



PRODUCT INFORMATION

Component AM Radio High Performance Antenna

Part Number HPR.0990

Image



The heavy-duty HPR.0990 Antenna Coil can handle hundreds of watts efficiently.

Description

This high performance antenna offers a communication professional the ability to establish an AM broadcast signal more efficiently than before possible with an antenna of similar design and price point. Its 50-ohm resonant design requires only a matching transformer at its feed-point, eliminating the need for an antenna tuner (matching network). Designed to operate most efficiently in conjunction with a horizontal groundplane, this antenna is compact and light-weight, making it easy to ship, set up and install. It may be assembled in minutes, if required, for an emergency application.

Specifications

Power: up to 270 watts carrier (1700 kHz)/100% modulation; up to 180 watts carrier (530 kHz)/100% modulation. See Chart 1 below.

Frequency Range: Various versions of the antenna's design allow it to function on any frequency in the 470 to 1800 kHz operating range.

Radiation Efficiency: 65 (530 kHz) to 308 (1710 kHz) with 50' /32-element groundplane (mV/m/km/1KW IDF – Inverse Distance Field). See Charts 2 and 3 below.

Impedance: 10-20 ohms (typical) with 50' tip height and 25-50' radius groundplane (typical).

Mounting Format: Top of support structure [tower, mast or pole]. Lower 36" of antenna base clamps in insulator mounts which can be attached to a vertical support with a round or flat surface.

Type: center-loaded, bottom-fed vertical, whip-type antenna with adjustable 6-element capacitive top hat and adjustable vertical tuning section. Omni directional. Anodized aluminum finish. Guying ring included.

Please be aware that all products we describe here are subject to availability based on our manufacturing capacity and the shipping dates. While we have made every effort to ensure the accuracy of all information, we do not accept liability for any errors or omissions and reserve the right to change these specifications without notice.

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Specs (cont'd)	Audio Bandwidth (2:1 SWR): 530 kHz: +/- 1.5 kHz; 1700 kHz +/- 5.5 kHz. See Table 1 below.
	Temperature endurance: -40°C to 85°C.
	Wind endurance: greater than 100 MPH, unguyed. Greater than 140 MPH with the addition of guy lines (nonconductive only). Wind surface area maximum of 4.7 square feet (530 kHz).
	Weight of the complete antenna varies with frequency. 30.5 lbs nominal. Mounts with insulators (2): 5.5 lbs total.
	Overall assembly: 5 sections plus capacitive hat. Length varies with frequency and tip extension. Typical: 32'. Includes assembly hardware. Outside diameter of vertical sections taper from 2.5" (lower) to 1.0" (upper). Capacitive hat spoke length varies with frequency.
	Recommended separation from buildings and structures: 100' or equal to the height of the structure, whichever is greater.
	RF exposure separation: 1 meter minimum recommended for both occupational and controlled environments.
Options	<ul style="list-style-type: none"> • FlexPlane Pro Preassembled Portable Groundplanes • THEMATCHBOX Impedance Matching Transformer • Lightning Arrestor & Grounding Enclosure • Insulators with Stand-Off Mounts • Weatherproof Cabinets • Coaxial Cable with Connectors • Guying Kit • Support Poles & Masts • Roof Stands

