



# ANTENNA EXPERTS

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Model # SD9-128 118 – 137 MHz. 9dBd. Omni, 12dBd. Offset Gain

## OMNI-DIRECTIONAL HIGH GAIN VHF AVIATION BAND STACKED DIPOLE ARRAY

**DESIGN FEATURES:** The SD9-128 ultra high performance VHF aviation band stacked dipole array is designed for use with highly populated radio sites requiring long haul omni-directional coverage. The SD9-128 is heavy duty stacked dipole array features, wide bandwidth, high gain, high power handling capacity, low VSWR, low noise performance and null filling coverage with omni-directional characteristics. This stacked dipole array maintains constant gain and VSWR over its 20 MHz bandwidth, making it highly suitable as base station antennas for repeater, paging and any other multi-channel communication systems. The radiation pattern can be changed in the field by use of common hand tools. The Vertical stacking distance is factory adjusted for highest possible efficiency. Specially designed center fed phasing harness ensures equal and in phase signal distribution to all the eight dipoles. The SD9-128 High gain stacked dipole array operates at D.C. ground for protection against lightning.

**CONSTRUCTIONS:** The stacked dipole array uses 6063T6 ultra corrosion resistant architectural anodized aluminum, consists of Eight folded dipoles stacked vertically, fed in phase. The center fed dipole ends and cable connections to the dipoles are sealed in epoxy at the end of the boom for protection against weather and imparting rigidity and strength to the dipoles structure. All the fasteners are made of marine grade SS. The 12 Meters long central mast for mounting the dipoles is shipped in four sections of 3 Meters each for easy of shipping. The dipoles are mounted on a tubular boom made of high strength aluminum alloy, which offers a low resistance discharge path against any lightning strike during the stormy weather. The N-Female termination of antenna sealed in flame retardant heat shrinking tube ensures complete waterproofing. The antenna can be supplied with or without central mast.

### ELECTRICAL SPECIFICATIONS:

Frequency Range	118 - 137 MHz.
Gain	9 dBd. Omni or 12 dBd. Offset
Bandwidth	20 MHz.
Polarization	Vertical
Input Impedance	50 Ohms.
Radiation Pattern (Horizontal Beam-width)	360 Degrees in Omni Configuration 180 Degrees in Offset Configuration
Vertical Beam-width –Half Power Points	9 Degrees
VSWR	1.5 : 1
RF Power Handling Capacity	500 Watts
Input Termination	N-Female
Lightning Protection	Direct Ground

### MECHANICAL SPECIFICATIONS:

Mounting Hardware	Stainless Steel
Wind Rating	180 Km/Hr.
Overall Length	12 Meters
Support Pipe Aluminum – Outer Diameter	51 mm
Dipoles Aluminum – Outer Diameter	12.7 mm
Shipping Length	3 Meters
Maximum Mount Pipe Diameter	52 mm (2 Inches)
Gross Weight – with central mast	45 Kg
Gross Weight – without central mast	20 Kgs

### ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-)30 to +70 Degrees Celsius
Storage Temperature	(-)40 to +80 Degrees Celsius
Humidity	0 to 95% RH

Note: All information contained in the datasheet is subject to change without any prior notice.

