

PR-422/420 Marine TV Antenna for Ships

PR-422 is an Active Extra High Performance Omni-directional wide-band Terrestrial AM-FM-TV Antenna (0.1-30 and 40-860 MHz) designed for Maritime purposes where second rate efficiency is unacceptable.

Constructed for High End Commercial and Military use, this compact and robust antenna shell is made of thick UV protected ABS plastic filled with polyurethane foam which provides both structural support and environmental protection. The mounting base is cast from Almag Marine Aluminum Alloy which is powder coated and then oven baked. Mounting hardware is made of stainless acid-proof steel. The Shielded Low Noise Amplifier is protected from static charges and is removable for field repair or replacement.



- Frequency range: 0.1-860 MHz
- Average VHF gain: 25 dB (amp)
- Average UHF gain: tilt 16-20 dB (amp)
- VHF Noise figure: 3.0 dB (amp)
- UHF Noise figure: 2.5 dB (amp)
- Max output level: 111 dBuV min (2 signals-60 dBIM)
- Third order intermod products: >20dB IP3
- Antenna factor: Ka = 0.12 AM
- Filters: Band pass 100 KHz-30 Mhz., 47-108 MHz
- 174-230 MHz., 470-860 MHz.
- Broadband rejection filter: 140-165 MHz
- Polarization: horizontal
- Antenna pattern: omni-directional
- Supply voltage to antenna: 15VDC nominal
- Current consumption: 130 mA Nominal
- Operating temperature: -40 to +55 C
- Protection circuits: static discharge device fires at 65 volts
- Impedence: 75 ohm nominal
- Connector "F" type Gold electroplate or BNC-75

- Return loss: >10dB with optional output connector
- Radome material: UV protected ABS
- Flange material: Stainless, Almag or Powder Coated Almag
- Internal stabilization material: Polyurathane foam injection
- Element material: copper foil
- Element type: three looped dipoles with Z match pcb

- Shipping Weight: 9 pounds with 50 ft coax and aluminum flange
- Dimensions: width 44.5cm (17.5 in), height 44.5 cm (17.5 in)
- Shipping container dim: 18 inches wide x 18 inches high

PR-411 is based on a construction of 3 circular dipoles coupled to a low noise amplifier via a broadband filter network. Maximum performance is assured through the extensive use of a Network Analyzer in the initial design and in the final construction and tuning of each unit. Microwave transistors provide needed gain with a minimum of internally generated noise. Careful engineering and the use of very high quality components yields excellent intermod performance and sharp hand tuned filters greatly reduce the chance of interference from outside of the TV bands.

The PR-422 is at the head of a new 4000 Series Marine Cassette Amplifier System with distribution passive introduced in 1998. The Series 4000 is the result of painstaking engineering and the use of state of the art components such as high performance GaAs Heterojunction Bipolar Transistors.

PR-420 is identical with the omission of AM radio reception.

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