## **HF ANTENNA SYSTEMS**

15S/R

# MARINE HF ANTENNA FOR VESSELS WHERE PERMANENT MOUNTING IS NOT POSSIBLE OR NOT REQUIRED

The 4.6m (15ft) 15S/R antenna system is a larger version of our very popular type 12S/R emergency antenna system. Easily and quickly assembled or removed, this demountable whip is especially suitable for trailed craft or as an emergency antenna where a wire to masthead system is used, such as a backstay on yachts,

The antenna is simply assembled from two sections of 2.7 and 1.85m, which are easily stored below deck. These sections screw together on a self locking taper and then into a permanently deck mounted feedthrough insulator to provide instant, efficient communications in the HF Band range from 2-30 MHz.

Antenna construction comprises light-weight marine grade tempered aluminium alloy tubing fully protected from the marine environment by a high durability epoxy based coating resistant to chemical attack, abrasion and the effects of ultra-violet radiation. The deckmount is of high density polyethylene with brass insert and stainless steel mounting bolt. Fittings are of nylon, stainless steel and brass with low loss coils (loaded top sections).

A backstay wire connection kit is available so that the deckmount may be used as a deck feedthrough insulator to feed a backstay antenna or the ship's main HF antenna. If dismasted or the main antenna is lost, the backstay feed wire connection may be removed and the whip antenna screwed into the deckmount.

The antenna is available unloaded or resonant at a single frequency (the highest to be used, normally 2.6, 4.6, 6.3, 8.3 or 10 MHz). For operation on frequencies lower than the resonant frequency, the difference is made up in the ATU.

## SPECIFICATIONS V

|                  | STANDARD  | OPTIONAL |
|------------------|---|----------|
| Colour           | Black   | White    |
| HF Marine Band   | 2-30 MHz  |          |
| Length           | 4.6 metres (15 ft)  |          |
| Pattern          | Omnidirectional   |          |
| Polarisation     | Vertical  |          |
| Base Diameter    | 80mm  |          |
| Frequency Range  | Pretuned to frequency, or unloaded 2-30 MHz with suitable ATU   |          |
| Wind Loading     | 4.0 kg at 100 km/h  |          |
|                  | 6.8 kg at 130 km/h  |          |
| Power Capability | 400W PEP for unloaded top sections, 250W PEP for normal loaded top sections; higher power to order.   |          |
| Mountings        | One high density polyethylene deckmount 80mm diameter with brass insert and stainless steel mounting bolt, mounting hole 12mm, fitting decks to 25mm thick. |          |
| Connection       | Under deck to lug on mounting bolt  |          |
| Packed Weight    | 4.5 kg with mountings   |          |



## 15S/R INSTALLATION INSTRUCTIONS **V**

#### Assembly:

- 1. Screw the top and base sections together. Tighten hard down by HAND, so that it locks firmly on the taper. Do not use tools.
- 2. On permanent installations ONLY use locking compound such as Loctite on top section screw thread joint. Note that some grades of Loctite will not allow disassembly, we suggest 243 grade. Do not use silicone sealant or grease on this joint.
- 3. If the top section is removed, make sure to replace it tightly when using the antenna again.

#### Mounting:

- 1. Drill a 25 mm and 5mm (for locking pin) hole through the deck in the location required and mount the deck mount using a packing wedge if necessary to keep the antenna vertical.
- 2. Use a little silicone sealant under the mount to keep the joint waterproof and drill a small hole to accommodate the locking pin. Bolt the mount hard down using the bolt and insulating washer provided. Take care to locate the locking pin.
- 3. Reinforce thin decks with a backing plate to prevent deck fracture.
- 4. Connect the antenna lead to the lug provided on the mounting bolt.
- 5. Screw the antenna hard down on the mount, otherwise it may work on the threaded section and eventually fracture. Do not use without the neoprene 0 ring as these waterproofs the joint and prevents it working loose.

### **Important Factors:**

- 1. For best result the antenna should be mounted vertically (not sloping).
- 2. The 2 metre recommended length of antenna lead should not be exceeded. Longer lead may be used if necessary, but antenna efficiency may decrease and series capacitance may be required to tune the higher frequencies.
- 3. Keep the lead clear of ship's wiring or other metallic objects and avoid running parallel to metal decks, etc., with less than 2 cm clearance.
- 4. Make sure the antenna is always erected with the neoprene 0 ring to protect the connection from salt spray; otherwise the antenna may work loose.
- 5. Earth leads should be connected directly to the ATU and kept as short as possible.
- 6. Copper strip recommended for earth lead between equipment and Moonraker earth plate.

## CONTACT DETAILS **V**

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Moonraker products represent the pinnacle of antenna design. With over 45 years' experience supplying Defence, Commercial and Recreational industries. Moonraker antennas are individually tuned and manufactured to our stringent extreme marine quality standards that ensure maximum performance and service life.

