

ACTIVE TUNED DIPOLE (CAT'S WHISKER)

02-4005 | 125W 2.5-30MHz



Data Sheet

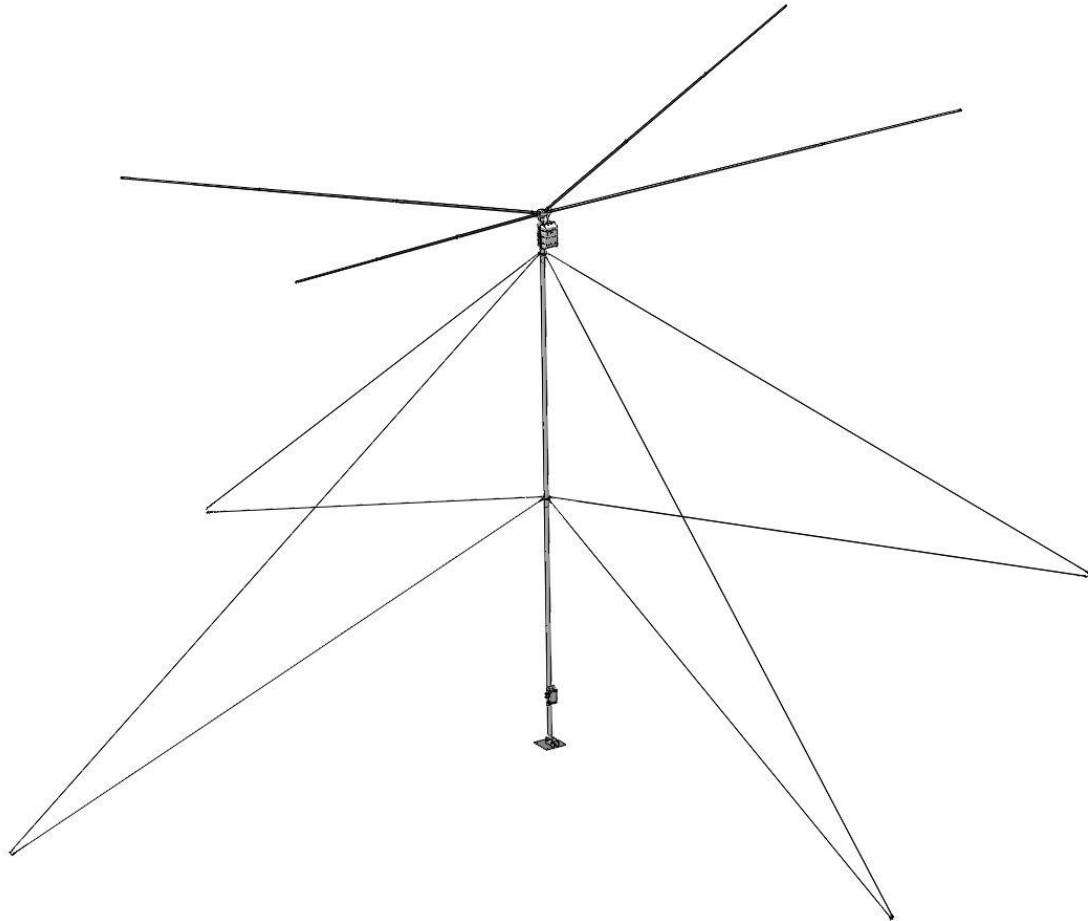


Figure 1 – 02-00131 Installed Antenna

The Lencom® 4005 Active Tuned Dipole antenna is a low footprint base-station antenna.

It is optimised to tune its four 4.8m dipole elements to a VSWR typically less than 1.5:1 over the whole range of 2.5 to 30 MHz, with no gaps.

The unique tuning algorithm provides unlimited memory slots all frequencies across the range.

The memory tuning time of <130 milliseconds makes the 4005 the ideal tuner for networks using ALE and/or frequency hopping, with tuning times for new frequencies averaging less than 1 second.

The 4005 is extremely rugged, and meets MIL-STD 810F for waterproofing (IP67), shock, vibration and dust ingress.

An Interface Unit is installed at the base of the mast, and provides system earthing, as well as external DC power to increase cable length.

Lencom makes a custom mast that is designed to suit the 4005.

