WD140-N

140-160 MHz Base Station Dipole Antenna

DESCRIPTION

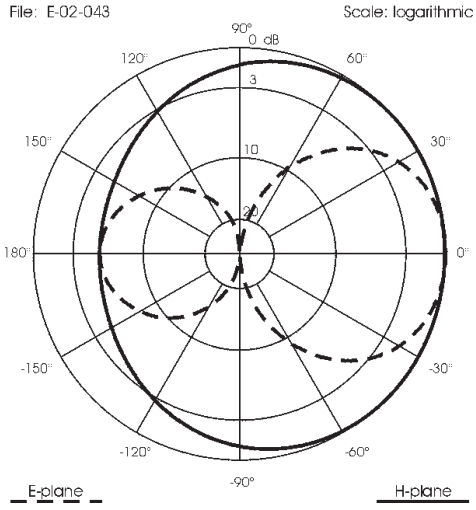
Base station antenna conceived by using an innovative feed system studied and applied to have highly symmetrical radiation pattern in both planes (E and H). It's completely computer designed to get high performances of gain and front-to-back in the working band. All aluminium parts are protected by anodized treatment, hardware are of Stainless steel or zinc plated steel, mounting bracket is of extruded aluminium for the best strength and the connector is placed in rear position for an easily access. To increase the antenna gain please install it in vertical stacked array. ***Patent pending applied****.*

TECHNICAL DATA

Electrical Data

Type	Half wave Dipole
Frequency range	140 - 160 MHz
Impedance	50 Ω Unbalanced
Polarization	Linear Vertical
Radiation (H-plane)	beamwidth at -3 dB= 245° at 150 MHz
Radiation (E-plane)	beamwidth at -3 dB= 80° at 150 MHz
Max Gain	4 dBi
Front to Back ratio	≥ 5 dB
S.W.R. in bandwidth	≤ 1.5:1
Max Power	200 Watts (CW) at 30°C
Feed system / Position	RG303 Teflon coax with balun / inside boom
Lightning protection	DC-ground
Connector	N-female with rubber protection cap

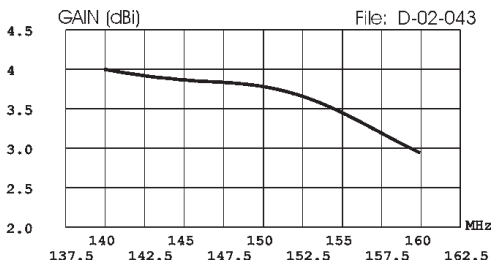
TYPICAL RADIATION PATTERN at 150 MHz



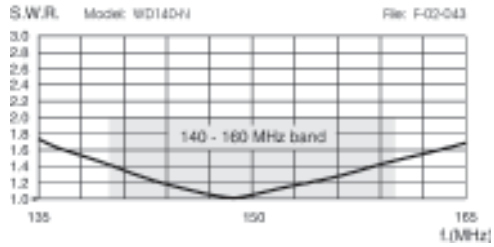
Mechanical Data

Materials	Anodized 6063-T5 Aluminium, Thermoplastic UV stabilized, Chromed Brass
Wind load / resistance	77 N at 150 Km/h / 200 Km/h
Wind surface	0.059 m^2
Dimensions (approx.)	730 x 915 mm
Weigth (approx.)	1390 gr
Turning radius	600 mm
Operating temperature	-40° C to +60° C
Mounting Mast	Ø 35-52 mm

TYPICAL GAIN DIAGRAM vs FREQUENCY



TYPICAL S.W.R. RESPONSE



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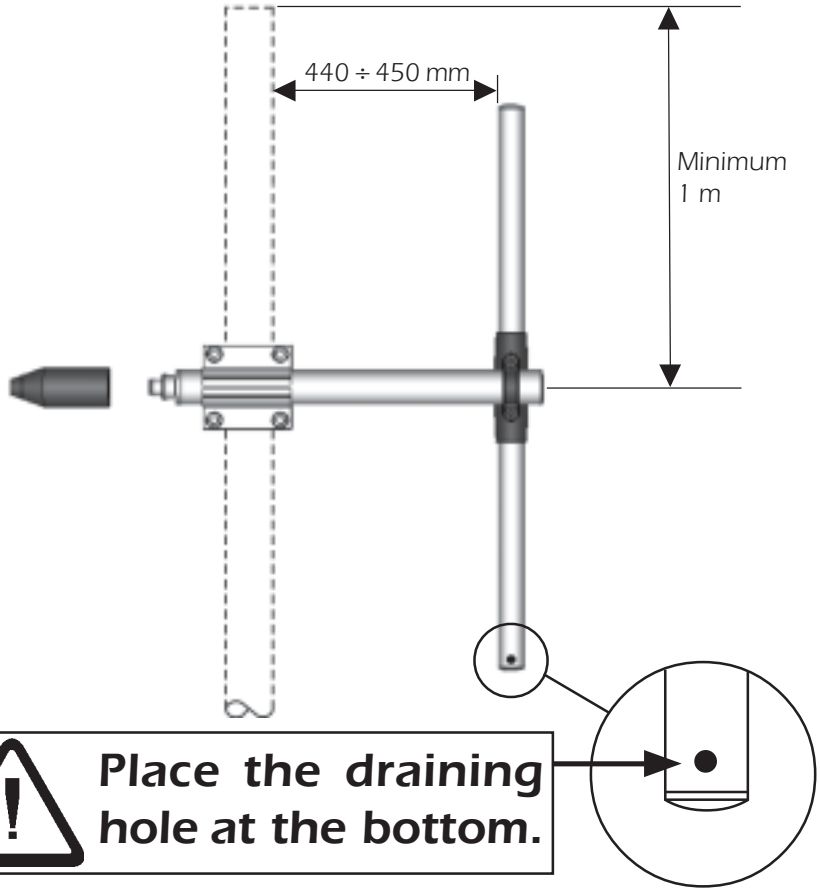
ID352

