



Vertical Log-Periodic Antenna

230HF-x 230H-x

- ★ For Long Range Communications, Minimum Tower Height
- ★ Highest Gain, Wide Azimuth Coverage
- ★ Low Angle Radiation Patterns
- ★ Minimum Ground Screen Requirements
Model 230H-x Series
- ★ 2~30 MHz Coverage
- ★ Rugged Construction

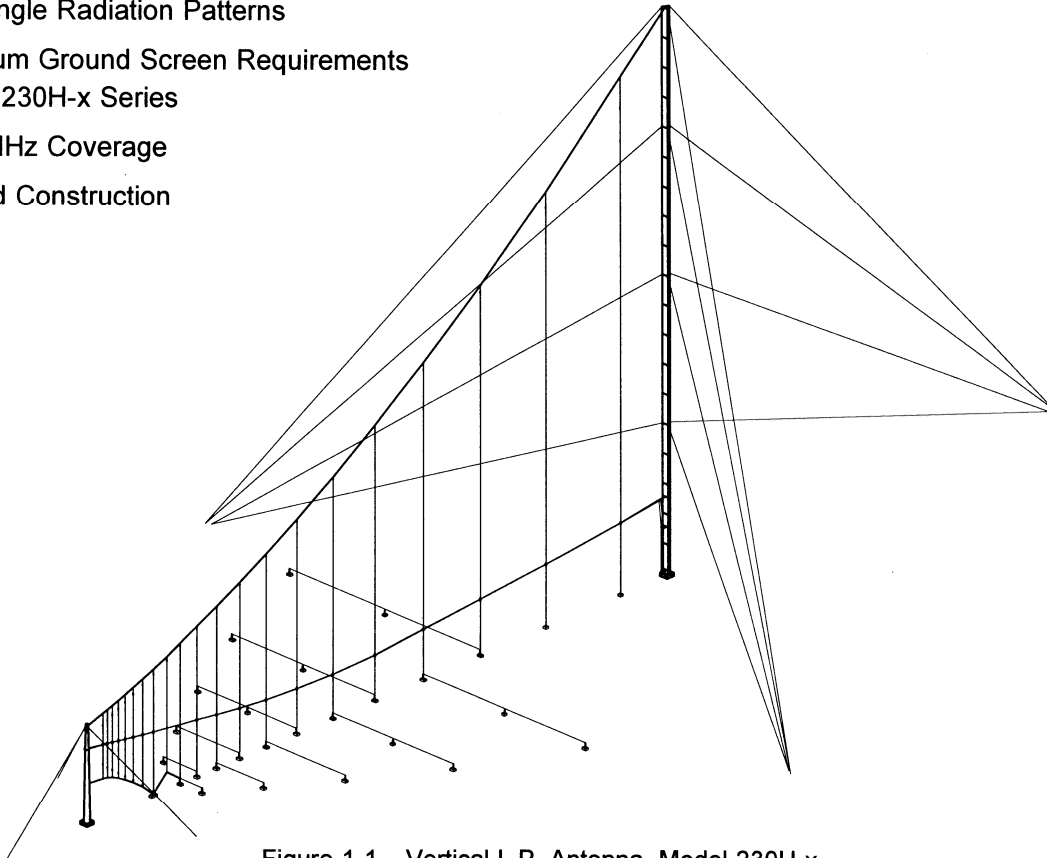


Figure 1-1. Vertical L.P. Antenna, Model 230H-x.

DESCRIPTION AND APPLICATION

The CD 230H and 230HF series, vertical log-periodic antenna systems have been designed to provide maximum efficiency and performance for long-haul and sectorial coverage service. These systems are characterized by low angle elevation plane patterns, high gain and unidirectional radiation patterns, resulting in excellent performance regardless of changing ionospheric condition. High front-to-back and front-to-side ratios provide minimum off path interference. 230H series antennas are smaller in the vertical dimension. This reduced height is structural advantage, and an operational benefit near airport. Ground screens are not generally required with these 230HF series antenna systems. On the other hand small ground screen is necessary to support the impedance of the 230H series antennas only for the lower frequencies cell. However, in instances where exceptionally poor ground conductivity is encountered, it may be desirable and beneficial to add optional ground screen in order to maintain low take-off angles. The 230H and 230HF antennas are ideally suited for a wide variety of circuits, ranging in path lengths of from 1000Km to 6000Km communication distance.

The 120 degree azimuth coverage of the 230H and 230HF series antenna systems generate numerous applications of these systems for communications with aircraft and ships at sea or other mobile stations within a broad area. The comparatively small installation area characteristics of these arrays, in addition to low comparative cost, versus high performance offer the user numerous advantages in an economical installation.

All materials have been selected for maximum resistance to corrosion under exposure to severe environmental conditions.

