

18-44

CHELTON

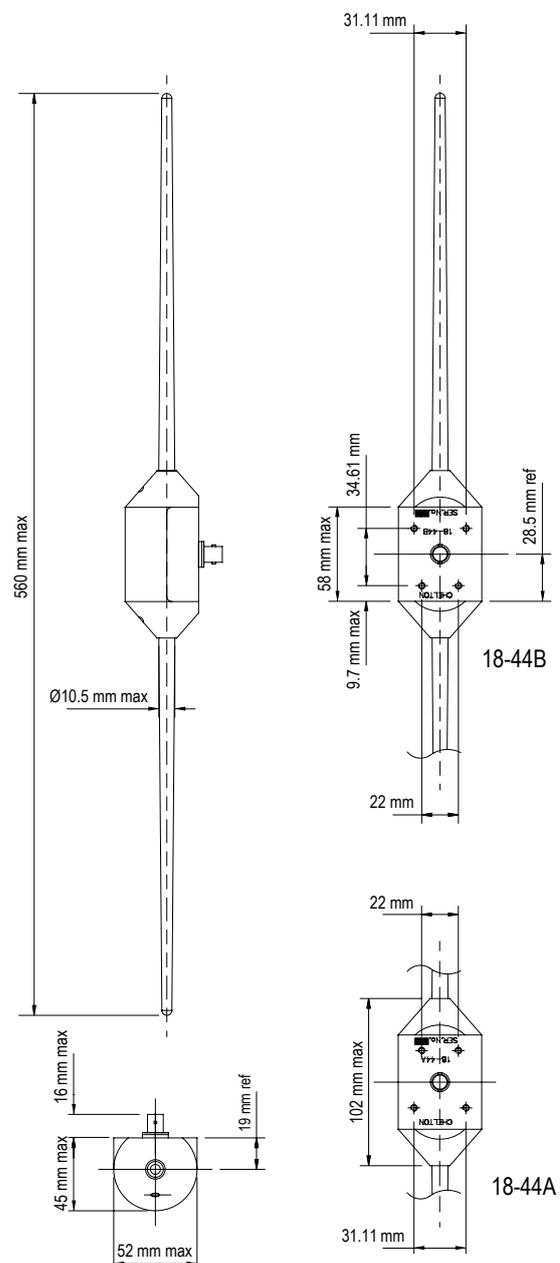
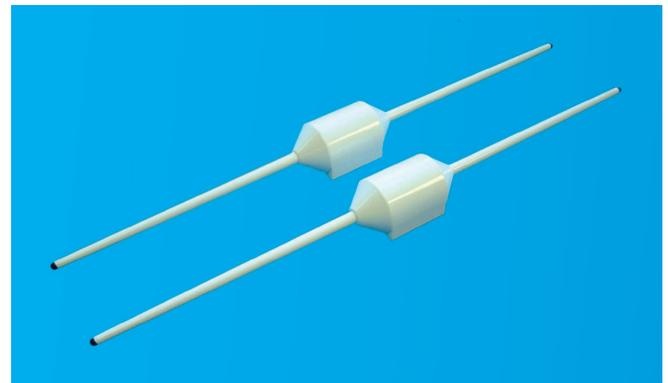
ELT Dipole Antenna

The 18-44 is a phase matched ELT (Emergency Location Transmitter) dipole antenna system designed specifically for homing applications. The whip elements are designed to be replaceable and are supplied as a pair.

Each antenna element is a reactively matched dipole that is fed via a low loss balun. Susceptance compensation is included to enhance low frequency gain.

The system comprises two dipole elements which are electrically phased by 180° and are mechanically handed to ensure the electrical inversion is compensated for when installed in a homing system. The pair of dipoles are part numbered 18-44A and 18-44B. Dipole elements may be replaced if broken with Cobham Part No. 28371.

The dipole elements are GRP covered aluminium alloy and are supported by a Tufnol™ dipole centre which also houses the matching circuitry. An aluminium alloy base block is integral with the dipole assembly and this carries the RF connector and the four threaded fixing holes.



ELT Dipole Antenna

ELECTRICAL

Frequency	121.5 MHz \pm 1 MHz 156.8 MHz \pm 1 MHz 243.0 MHz \pm 1 MHz
VSWR	50 ohm (nominal)
Radiation	Omnidirectional in azimuth (nominal) Cosinusoidal in elevation (nominal)
Power Handling	Receive only
Phase Difference between antennas	$\leq 5^\circ$ when supplied as pair $\leq 8^\circ$ when elements have been replaced
Polarisation	Vertical (when mounted vertically)
Connectors	BNC Female

MECHANICAL

Dimensions (LxWxH)	560 mm (maximum)
Dipole Centre (mm)	45 x 52 x 102 (maximum)
Weight	0.3 kg
Mounting	4 holes fixed location

ENVIRONMENTAL

Temperature Altitude	RTCA DO-160C, Section 4, Category C2
Temperature Variation	RTCA DO-160C, Section 5, Category A
Vibration	RTCA DO -160C, Section 8, Category Y
Shock	RTCA DO -160C, Section 7, Paras 7.2 and 7.3.1
Acceleration	RTCA DO -160C, Section 7, Para 7.3.2
Humidity	RTCA DO -160C, Section 6, Category C
Waterproofness	RTCA DO -160C, Section 10, Category R
Fluids Contamination	RTCA DO -160C, Section 11
Sand and Dust	RTCA DO -160C, Section 12
Fungus	RTCA DO -160C, Section 13
Salt Spray	RTCA DO -160C, Section 14
Magnetic Effect	EUROCAE ED-14G/RTCA DO-160G Sect 15, Cat Z