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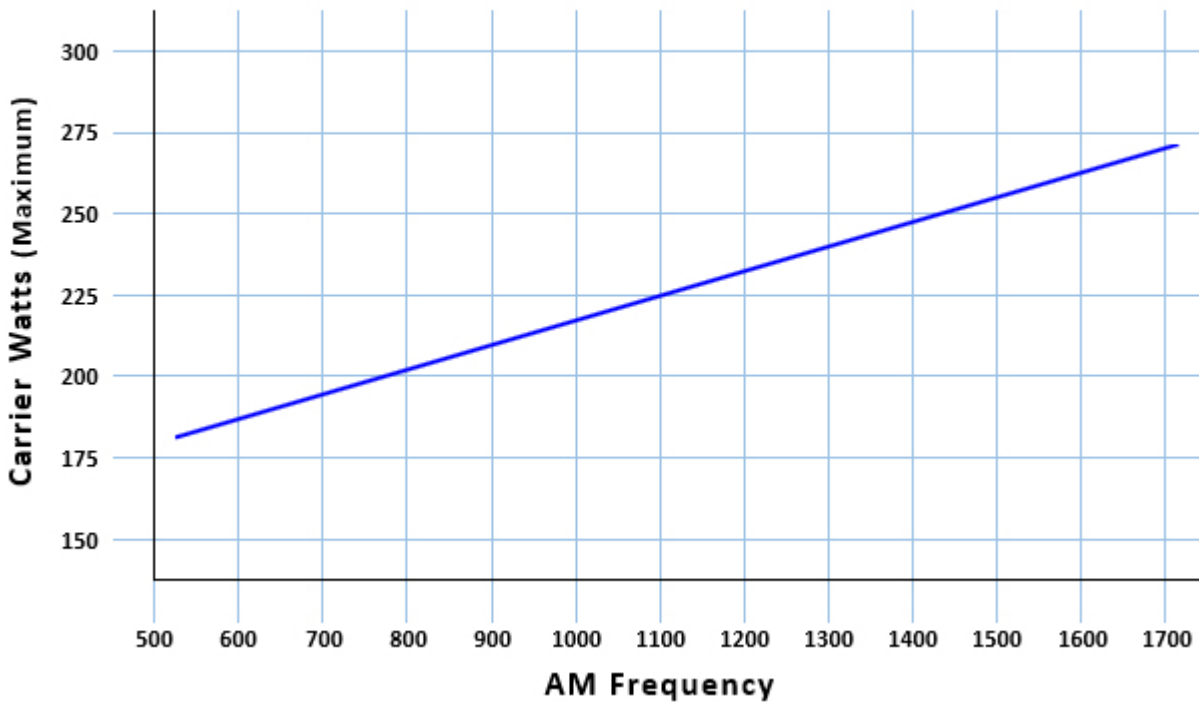


Table 1 of 1

Frequency Band	Max Carrier Power 125% + Modulation Peaks	2:1 VSWR Bandwidth
1500 - 1700 kHz	220 Watts	+/- 5.5 KHz
1100 - 1500 kHz	210 Watts	+/- 4.5 KHz
800 - 1100 kHz	200 Watts	+/- 3.5 KHz
650 - 800 kHz	175 Watts	+/- 2.8KHz
530- 650 kHz	155 Watts	+/- 1.5 KHz

Chart 1 of 3

Power vs. Frequency Chart
HPR.0990 Antenna



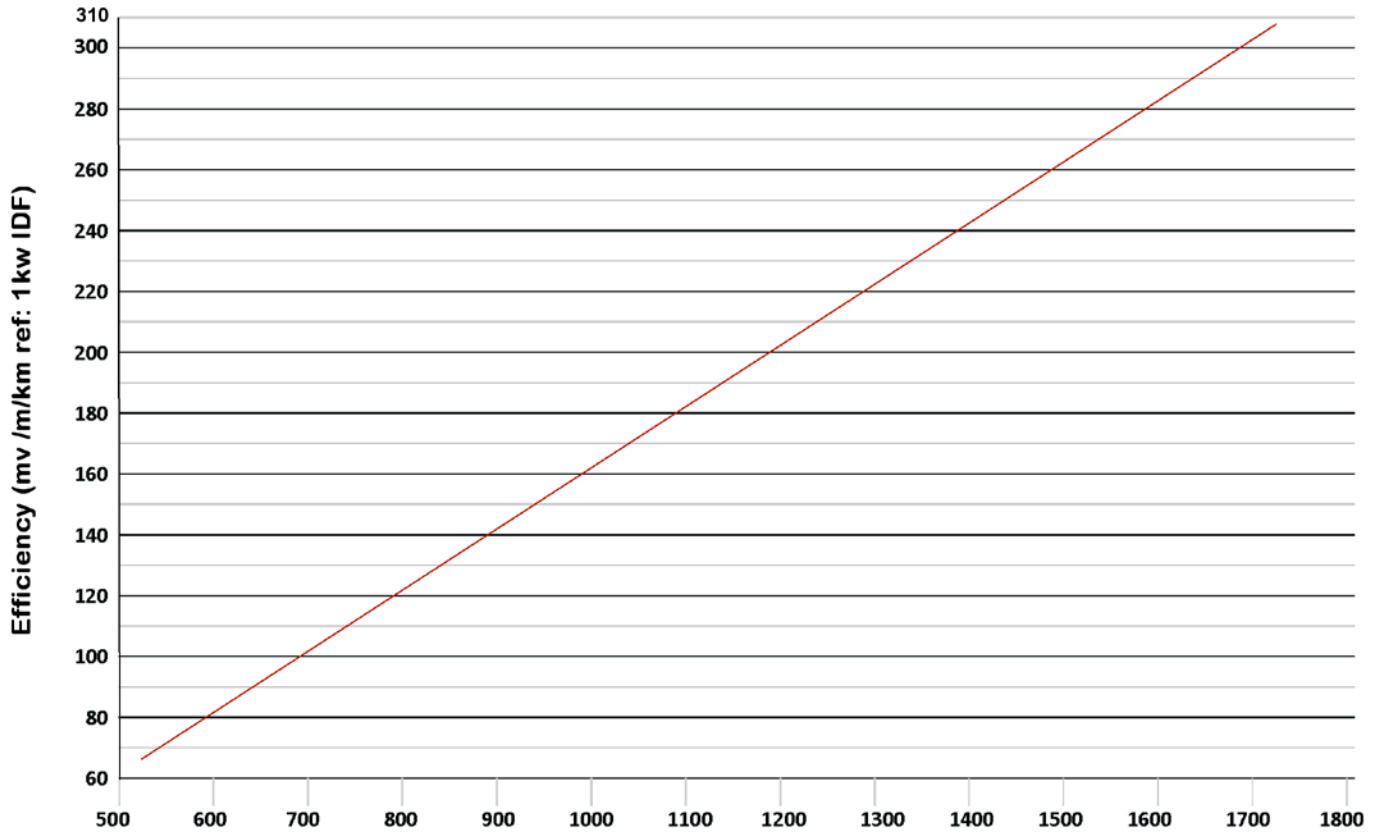
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Chart 2 of 3