Included within the system kit are disassembled tower components, radiator curtains, guys, anchors, and necessary hardware to effect a complete installation. The wooden front poles have been excluded for the purpose of reducing shipping weight and volume, since poles of this type are generally available at the construction local.

- ★ For Long Range Communications
- ★ Highest Gain, Wide Azimuth Coverage
- ★ Low Angle Radiation Patterns
- ★ No Ground Screen Required for Impedance Control
- ★ 4~30 MHz Coverage

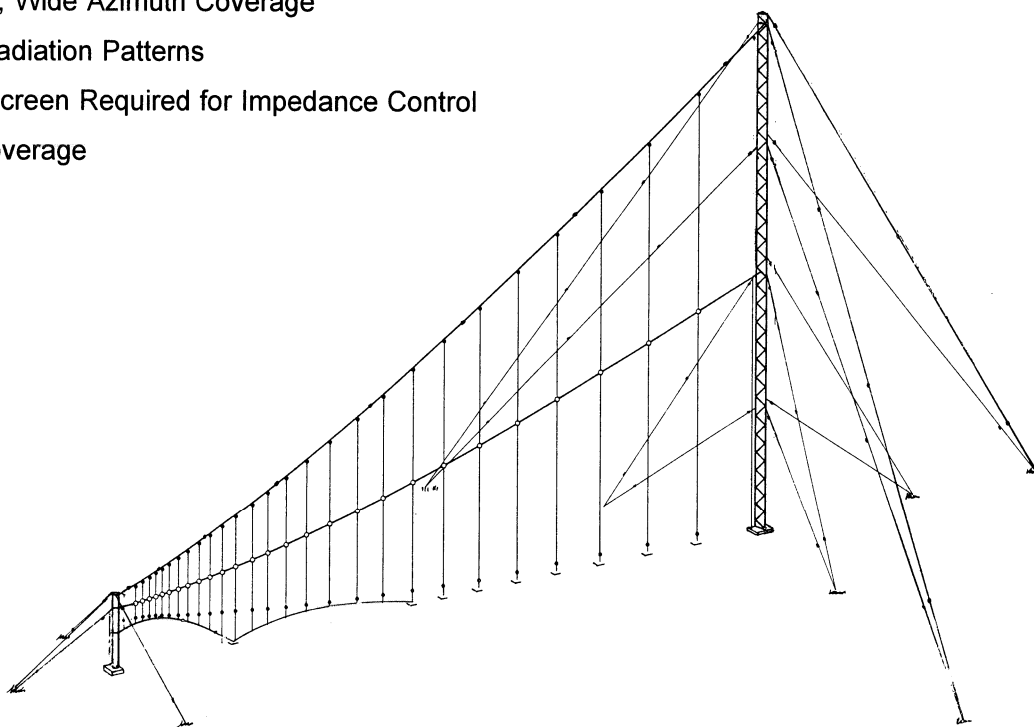


Figure 1-2. Vertical L.P. Antenna, Model 230HF-x.

SPECIFICATIONS

Model No.	230H-1	230H-2	230HF-1	230HF-2
Frequency Range	2~30 MHz	3~30 MHz	4~30 MHz	6~30 MHz
Polarization	Vertical	Vertical	Vertical	Vertical
Forward Gain				
Over Average Soil Conditions	9~11 dBi	9~11 dBi	10~12 dBi	10~12 dBi
Front/Back Ratio, Average	12 dB	12 dB	14 dB	14dB
VSWR (Respect to 50 ohms)	2.1:1	2.1:1	2.0:1	2.0:1
Power Capability and Input Connector	- Refer to Note Below -			
Azimuth Half Power Beam Width (Average)	130°	130°	120°	120°
Elevation Angle, Angle of Maximum Gain	10°~20°	10°~20°	5~15°	5~15°
Overall Height	47 m	32.5 m	44 m	32.5 m
Length	113 m	70 m	98 m	68 m
Width	66 m	45 m	60 m	45 m
Wind Loading Capability No Ice	45 m/s	45 m/s	45 m/s	45 m/s
System Net Weight	1860 Kg	1380 Kg	1700 Kg	1300 Kg

Note 1: Use an appropriate sub-model number when specifying or ordering a system.

	Connector
230H, HF-x-1. Receive	Type "N" Female
230H, HF-x-2. Transmit, 1 kW/2 kW PEP	Type "N" Female
230H, HF-x-3. Transmit, 5 kW/10 kW	7/8" EIA. Female
230H, HF-x-4. Transmit, 10 kW/20 kW	1-5/8" EIA. Female

Note 2: Aircraft obstruction lighting kits, tower painting kits and gin-pole erection fixtures are available as an optional accessories to be ordered separately. Wooden front pole is not supplied as a part of the antenna kit.