



# ANTENNA EXPERTS

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Model # AY-312-16

225 – 400 MHz.

16 dBi. Gain

## UHF AVIATION BAND 8 STACKED YAGI ARRAY SYSTEM

**DESIGN FEATURES:** This air band extended range antenna system is highly suitable as base station antenna for ATC sites where extended range is required to cover the longer and deep Oceanic Information Region (OIC) to control the inbound and outbound Oceanic traffic. The UHF array system has a 110 Degrees wide horizontal beam-width if configured vertically as shown in the figure. The unique design of the yagi antenna feed which works as matching device to keep the VSWR low resulting in increased efficiency of the yagi antenna. The UHF aviation band 8 stacked yagi antenna is supplied with N-Female termination fixed on the driven element. This highly directional antenna systems, comes factory tuned and does not require any field adjustment.

**CONSTRUCTIONS:** The UHF aviation band array system is consisting of 8 yagi antenna each having 3 elements, supplied with Two solid air-cored 4 way power splitter/combiner, One solid air-cored 2 way power splitter/combiner and Ten low loss phasing harness cables. Radiating elements, supporting booms and adjoining metal castings of yagi antenna system have been constructed in high quality aluminum alloys to prevent corrosion. The UHF ATC yagi array system when packed comes with elements removed from the antenna boom for ease of packing and transportation. This array can be assembled at site with simple hand-tools. The complete array system is constructed from 6063T6 ultra corrosion resistant architectural anodized aluminum alloy and supplied with powder coating finish to protect it further from sever environmental conditions.

### ELECTRICAL SPECIFICATIONS:

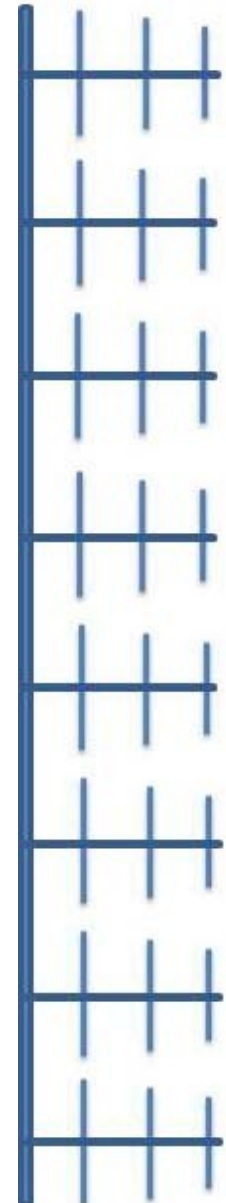
Frequency Range	225 - 400 MHz
Gain	16 dBi
Bandwidth	20 MHz
Polarization	Vertical
Input Impedance	50 Ohms
Radiation Pattern	Directional
Horizontal Beam-width –Half Power Points	110 Degrees
Vertical Beam-width -Half Power Points	12 Degrees
Front to Back Ratio	24 dB.
VSWR – Bette than	1.5:1
RF Power Handling Capacity	1000 Watts
Input Termination	N-Female or DIN-Female

### MECHANICAL SPECIFICATIONS:

Materials	6063T6 Aluminum Alloy
Mounting Hardware -Materials	Marine Grade Stainless Steel
Wind Rating	200 KMPH
Overall Length of each yagi antenna	0.65 Meter
Shipping Length of array system	0.70 Meter
Support Boom – Materials-Outer Diameter	Aluminum - 25 mm
Elements – Materials - Outer Diameter	Aluminum - 12 mm
Minimum Mast Aperture Required	7 Meters
No. of 3 Elements Yagi Antenna	8 Nos.
Maximum Mount Pipe Diameter	51 mm (2 Inches)
Gross Weight of complete array system	30 Kgs.

### ENVIRONMENTAL SPECIFICATIONS:

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



Please contact us for further information like block diagram of antenna, splitters and phasing cable, Azimuth & Elevation radiation patterns and frequency Vs VSWR graph.

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