MOUNTING INSTRUCTIONS

Correct mounting for vertical polarization



Place the draining hole at the bottom.

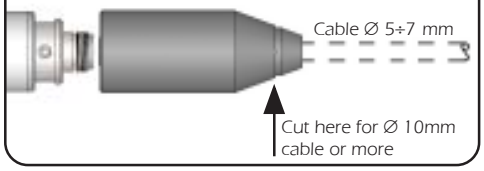
Standard Mounting Bracket

Spare parts: p/n SA197
Materials: extruded aluminum
Hardware: stainless & zinc plated steel
Dimensions : 80 x 76 x 65 mm
Weight: 460 gr

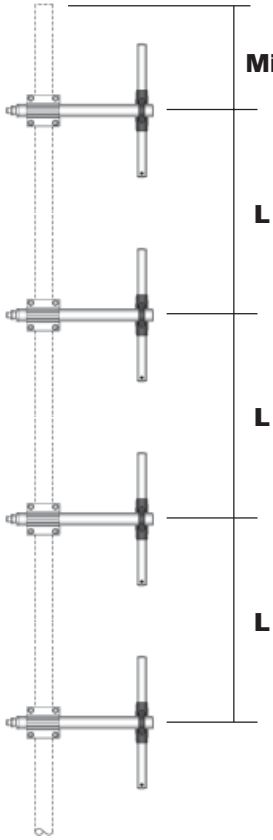
Part List	
Q.ty	*Description*
1	Extruded aluminium bracket
2	Steel bracket
2	M8x200 U-bolt
4	M8 Grower washer
4	M8 Hexagonal nut
2	M6x20 Hexagonal head screw
2	M6 Grower washer
2	M6 Hexagonal nut

Connector protection cap

Spare parts: p/n TE06416



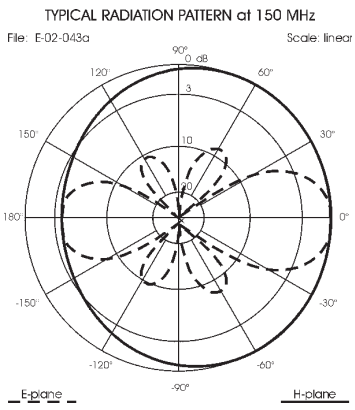
Side mast mounting for DIRECTIONAL pattern: Stacking distance



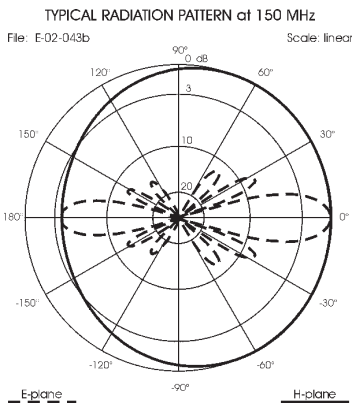
Vertical polarization
(Stacked)
L= 1.6 m

No. of dipole	*Max Gain (dBi)*	*HPBW E-plane*	*HPBW H-plane*
2	7.3	32°	245°
4	10.2	16°	245°
6	12	10.5°	245°
8	13	8°	245°

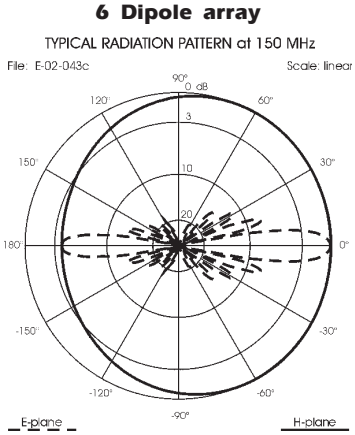
2 Dipole array



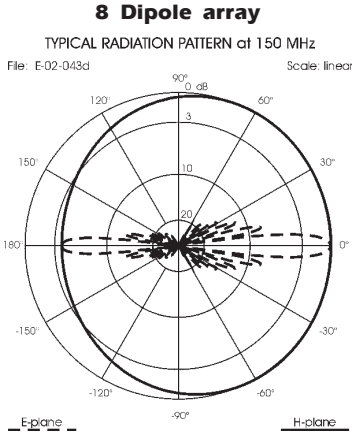
4 Dipole array



6 Dipole array



8 Dipole array



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