

1. GENERAL DESCRIPTION

The model CV24A is a vertically polarized high gain antenna for 150MHz band base stations. Azimuth radiation pattern of this antenna is selectable 2 choices either from slightly offset uni-directional pattern and omni-directional pattern. Additional 3dB forward gain compared with omni-directional pattern is expected when the uni-directional pattern is selected where communication area are one sided. The backward gain is -1 dB compared with omni-directional pattern because of the 4dB F/B ratio. The pattern should be selected after examination of topography and communication area.

2. SELECTION OF RADIATION PATTERN

The radiation pattern for the CV24A is selectable either from omni-directional pattern or uni-directional pattern. Fig.1 shows the structure and the radiation pattern of this antenna. Before start assembling, study which it could meet a requirement considering communication cover area, determine the choice.

3. SPECIFICATIONS

Electrical Characteristics			Mechanical Characteristics	
Gain: Omni-Directional		8.0 dBi	Overall Length -1	6.9 m
Uni-Directional		11 dBi	-2	6.6 m
Frequency Band	-1	146-155 MHz	-3	6.4 m
	-2	155-164 MHz	Lightning Protection	Lightning Rod
	-3	164-174 MHz	Mounting	Tubing Mast
VSWR		Less than 1.5:1	Suggested Mast Dia.	70~90 mm
Impedance		50 Ω	Connector	Type N-J
RF Power		300 W Max.	Wind Survival Rating	55 m/sec
			Weight	19 kg

4. SUPPLIED PARTS

The model CV24A is supplied complete and corresponds to the drawings contained in the manual. Refer to the PARTS LIST for complete breakdown of parts. The PARTS LIST shows the standard commercial packaging. Any changes or modifications which may be incorporated as a result of special contractual agreements are covered in CONTRACT REQUIREMENTS.

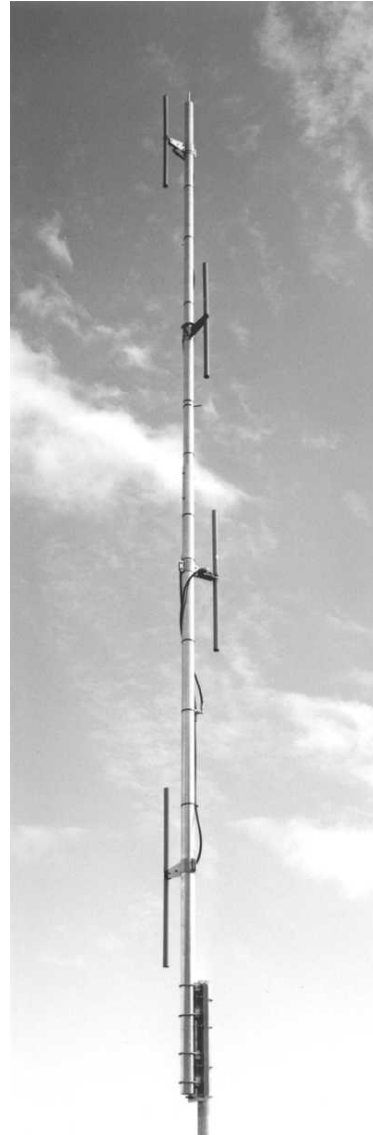
5. EQUIPMENT REQUIRED BUT NOT SUPPLIED

Following parts and equipments are required for the installation and operation of the CV24A. Those are not supplied with the antenna.

