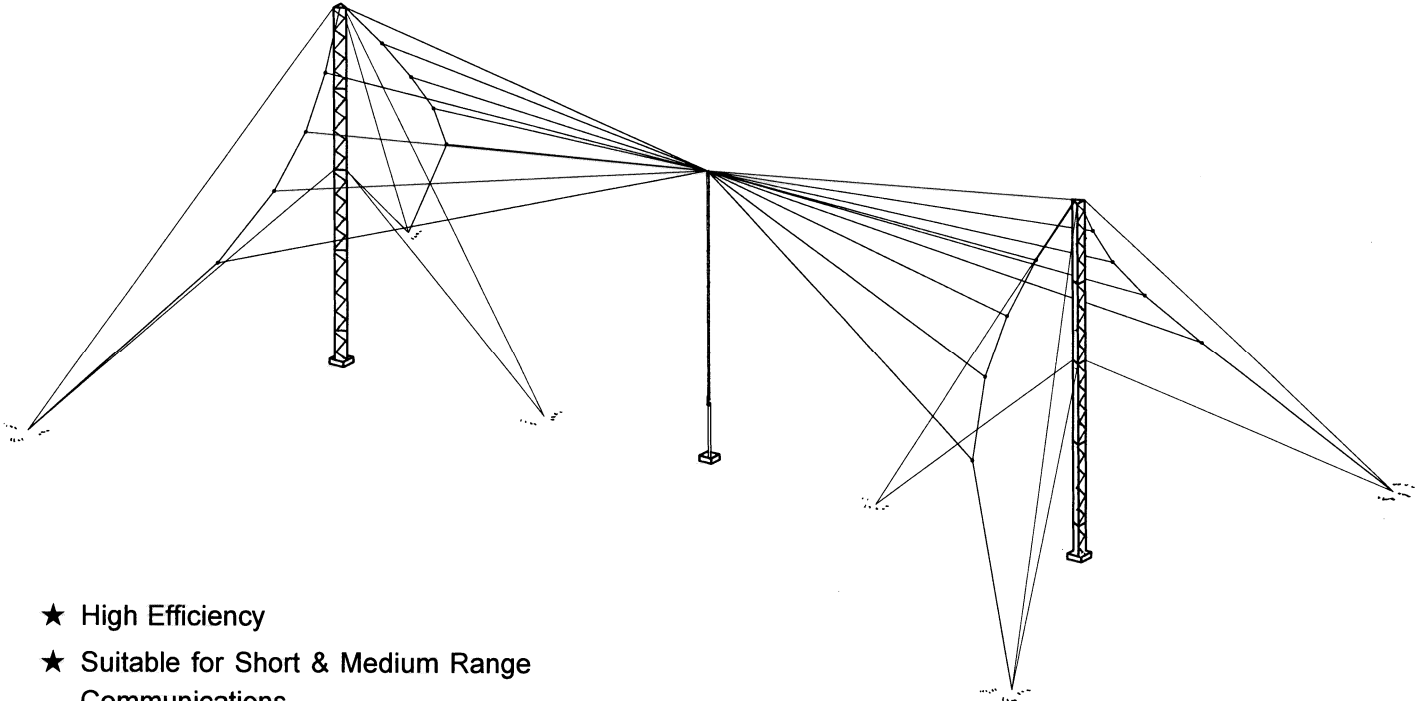




Broadband Dipole **HW330-x**



- ★ High Efficiency
- ★ Suitable for Short & Medium Range Communications
- ★ Easy to Install

Model HW330

DESCRIPTION AND APPLICATION

The CD Model HW330 Series is a broadband dipole antenna which is a variety of conical dipole antenna providing a dipole pattern over a broad frequency range using a small land area. The input impedance and radiation pattern of this type of antenna are comparatively standardize from highest frequency through lowest cut-off frequency. In case 300 ohms feeding impedance if chosen the VSWR of the antenna is less than 2:1 average and 2.5:1 maximum over the entire frequencies, because the feed point impedance of the HW330 concentrate upon 300 ohms average. Typical radiation pattern over average ground of this HW330 are shown overleaf. This antenna has omni-directional (Essentially Bidirectional) 5 dB pattern on the azimuth plane. Lower antenna height were chosen for this antenna to maintaining high angle of radiation for short range communications. At the higher frequencies the take-off angle is lowered, thereby emphasizing medium distance communications. The HW330 antenna uses two steel guyed towers to support the curtain at either end. The curtain is fed at a point midway between the two towers. The feedline descends vertically from the center of the curtain and attaches to a short steel pole onto which the balun is mounted. The towers for the Model HW330 are made of WEL-TEN60 High-Strength steel alloy. Each tower has a triangular cross-section. The towers can be shipped pre-assembled, or disassembled kit form for assembly in the field. The radiator curtain, in plan view, resembles a bow-tie. None radiators extended from the center of the bow-tie to a catenaries tied between each tower and ground. The catenaries are made of Alumoweld wire and are uninsulated except at their extremities. At these points the catenaries are broken up at intervals with ceramic insulators to render them electrically transparent. The Model HW330 is supplied with a BALUN (balanced-to-unbalanced transformer) which converts the nominal 300 ohms balanced impedance of the feed point to an unbalanced coaxial feedline.

