



DEEP SEA TWINS

**6.7 metre (22 feet) matched pair of HF and VHF antennas
for vessels over 10.5 metres (34 feet)**

Deep Sea Twins provide high radiating efficiency in demanding service conditions for vessels that prefer the aesthetic look of matched HF and VHF antennas, like flybridge cruiser and higher speed craft.

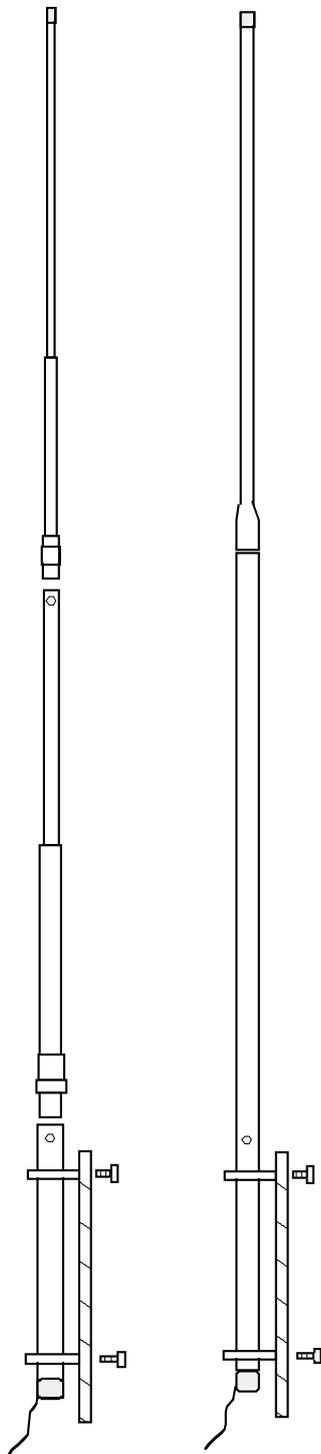
The *lookalike* pair consist of the high endurance side mounting type 22W HF whip together with a side mounting version of the type MD 1/2λ VHF dipole antenna, matched in length.

Deep Sea Twins are constructed of marine grade tempered aluminium alloy, which provides a large low loss radiating surface. Maximum protection from the marine environment is provided by a high durability epoxy based coating, resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation. For ease of transportation, each antenna is comprised of three easily assembled sections.

Fittings are of nylon, stainless steel, marine grade aluminium and chromed bronze. The HF antenna is available loaded or unloaded with the VHF antenna pretuned to the marine band.

Mounting is by way of sidemount insulators (two per antenna).

SPECIFICATIONS



	HF	VHF
Colour	Standard is White. Optional Black.	Standard is White. Optional Black.
Base Diameter	32mm (1.25 in)	32mm (1.25 in)
Frequency Range	Pre-tuned to frequency or frequencies required or unloaded 2-30 MHz with suitable ATU	VHF Marine Band 156.8MHz (Channel 16)
Length	6.7 metres (22 ft)	6.7 metres (22 ft)
Base Diameter	32mm (1.25 in)	32mm (1.25 in)
Pattern	Omnidirectional	Omnidirectional maximum radiation 90° to radiator
Polarisation	Vertical	Vertical
Bandwidth	-	7MHz at 1.5 SWR points
Gain	-	2.2dBi
Impedance	-	50 ohms (nominal)
Wind Loading	7.7kg at 100 km/h (16.9 lbs at 60 mph); 13.0kg at 130 km/h (28.6 lbs at 81 mph)	
Power Capability	1kW PEP	80 Watts
Connection	2 Metres of silicone insulated flexible cable	5 Metres of RG58 coaxial cable with PL259 connector
Mounting	100mm (4 in) nylon clamp type insulators (2 per antenna), 50mm (2 in) diameter, threaded to take 12mm bolt (not supplied). Minimum mount spacing 0.9m (3 ft)	
Packed Weight	14.5kg	

Specifications subject to change – Issued 07/13



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





DEEP SEA TWINS INSTALLATION INSTRUCTIONS

Assembly and Mounting

HF and VHF

1. Slide the two mounting insulators on the base section of each antenna before assembling, being careful not to damage the antenna coating. If necessary 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, mid and top sections and fasten with the three stainless steel self tapping screws supplied. Use of a smear of grease on the bare aluminium before assembly will aid future disassembly. Seal the **OUTSIDE** of each joint with tape or neutral cure silicone.
3. Make sure the mounting bolts enter the two mounting insulator thread by not less than 25 mm (1 in) but not so that they bottom in the hole.
4. Mounting insulators should be spaced not less than 0.9 metres (3 ft) apart.

Important Factors

HF

1. For best results the antenna should be mounted vertically (not sloping).
2. The length of lead supplied with the antenna should not be exceeded (2.5m/8ft). Longer lead may be used if necessary, but antenna efficiency may decrease and series capacitance may be required to tune the higher frequencies above 8 MHz.
3. Keep the lead clear of ship's wiring and other metallic objects and avoid running parallel to metal decks, etc. with less than 2cm (3/4 in) clearance. We recommend Moonraker stand off and cable run insulators.
4. Lead should be run as short and direct as possible between the antenna and equipment.
5. If using deck feed through 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 feed through insulators are recommended wherever the lead passes through the cabin or deck.
6. Earth leads should be connected directly to the ATU and kept as short as possible.
7. Copper strip at least 50mm (2 in) wide is recommended for earth lead between equipment and Moonraker earth plate when installed on fibreglass or wooden vessels.

VHF

1. The antenna should be mounted clear of nearby metal objects which may affect antenna tuning, and for best results should be vertical, not sloping.
2. Note that due to inbuilt static discharge capability, this antenna will exhibit a short circuit if tested with an ohm meter or DC circuit tester.



Specifications subject to change – Issued 07/13

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

