



# ANTENNA EXPERTS

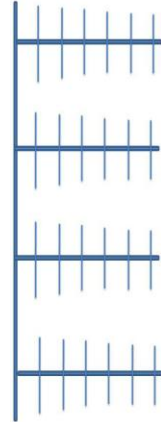
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Model # AQY-128 117 – 137 MHz. 17.5 dBi. Gain

## VHF AVIATION BAND QUAD STACKED ARRAY SYSTEM

**DESIGN FEATURES:** The aviation band quad stacked yagi antenna system is highly suitable as base station antennas for ATC sites where longer communication range is required to cover the particular sector of Flight Information Region (FIR) like narrow but long strip if stacked side-by-side or Oceanic Information Region (OIC) of a bay if stacked 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 aviation band quad stacked yagi antenna is supplied with N termination fixed on the driven element. This directional yagi antenna, comes factory tuned and does not require any field adjustment.

**CONSTRUCTIONS:** The VHF aviation band array system is consisting of 4 yagi antenna each having 6 elements, supplied with a solid air cored 4 way power splitter/combiner and four 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 VHF 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.



### **ELECTRICAL SPECIFICATIONS:**

Frequency Range	117 - 137 MHz
Gain	17.5 dBi
Bandwidth	6 MHz
Polarization	Vertical
Input Impedance	50 Ohms
Radiation Pattern	Directional
Vertical Beam-width –Half Power Points	12 Degrees
Horizontal Beam-width -Half Power Points	65 Degrees
Front to Back Ratio	21 dB.
VSWR	1:1.5
RF Power Handling Capacity	1000 Watts
Input Termination	N-Female or DIN-Female

### **MECHANICAL SPECIFICATIONS:**

Materials	All Aluminum
Mounting Hardware -Materials	Stainless Steel
Wind Rating	200 KMPH
Overall Length of each yagi antenna	2.2 Meters
Shipping Length of array system	2.5 Meters
Support Boom – Materials-Outer Diameter	Aluminum - 25 mm
Elements – Materials - Outer Diameter	Aluminum - 19 mm
No. of Yagi Boom	4 Nos.
Maximum Mount Pipe Diameter	51 mm (2 Inches)
Gross Weight of array system	35 Kgs.

### **ENVIRONMENTAL SPECIFICATIONS:**

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