

## Section 6

### MARINE ANTENNAS

Updated 19 January 2012

## HM300 HF Marine Radio 10 metre Deck Mount

Frequency  
2 – 30 MHz

Bandwidth  
Requires ATU



HM300 is a 10 metre tall free standing marine HF radio deck mount antenna specifically designed for larger vessels. This model delivers outstanding performance, is very durable and accepts high input power up to 2,000 watts PEP.

The antenna couples with a HF radio transmitter via an Antenna Tuning Unit.

The sturdy fibreglass radome is a three piece construction with each section joined with stainless steel ferrules. Each radome is fully sealed and packed tight with closed cell foam to protect the internal braided copper radiators, prevent rattles and maximise service life in harsh marine conditions.

The radome tip has a corona ball to prevent high voltage discharge into the atmosphere. The antenna butt is bonded to a short piece of stainless steel tube.

The deck mount base assembly is available to order separately if required. Constructed from stainless steel, this very sturdy deck mount plate is 300 mm in diameter and 12 mm thick, as pictured below. The vertical mount tube is welded to the steel plate. There are 4 holes in the plate for securing the base to the deck using stainless steel bolts, washers and nuts. Termination is via a bolt in the base to which the 6 metre single core 20 kV antenna feed cable attaches.

SPECIFICATIONS	HM300
Construction	Three piece white fibreglass radome, copper radiators, stainless steel joining ferrules
Frequency Range	HF Radio 2 to 30 MHz with suitable ATU
Impedance (Nom)	Antenna Tuning Unit is required to match the antenna to 50 Ohms
Tuning	Tuning limits are determined by the ATU used. Grounding systems may also affect the ATU tune range.
Termination	6 metres of 20 kv single core cable fitted with a lug for antenna terminal supplied
Gain	2.1 dBi
Maximum Power	2,000 Watts PEP
Polarisation	Vertical
Height	10 metres
Weight	24 kg
Mount Tube	60 mm diameter x 4 mm stainless steel
Deck Mount Base Assembly, available to order separately	<b>Order Code : 1429</b> 300 mm diameter x 12 mm stainless steel, 4 holes for securing the base to the deck
Shipping Length	4 metres
Shipping Weight	42 kg



**1429**  
Stainless Steel  
Deck Mount Base  
available to order  
separately

#### Advice to customers :

To achieve best performance, the marine HF radio antenna must be mounted as far away from other antennas and metallic objects as possible to avoid interference and distortion of the radiation pattern. Also, a good earth system is the essential key to achieving the optimum transmit and receive performance. The HF radio antenna must be isolated from the vessel's earth system. The antenna feeder cable attaches to your Antenna Tuning Unit, and it is the ATU which must be connected to the vessel's earth system. Refer to the installation instructions which came with your ATU.

The vertical radiation pattern for HF radio antennas is largely influenced by the size, shape and nature of the ground plane under the antenna. Symmetrical, balanced, as well as low resistance earthing is needed for a good omnidirectional radiation pattern. 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 causes the pattern to vary greatly from omnidirectional.