

## Section 6

### MARINE ANTENNAS

Updated 26 August 2008

### HF Marine Deck Mount Antennas

Frequency	Bandwidth	Availability
<b>2 – 30 MHz</b>	<b>Requires ATU</b>	<b>STOCK</b>



The HM212 and HM215 deck mount models are suitable for all HF marine communications in the 2 to 30 MHz frequency range.

These antennas are designed to couple with transmitters via Antenna Tuning Units (ATU). Clients contemplating purchase of these antennas should verify with their supplier whether their ATU specification will load the given length of radiator for the chosen model at the lowest frequency desired.

Radiators are sealed inside the single piece white fibreglass tapered radome and terminate via 5 metres of high voltage (20 kV) feed cable side exiting from the chromed brass mount ferrule.

Both models come complete with our highest quality fully stainless steel MM2 folding deck mount. This base folds down in two directions and also swivels in the opposite plane by loosening the stainless steel pivot bolt. This versatility allows the antenna to be mounted in a variety of positions on any flat surface and at any angle using four screws or bolts.

The antenna must be in a vertical position for optimum performance and can be folded down when not required.

SPECIFICATIONS	HM212	HM215
<b>Construction</b>	Single piece white fibreglass tapered radome, chromed brass ferrule, 1"–14 UNS thread	
<b>Frequency Range</b>	<b>HF 2 to 30 MHz with suitable Antenna Tuning Unit (ATU)</b>	
<b>Tuning</b>	Tuning limits are determined by the ATU Grounding systems may also affect the ATU tune range	
<b>Gain</b>	<b>2.1 dBi</b>	<b>2.1 dBi</b>
<b>Max Input Power</b>	250 Watts PEP	250 Watts PEP
<b>Impedance (Nom.)</b>	ATU is required to match the antenna to 50 Ohms	
<b>Polarisation</b>	Vertical	Vertical
<b>Termination</b>	5 metres of 20 kv single core cable side exits from the chromed brass mount ferrule	
<b>Height (inc mount)</b>	3.7 metres	4.5 metres
<b>Weight (inc mount)</b>	2.0 kg	3.5 kg
<b>Shipped Length</b>	3.9 metres	4.7 metres
<b>Shipped Weight</b>	4.0 kg	5.0 kg
<b>Deck Mount Supplied</b>	The <b>MM2</b> stainless steel folding deck mount supplied can be secured to any flat surface horizontal or vertical at any angle using 4 screws or bolts	



#### Installation Advice :

The vertical radiation pattern for these installations is largely influenced by the size, shape and nature of the ground plane under the antenna. The length and placement of the feedline also has a large effect on pattern formation, with modelling indicating a long feedline at right angles to the antenna causing pattern to vary greatly from omnidirectional.

As every installation is different, no radiation patterns are published for these antennas. In all installations a good earth system is an essential key to good performance. As mentioned, the groundplane and associated grounding system play a large part in determining both the tuning range and pattern formation of these antennas. In simpler marine installations, including the case of fibreglass hulls, radiation may also occur from earth leads.

Keep all leads as short as possible and joints in the earth system fully soldered. Your earthing system may need more planning and attention than your vertical radiator! Earthing system problems may also cause the DC feed wiring to become an active radiator.

It is wise to verify in advance the ability of your ATU or autotuner to match shorter radiators at the lowest frequency. Symmetrical, balanced, as well as low resistance earthing is needed for good omnidirectional radiation. Cable feed to antenna from the tuner that is not assisting symmetrical pattern formation by being at right angles to the antenna must be minimised.



MM2 stainless steel folding deck mount