

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 lightning and antistatic protection.

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



		<b>Horwin AD 1604</b>	
			<b>E-plane <math>\frac{1}{4} \lambda</math> dipole to mast spacing</b>
Frequency range, MHz		<b>136 – 176</b>	<p>Frequency = 150 Main lobe magnitude = 11.1 Main lobe direction = 0.0 deg. Angular width (3 dB) = 175.2 deg.</p>
Bandwidth @ SWR < 1,5, MHz		<b>40</b>	
Elements		<b>4</b>	
Gain, dBd ( $\frac{1}{4} \lambda$ dipole to mast spacing)		<b>6</b>	
Gain, dBd ( $\frac{3}{8} \lambda$ dipole to mast spacing)		<b>9</b>	
Power rating, W		<b>200</b>	<b>E-plane <math>\lambda</math> dipole to mast spacing</b>
Overall dimensions, mm	H	4800	<p>Frequency = 150 Main lobe magnitude = 8.14 Main lobe direction = 61.0 deg. Angular width (3 dB) = 227.6 deg.</p>
	D	1100	
Weight (aprox.), kg		11,5	
Impedance, Ohm		50	
Termination		<b>N- female</b>	
Vertical beamwidth ( $\frac{3}{8}$ spacing)		<b>19°</b>	
Max. exposed area, m <sup>2</sup>		<b>0,29</b>	<b>H-plane</b>
Lateral thrust at 45 m/s, N		<b>335</b>	<p>Frequency = 150 Main lobe magnitude = 11.1 Main lobe direction = 0.0 deg. Angular width (3 dB) = 19.4 deg. Side lobe level = -8.6 dB</p>
Lightning protection		<b>DC Ground</b>	
Rated wind velocity, m/s		<b>45</b>	
Rated wind velocity with 13mm icing, m/s		<b>28</b>	