TECHNICAL ARTICLE
Cabin Equipment - Antennas

VHF Antennas

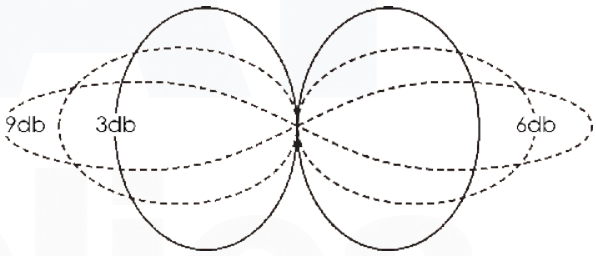
For this article we will be focusing on antennas as a marine radio is only as good as its antenna. Even the most expensive radio will perform poorly with a second rate antenna.

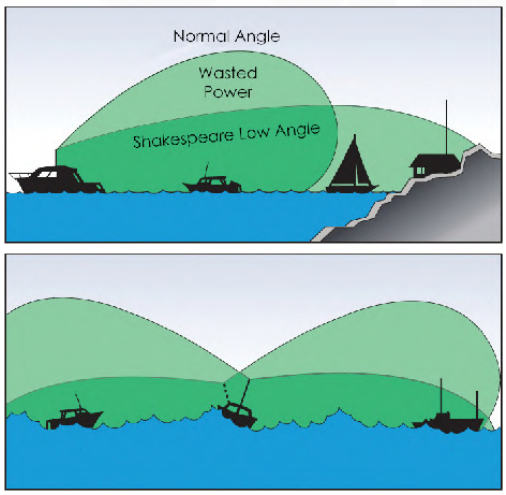
We stock the Shakespeare V-Tronix and Classic ranges of antennas as they are renowned for their quality, with hand soldered connections and brass and copper elements.

When choosing an antenna height is paramount in getting the greatest range and this is the reason the antenna should be placed as high as possible on the boat.
Sailboats: As a general rule, sailboats have a 3' - 5' antenna mounted on the masthead.
Powerboats: Most powerboats from 16' - 25' in length use a standard 8' antenna, while bigger vessels have the option of larger antennas with more gain.

What is Gain?

This is a rating stated in decibels (dB). Generally, the higher the gain, the greater the communication range. Howvever, keep in mind that the higher the gain, the more compressed the beam width becomes (see illustration). A narrow beam can cause fading in rolling seas. Sailboats and small, lightweight boats which roll excessively in heavy seas normally do not use a gain rating above 6dB. The more stable the platform of a vessel, the higher the gain that can effectively be used.





Shakespeare combines a normal beam width with a unique low angle of radiation to minimise signal fading in rough or rolling seas.

Low Angle Radiation
Shakespeare pioneered low angle techniques in marine antennas in the 1960s and built them into many models. Low angle minimises fading while maximising range, even during excessive boat roll in turbulent areas. A normal angle shortens the range and wastes power.

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