SPECIFICATIONS

Model Number	HW330-1	HW330-1B	HW330-2	HW330-3
Frequency Range	2~25 MHz	2.5~27 MHz	3~30 MHz	4~30 MHz
Polarization	----- Horizontal -----			
Gain (Nominal)	3~5dBi	3~6 dBi	3~6 dBi	3~6dBi
Azimuth Pattern	Omnidirectional (Essentially Bidirectional)			
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms
VSWR. Nominal	2.0:1	2.0:1	2.0:1	2.0:1
Maximum	2.5:1	2.5:1	2.5:1	2.5:1
Power Handling Capability	- Refer to Note below -			
Antenna Height	24.8 m	19.9 m	14.8 m	12.5 m
Site Dimensions, Length x Width	75 x 45 m	63 x 37 m	48 x 27 m	40 x 23 m
Wind Loading Capability	45 m/s	45 m/s	45 m/s	45 m/s
System Net Weight	780 kg	660 kg	580 kg	490 kg

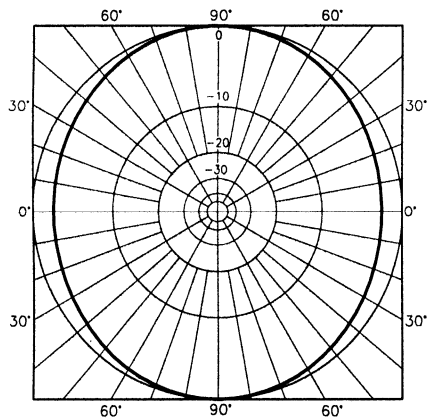
Note: Use an appropriate sub-model number when specifying or ordering a system.

RF Power

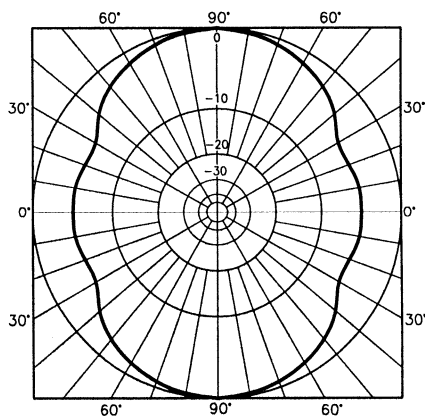
- HW330-x-1. Receive
 HW330-x-2. Transmit, 1 kW/2 kW
 HW330-x-3. Transmit, 5 kW/10 kW
 HW330-x-4. Transmit, 10 kW/20 kW

Connector

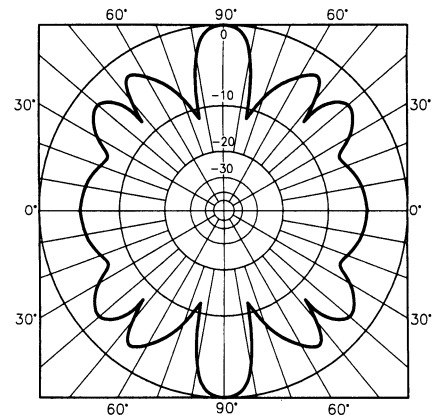
- Type -N-
 Type -N-
 Type 7/8" EIA.
 Type 1-5/8" EIA.



AZIMUTH fo

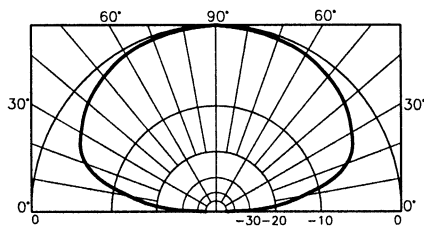


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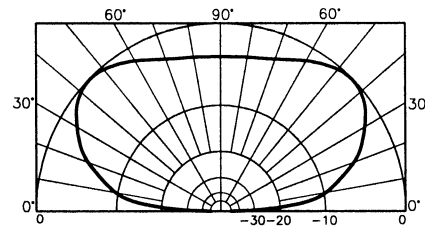


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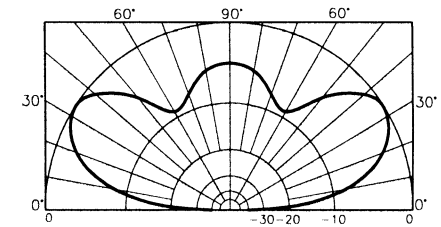
Azimuth Radiation Patterns



ELEVATION fo



ELEVATION 3 fo



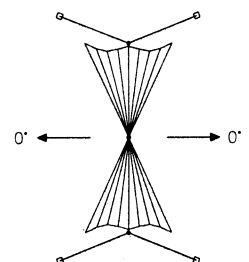
ELEVATION 9 fo

Elevation Radiation Patterns

Note:
 Azimuth Patterns at elevation angle of beam maximum.

HW330, Radiation Patterns

DWGA.064B



ANTENNA PLAN

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