

VHF Folded Dipole Antenna

HORWIN AD1604 is a 4- elements dipole array wide band VHF antenna for extensive range of applications – trunking radio systems, military communications, dispatch base stations, amateur radio repeaters, etc.

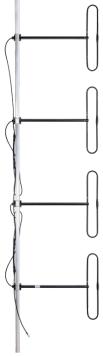
Dipole incorporates "balun" matching circuit optimized for wide bandwidth and accurate matching. More gain is achieved by coupling single folded dipoles into arrays. Dipoles in array are coupled by precision phasing cable harness keeping low SWR and minimum insertion losses.

The horizontal radiation pattern is adjusted by changing the distance between dipole elements and supporting mast.

All antenna parts are made of AD31 (T6063) aluminium and covered with polymer powdered coating (resists water and ice buildup, and provides exceptional protection from corrosive gases, UV radiation, salt spray, acid rain and windblown abrasives).

The boom is mounted to the mast (Ø 30-55 mm) through the omega clamp with U-bolts. All components of dipole element are DC-grounded for better lighting and antistatic protection.

The phasing cable harness is fully waterproof and protected against hostile environments.



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	Horwin AD 1604		
	HOFWIII AD 1004	E-plane $^{1}\!\!/_{4}$ λ dipole to mast spacing	
Frequency range, MHz	136 – 176	Farfield Directivity Abs (Phi-180	Frequency = 150
Bandwidth @ SWR < 1,5, MHz	40	Phir 180 30 30	Main lobe magnitude = 11.1 Main lobe direction = 0.0 deg. Angular width (3 dB) = 175.2 deg.
Elements	4	50	
Gain, dBd (1/4 λ dipole to mast spacing)	6	120 S	90
Gain, dBd (3/8 λ dipole to mast spacing)	9	150 150 150 150 150 150 150 150 150 150	139
Power rating, W	200	E-plane λ	dipole to mast spacing
Overall dimensions, mm H 3/8 λ spacing D	4800 1100	Farled Drechet Als (Ph-160) Ph-160 Frequency = 150 Main lobe magnitude = 8.14 Man lobe direction = 61.0 deg.	
Weight (aprox.), kg	11,5	80 20 20	Angular width (3 dB) = 227.6 deg.
Impedance, Ohm	50	**	6 00
Termination	N- female	120	4
Vertical beamwidth (3/8 spacing)	19°	150 150 150 150 150 150 100 150 150) 120
Max. exposed area, m ²	0,29		H-plene
Lateral thrust at 45 m/s, N	335	Forfeld Directivity Abs (Azerna	h-180) Frequency = 150
Lightning protection	DC Ground	Azmuth=18) 60 90	Main lobe magnitude = 11.1 Main lobe direction = 0.0 deg. Angular width (3 dB) = 19.4 deg.
Rated wind velocity, m/s	45	30/-30/-50	Side lobe level = -8.6 dB
Rated wind velocity with 13mm icing, m/s	28		
		30 60 60	/*