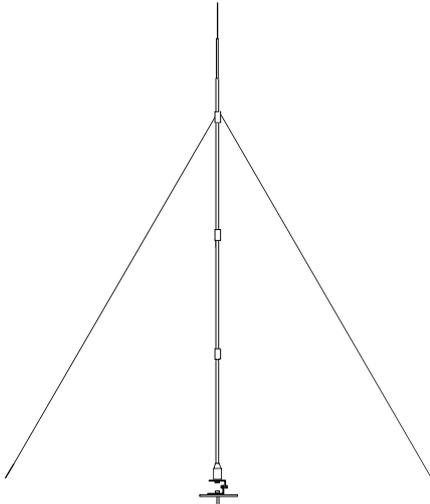




Type 9.5M

HF base station antenna system

Designed for permanent or temporary installation on buildings or on open ground to provide long distance communications whether in remote areas or in the city.



The 9.5M is practical to transport and easily erected and dismantled by the individual, being assembled from 2m (6.5ft) lengths. Roof mounting in city locations is both convenient and unobtrusive. Tempered corrosion resistant aluminium alloy tubing 32mm (1.25in) at base, tapering to 16mm (5/8in) at top, provides a large low loss radiating surface and, when trapped and/or loaded, extreme high efficiency is achieved. A low loss polypropylene insulator is fitted at the base.

The guy point, 6m (20ft) from the base, suspends one set of four electrically transparent Dyneema core guys, 4mm (11/64in) in diameter. The guy point is of aluminium and fastenings are of stainless steel. A hot dip galvanised steel adjustable angle base plate and ground spike with provision for attaching ground radials is used for open ground installations and for roof building erection, a hot dip galvanised adjustable steel bracket is supplied.

The antenna is usually supplied unloaded and self resonant at approximately 7.5 MHz but may be supplied trapped and/or loaded for high efficiency multi-frequency operation. An antenna tuning unit is normally required, and, for efficient operation, a low impedance ground plane or earth mat system is necessary. When erected on open ground, at least four wire radials extending as far as practicable from the base are desirable, especially in dry ground conditions, and for building erection, metal roofing or ground plane radials are recommended. An antenna tuning unit is normally required. Roof ground plane or earth mat systems are options, as are tuned top sections and lightning protection units. (See type LPU for details.)

SPECIFICATIONS

HF Band	2-30 MHz
Length	9.5m (32ft)
Pattern	Omnidirectional
Polarisation	Vertical
Guy Spread	Recommended not less than 3m (9.75ft) radius
Guy Tension	Recommended 4kg (8.8 lbs)
Frequency Range	Pretuned to frequency or frequencies required, or, unloaded 2-30 MHz. A suitable ATU is required.
Wind Loading at guy point	8.2kg at 100 km/h (18.04 lbs at 60 mph) 13.9kg at 130 km/h (30.6 lbs at 81 mph)
Vertical Force on Base at Minimum Guy Spread	25kg at 100 km/h (55 lbs at 60 mph) 40kg at 130 km/h (88 lbs at 81 mph)
Power Capability	1kW PEP for normal loaded top sections; 500w PEP for trapped top sections; 1kW PEP for unloaded top sections.
Mountings	On open ground: adjustable angle ground plate, 300 x 300 x 5mm (12 x 12 x 3/16 in) with ground spike and provision for connection of earth mat radials; On buildings: adjustable angle bracket. Both mountings are supplied in kit form.
Connection	Cable Lug at base of antenna
Packed Weight	Antenna: with ground mount 11.0kg (24.2 lbs); with building mount 8.0kg (17.6 lbs). Ground Plane 4.0kg (8.8 lbs) Earth Mat 6.0kg (13.3 lbs)



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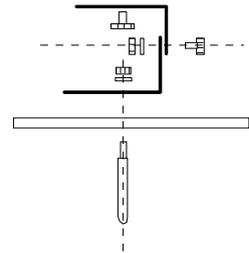




TYPE 9.5M INSTALLATION INSTRUCTIONS:

Assembly

1. Assemble the antenna sections, observing the section numbers on the end of each section. Section one being the base. For ease of assembly smear a little grease on the joints. This will also assist with future dismantling. Ensure guy ring is on section four prior to section five being installed.
2. Fasten together by the stainless steel self tapping screws provided.
3. Fasten the galvanised right angle mounting brackets together then to the base insulator using the M10 x 25mm stainless steel bolt and washer provided. (As shown in the drawing at right.)



Mounting

Antenna

1. Fasten the building bracket or ground plate in position and loosely bolt the antenna bracket to the base plate..
2. Temporarily fasten the side and back guys to their anchors and swing the antenna upright.
3. Tighten all guys and mounting bolts. Do not exceed 4kg (8.8 lbs) guy tension as this will pre-stress the antenna and may lead to premature failure.

Ground Plane and Earth Mat

1. Fasten one end of each copper wire radial to ground plate or angle bracket of the antenna mount with the bolts provided.
2. Run the radials out from the base at 90° spacings.
3. For the Earth Mat: drive in the outer earth stakes and attach the radial with the bolts provided. (It is advisable to leave bolts in the stakes while driving to prevent distortion of bolt holes.)

For the Ground Plane: fasten the outer end anchor lugs, lightly tension the radials and crimp the swages provided to maintain the tension.

4. In the case of the Earth Mat, the radials should be buried if possible.

Important Factors

1. Recommended guy tension should not be exceeded.
2. Observe minimum recommended guy spread.
3. When handling guy wires, ensure that they do not become kinked and subsequently weakened.



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