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KEY CHARACTERISTICS

ELECTRICAL

Frequency range	2.5-30MHz
Power rating	125W PEP
Power consumption (typical)	Tuned 400mA Tuning <800mA
Input impedance	50Ω
VSWR over range	<1.5:1 (typical)
Tuning Speed	Memory <130ms Initial 1s (average)
Memory Channels	Unlimited - unique non-linear memory allocation
Efficiency	>40% (typical)
Radiation pattern	Refer radiation plot

MECHANICAL

Temperature Rating	-30 to +60° C
DC operating range	10 to 16VDC
Protection	Open/Short circuit antenna Over temperature High VSWR Voltage transients
EMC	Compliant
Shock and vibration	MIL-STD-810F (Dust, vibration, water ingress to IP67) Case pressure-equalisation device fitted
Connectors	RF: UHF socket Control: 6 pin bayonet (Mil-spec)
Case construction	Bespoke diecast aluminium alloy
Finish	Powdercoat white or military green
Installed Dimensions	Tuner Body 300mm x 250mm x 190mm Total (with arms) 4m x 9m
Weight	4005 and Interface Unit 11.5kg 6m Mast 22kg
Packed Dimensions (without mast)	1 Box 572 x 378 x 335mm 9.2kg 1 Tube 125OD x 2260mm 6kg
Packed Dimensions (mast)	1 Box 1070 x 410 x 210mm 12kg 1 Tube 160OD x 3220mm 18kg

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RADIATION PATTERNS

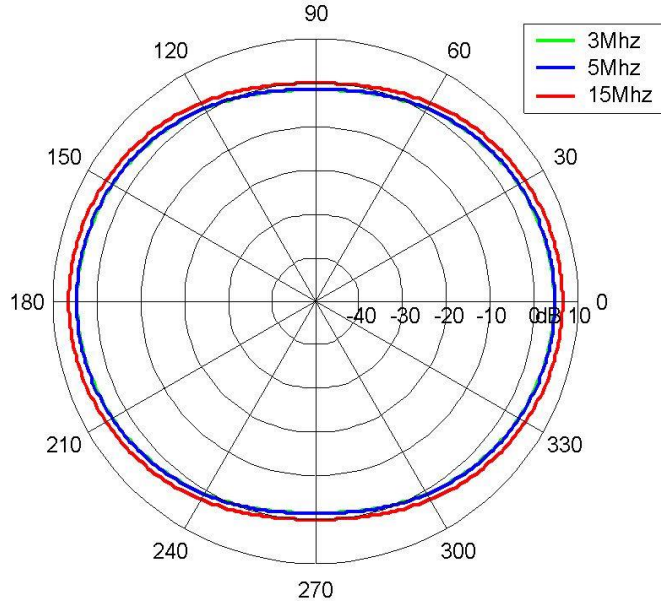


Figure 2 – Azimuth at 35° elevation

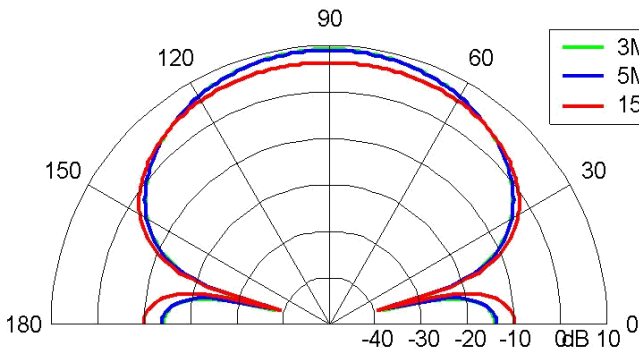


Figure 3 – Elevation at 90°

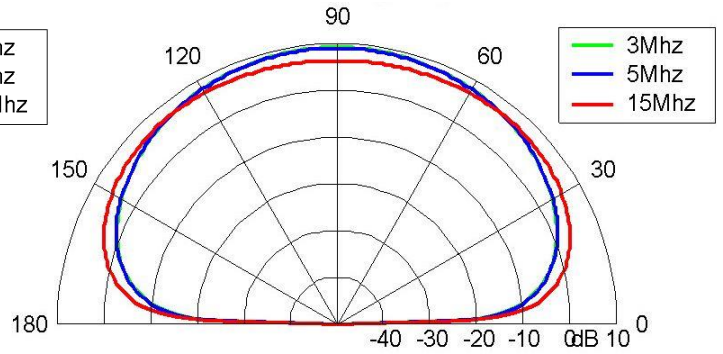


Figure 4 – Elevation at 0°

All patterns modelled over perfect earth

ACCESSORIES

Mast	Earthing kit	Coaxial Cable	Lightning Arrestor
Mast: 6m 02-2191-001	Earthing kit	Available to customer specifications	Lightning arrestor

High Wind Kit: A kit is available to allow the 4005 to be rated for 200km/h winds.

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