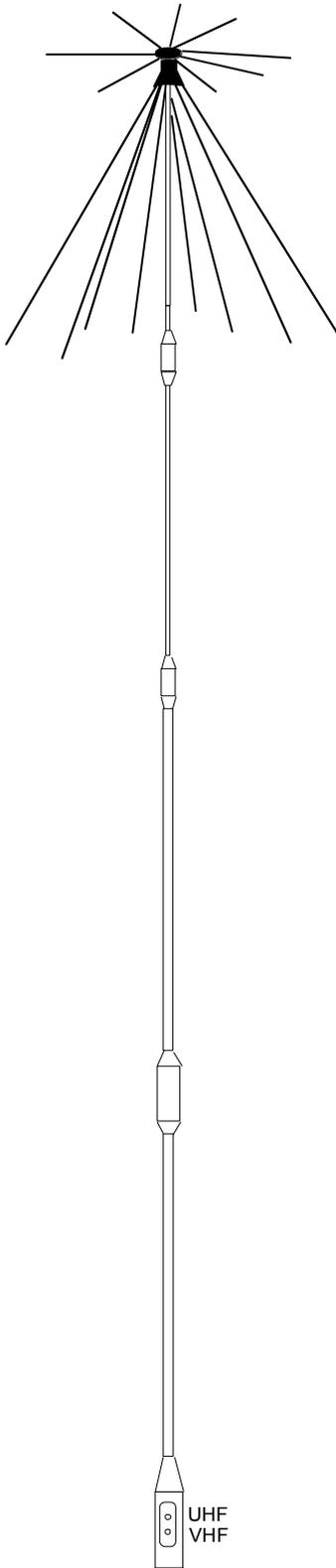


Type VBDA391340

3 Band Omnidirectional VHF/UHF Base Station antenna system



The VBDA391340 is designed to provide excellent ground to ground and surface to air tri-band transmission and reception over the 30-90, 100-174 and 225-400 MHz ground and aviation tactical bands.

The principle of operation is that of a wideband system comprising two separate antennas within a single structure. Output is provided in the three ranges via two separate 50Ω coaxial outputs. The upper connection is for the UHF bands, and lower connection for the VHF band. The system is ground independent and DC isolated to guard against electrolysis. Radiation is vertically polarised and omnidirectional in the azimuth plane.

In the upper bands the antenna functions as a multiple element discone with radiation characteristics optimised to suit ground to ground and surface to air operation. Elevation patterns are consistent in character over the range, being similar to a quarter wave vertical monopole. In the lower band the antenna functions as a ground independent centre fed dipole.

The antenna comprises two sections and features sloping and top hat radials. Construction is rugged, being from marine grade, low corrosion tempered aluminium alloy and stainless steel tubing, completely coated with black PVC to provide maximum protection from the harsh marine environment and ultra-violet radiation. The base mounting section housing the matching unit is 'O' ring sealed.

Specifications

Frequency Range	30-400 MHz in three frequency bands
Bands	30-90 MHz, 100-174 MHz, 225-400 MHz
Overall Length	4.7m (15.4ft)
Diameter	Sloping radials: 840mm (2.7m); base: 44mm (1.73 in)
Pattern	Azimuth: omnidirectional; Elevation: 100-174/225-400 MHz similar to ¼ wave vertical monopole, 30-90 MHz similar to ½ wave dipole
Polarisation	Vertical Linear
Impedance (output)	50Ω (nominal)
Power Capability	100W CW
Gain	VHF: better than -10 dBi at 30 MHz, -1.5 dBi at 60 MHz, +1.0 dBi at 90 MHz; UHF: up to +2.5dBi over frequency range
VSWR	Typically <3.0:1
Wind Survival	Designed to withstand wind velocities of 150 km/h (94 mph) no ice and 70 km/h (44 mph) with 25mm (1 in) radial ice build up
Connection	Via 2 separate outputs either at the antenna or each with 1m coaxial cable tail with BNC, TNC or N type connectors
Mounting	Base threaded to mate to: 1" pipe; extension mounting pole and base flange (option); or extension mounting pole and heavy duty galvanised clamps
Packed Weight	8kg (17.6lbs)