

## SECTION 1 GENERAL AND SPECIFICATIONS

### 1.1 GENERAL

This CD model CLP5130-2 is a high gain wide band log periodic beam antenna for VHF and UHF band designed to use for a fixed stations. The antenna is designed to use in the horizontally polarization as a standard use, but vertical polarization would also be possible by additionally use of an FRP mast or mount adaptor for vertical polarization. This antenna would be suitable for not only amateur band covering from 105~1300 MHz but also meet with those applications such as FM broadcasting, scanning, V-UHF television, air bands communication, government applications, and other business band use, etc. In comparison with those non-directional antennas such as a generally available Disc Cone type of antenna, the gain derived is at approx 6dB (4 times greater) greater, and is assured that VSWR is 2.0:1 or less in across the band.

Mechanically, the boom structured in use of 2 channels takes an important role of this antenna as to works as a phase-line electrically. A high quality aluminum materials are being used for those main structural parts which make it possible to contribute to be minimum distortion and deformation of alignment for both horizontal and vertical planes of this antenna that allows to be light weighted antenna for giving an easy assembly and installation. The phase-line is designed to be shortened circuit electrically in order to protect the radio equipments from a high DC voltage by lighting damage. This antenna would able to give its full performance by rotating the antenna in use of antenna rotator as it is a beam antenna. The recommended rotator is CD RC5-x or equivalents suitable for a small-sized TV antenna application.

The specification details of this antenna is shown in Section 1.2 below.

### 1.2 SPECIFICATIONS

	CLP5130-2
Frequency	105~1300 MHz
Number of Elements	17 ele.
Polarization	Horizontal (Vertical Possible)
Forward Gain	11~13 dBi/Average Ground 7~8 dBi/Free Space
Front to Back Ratio	15 dB
Half Power Point	E-Plane: 70~60° H-Plane: 130~110°
Impedance	50 Ohms
Input Connector	- N -
VSWR	2.0 : 1 or less
Power Rating	500W PEP
Boom Length	1.4 m
Element Length	Max. 1.45 m
Mast Size	38~50mm
Weight	3 kgs
Wind Survival Rating	40 m/sec. (90 mph)

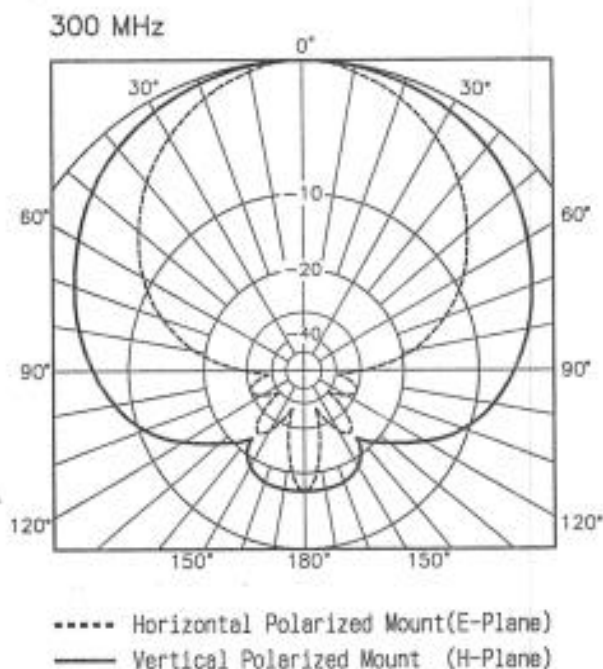


Figure 1A. Radiation Pattern. In Average.

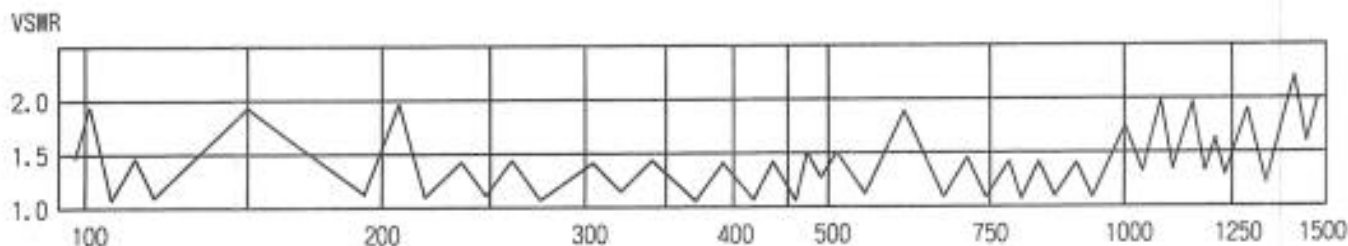


Figure 1B. VSWR Characteristics. Ex. CLP5130.2