HPR.0990 Antenna Radiation Efficiency



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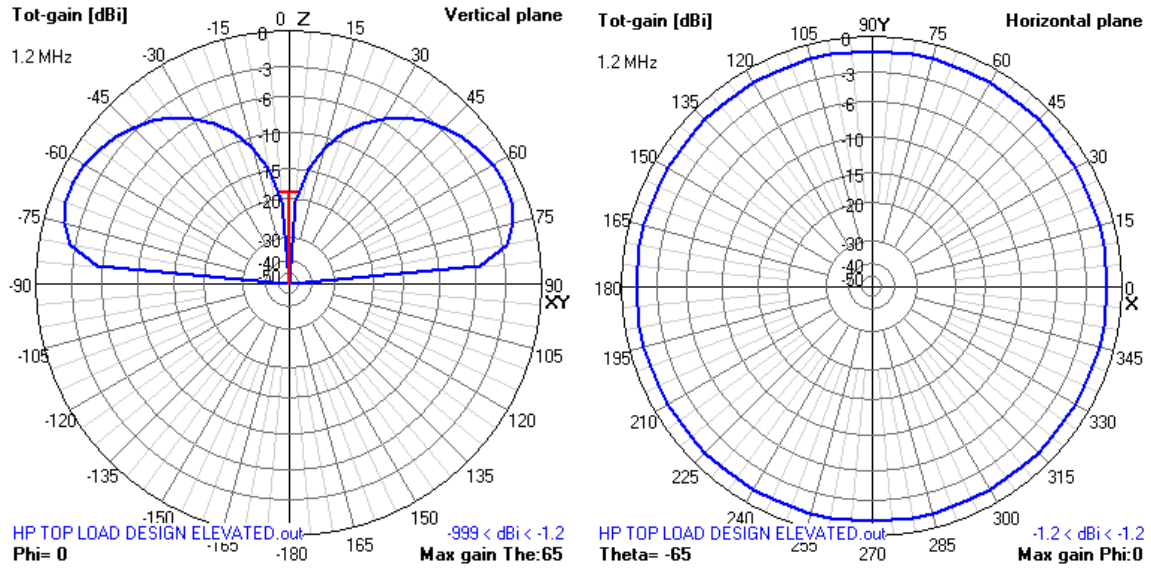
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Chart 3 of 3

Typical HPR.0990 Vertical & Horizontal Radiation Pattern

(Feedpoint Elevated on 20ft Pole - 32 Radials [50ft] at Base of Support)



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