

VHF Omnidirectional Dipole Arrays

136-174 MHz

Binary Array Series



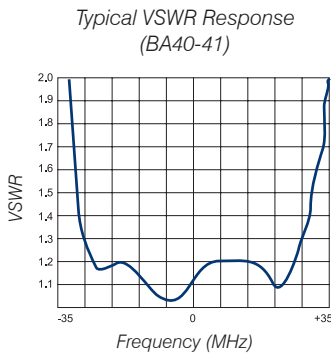
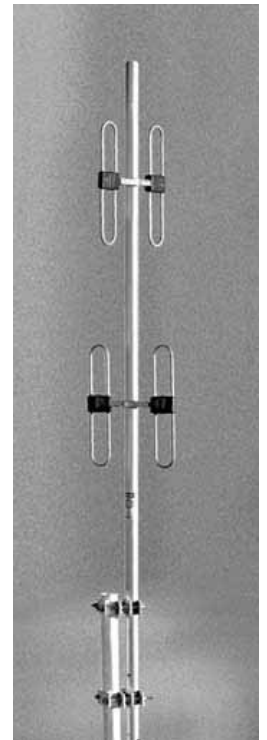
This high performance VHF dipole omnidirectional array is for use in highly populated radio sites requiring long haul omnidirectional coverage. The array feature high gain, low noise performance and enhanced null fill coverage with omnidirectional coverage characteristics.

Each of the dipoles are fed via an internal phasing harness in stable, PTFE based double-screened coaxial cable with PE jacket for optimum weatherproofing. These omnidirectional arrays incorporate extensive side lobe suppression and null fill, and the binary phasing arrangement ensures consistent omnidirectional coverage and vertical pattern control.

With all welded construction and superior internal harness construction, these antennas provide not only excellent pattern characteristics but also defined, high levels of intermodulation and noise suppression. The entire array rests at ground potential and offers the ultimate in lightning resistant antennas.

Features:

- High gain omnidirectional patterns
- Operate over entire 136-174 MHz VHF band without tuning or adjustment
- Inverted mounting version available
- Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum performance
- BA80-41 may be operational as 2 x 3dBd arrays by removing external cables harness (BA4040-41)
- Hermetically sealed internal phasing harness



Electrical Specifications

Model Number	BA40-41-P	BA80-41-P	BA4040-41-P
Nominal Gain dBi (dBd)	5 (3)	8 (6)	2 x 5 (3)
Frequency MHz	136 - 174		
Tuned Bandwidth	Entire Band		
VSWR (Return Loss)	<1.5 :1 (14dB)		
Nominal Impedance Ω	50		
Downtilt	Not offered	0° Std, 3°, 5°, 8°	Not offered
Vertical Beamwidth°	35	18	35
Horizontal Beamwidth°	Omni +/-0.5dB		
Input Power W	750		
Passive IM 3rd order dBc	-150		

Mechanical Specifications

Model Number	BA40-41-P	BA80-41-P	BA4040-41-P
Construction	All welded aluminium with alodined finish. See note (2)		
Length m (inches)	3.5 (138)	6.3 (248)	
Weight kg (lbs)	14.5 (32)	31 (68)	
Termination	4.3-10female with 0.5m (20") RG142 cable tail.		
Mounting Area	750mm x 63mm diam. (20" x 2.5")	750mm x 76mm diam. (20" x 3.0")	
Suggested Clamps	2 x UC1	3 x UC114	
Projected Area cm ² (ft ²)	No Ice	4164 (4.5)	8294 (8.9)
	With Ice	7117 (7.7)	13325 (14.3)
Wind Load @160km/h N (100mph lbs)	494 (111)	983 (221)	
Wind Gust Rating km/h (mph)	240 (150)	184 (114)	
Torque @160km/h Nm (100mph ft-lbs)	617 (455)	2605 (1921)	

- (1) Factory pre-set downtilt of 3° may be specified on BA80 series antennas using model no. trailer -T3
- (2) BA40 series can be optionally supplied in all welded 316 grade stainless steel. Dimensions vary slightly