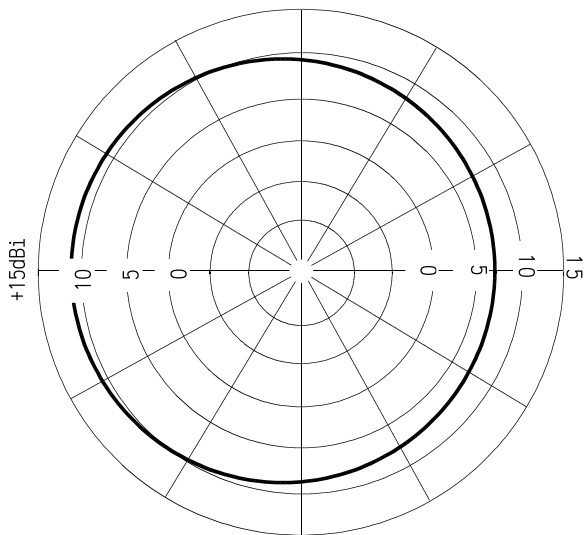
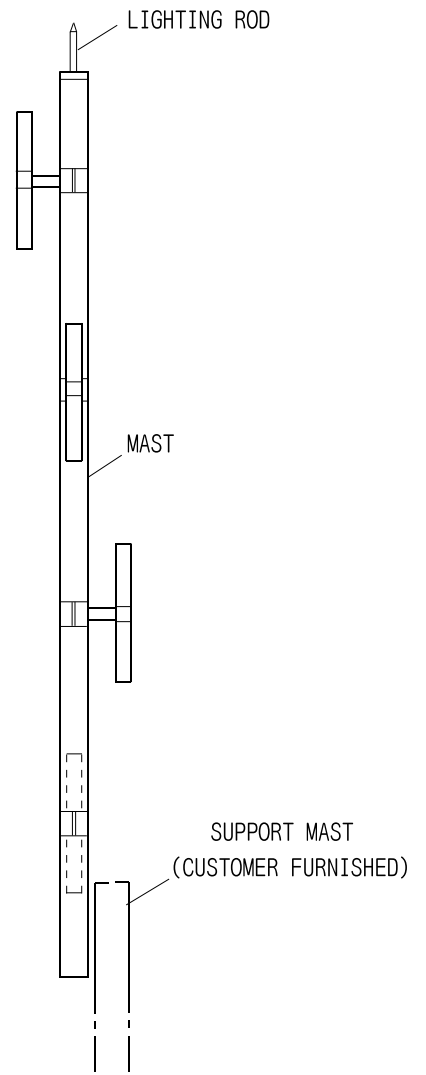
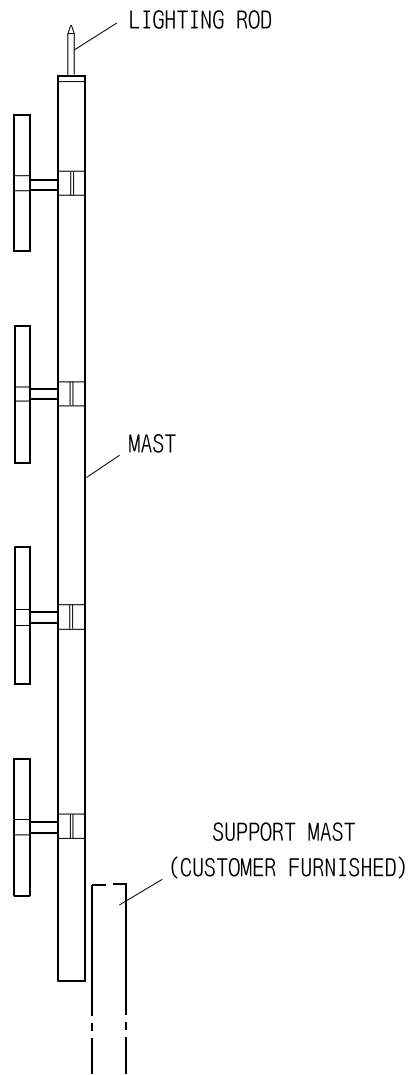
- 1) Antenna Supporting Mast: 70~90mm dia. Galvanized Steel Tube, More than 3mm. Thickness.
- 2) Standard Tools: M5~M8 Spanner Wrench, Screw Driver, Vinyl Tape (for Weather Proof The Connection)
- 3) Stand for Assembly: 300mm Height x 2 pcs.
- 4) Coaxial Cable: 50 Ohms Coax. with NP Connector which has Appropriate Length and Thickness.



Uni-Directional, CV24A

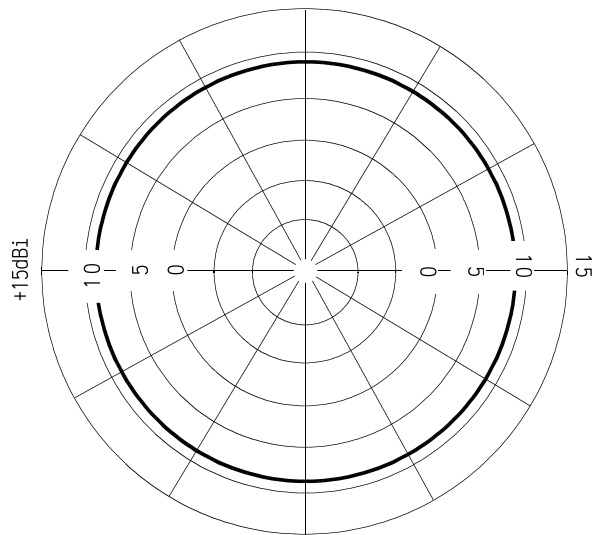


Omni-Directional, CV24A



HORIZONTAL RADIATION PATTERN
FOR VERTICAL POLARIZATION
11dBi GAIN

OFFSET ASSEMBLY



HORIZONTAL RADIATION PATTERN
FOR VERTICAL POLARIZATION
8dBi GAIN

OMNIDIRECTIONAL ASSEMBLY

Figure 1. Radiation Pattern CV24A.