

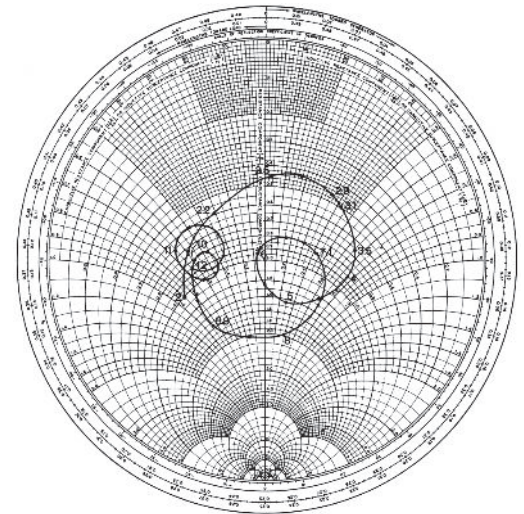
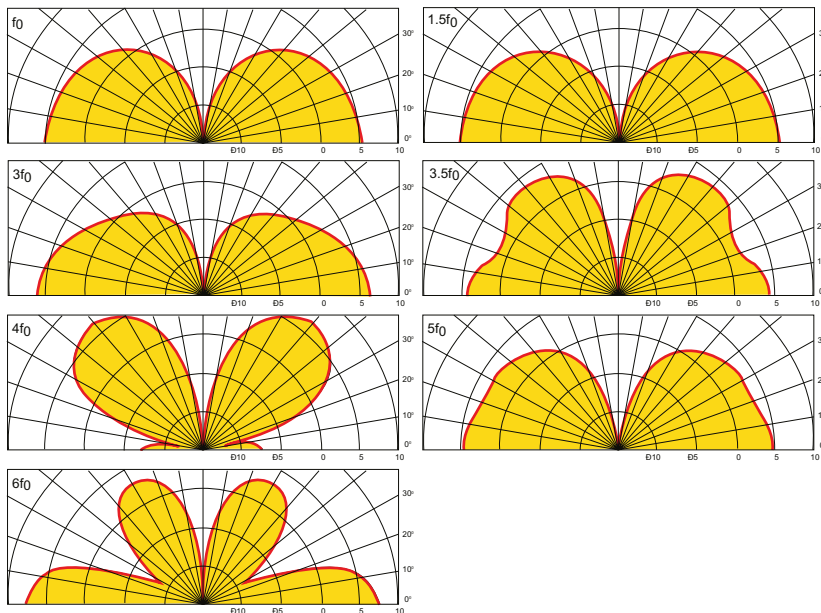
* Measured from extreme guy points

Power and Impedance Data

| Model Number | Input Impedance | Power | Connector |
|--------------|---------------------|---------------------|-------------------|
| 506-N-02 | 50 Ω coaxial | Receive | Type N Female |
| 506-N-06 | 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 |

> Model 506 Elevation Patterns and Impedance Data

Gain in dBi over perfect earth



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AN SPX TECHNOLOGIES PLATFORM

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