



Type 23H/S

Higher power capability ruggedised marine HF whip antenna for professional use on vessels over 18 metres (60 feet)

The type 23H/S is a 7 metre (23 ft) heavy duty self supporting whip antenna with a power capability of 1.2 kW PEP in the frequency range 1.6 to 30 MHz. This is a side mounting version of the military type 23B/3C. Wind survival is to 240 km/h (150 mph) without permanent deformation effects.

The 23H/S utilises two side mounting insulators with the RF feed point placed just above the position for the lower insulator. Construction is from laminated heavy gauge marine grade aluminium alloy tubing, providing a large low loss surface area for maximum radiating efficiency. The radiator is fully protected by a high durability epoxy based coating, highly resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation.

For ease of transport, the antenna breaks down into two sections [base 3.76m (12.3 ft); top 3.35m (11 ft)] which slip together and fasten with four stainless steel locking screws.

The 23H/S is available unloaded or resonant at a single frequency of 4.6 MHz. For operation on frequencies other than the resonant frequency, the difference is made up in the antenna tuning unit.

Specifications

Colour	Standard is Black
HF Marine Band	1.6-30 MHz
Length	7.0 metres (23 ft)
Pattern	Omnidirectional
Polarisation	Vertical
Frequency Range	Pre-tuned to 4.6 MHz or, unloaded, 1.6-30 MHz with suitable ATU
Wind Loading	8.8 kg at 100 km/h (19.5 lbs at 60 mph) 20 kg at 150 km/h (44 lbs at 94 mph) Antenna survival : 250 km/h (156 mph)
Power Capability	1.2 kW PEP for unloaded top sections, 800 w PEP for 4.6 MHz top sections
Radiator	Total radiating surface: 5,500 sq cm (5.9 sq ft)
Mountings	Two 100 mm (4 in) nylon clamp type insulators, 50 mm diameter, threaded to take 12mm bolt (supplied); insulator spacing not less than 0.9 m (3 ft)
Connection	M6 stainless steel stud and lock nuts direct to antenna
Packed Weight	8 kg (17.6 lbs)



Specifications subject to change – Issued 01/09/13

Moonraker Australia Pty. Ltd. ABN 70 162 868 475

Tasmanian Technopark, Dowsing Point, Tasmania, Australia 7010

Website: www.moonraker.com.au Tel: 61 (0)3 6273 1533 Fax: 61 (0)3 6273 1749 Email: radiocom@moonraker.com.au



Type 23H/S Installation Instructions

Assembly

1. Slide the two mounting insulators on the base section before assembling, being careful not to damage the Epoxy based coating. Mounts may be opened by reversing the clamp screw, placing a coin or similar in the slot behind the screw and using the screw to force the slot apart.
2. Assemble the base and top sections and fasten with the stainless steel self tapping screws supplied. Use of a smear of grease on the bare aluminium before assembly will aid future disassembly.

Mounting

1. Make sure the mounting bolts enter the insulator thread by not less than 25mm (1 in) but not so that they bottom in the hole.
2. Mounting insulators should be spaced not less than 0.9m (3 ft) apart.

Important Factors

1. For best results, the antenna should be mounted vertically (not sloping) on the cabin side or stub mast.
2. Keep the feeder lead clear of ship's wiring and other metallic objects and avoid running parallel to metal decks, etc. with less than 2 cm (0.75 in) clearance. We recommend Moonraker standoff and cable run insulators and Moonraker HV silicone insulated cable.
3. Lead should be run as short and direct as possible between the antenna and equipment.
4. If using deck feedthrough insulator, make sure the terminals are protected from salt spray; otherwise severe loss of power may result due to leakage across the wet insulator. Moonraker feedthrough insulators are recommended.
5. Earth leads should be connected directly to the ATU and kept as short as possible.
6. Copper strip at least 50 mm (2 in) wide is recommended for earth lead between equipment and Moonraker earth plate.

Tuning

As the feed point impedance of this antenna is relatively high on all frequencies, antenna current will be relatively low, and earth losses minimised. At the self resonant frequencies little or no inductance will be required in the ATU. At 8 and 12 MHz frequencies series capacitance may be required if the antenna and earth leads are long.