

# ECHOMAX

*a significant advance in marine safety*

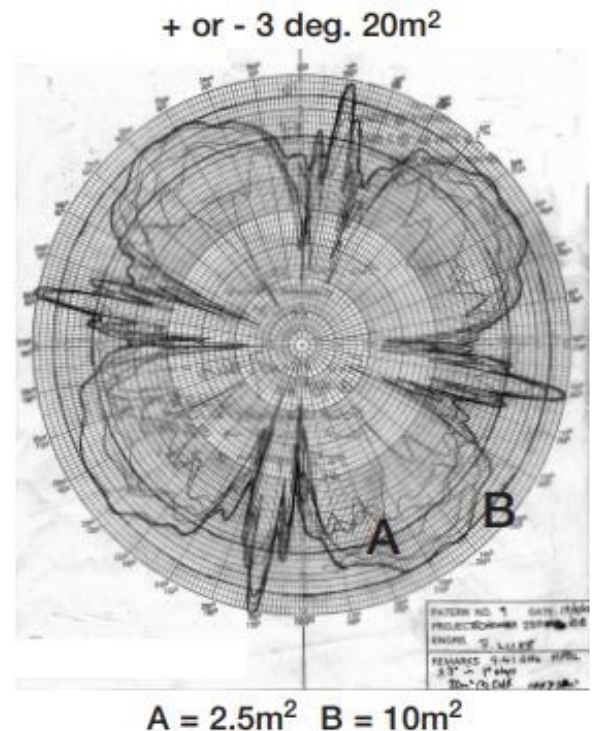
## EM230 MIDI & MIDI BASEMOUNT— RADAR REFLECTORS

We hereby certify that the polar diagram shown here was issued on 17th May 2002 by QinetiQ radar testing laboratory and that the EM230 Midi accompanying this certification is identical in all respects to that tested. Said polar diagram confirms that Echomax recorded a peak of  $20\text{m}^2$  at  $\pm 3$  degrees, exceeding that  $10\text{m}^2$  requirement of RORC and ORC Regulations. Recent tests by the RNLI in seat state 'fair' recorded 100% paints at 3.8 miles and 80% paints at 5 miles plus, the reflector being mounted at 2m above sea level. The RORC recommended height above sea level is 4m if possible. Echomax Reflectors must not be mounted horizontally.

Signed



Managing Director



## Mounting Instructions

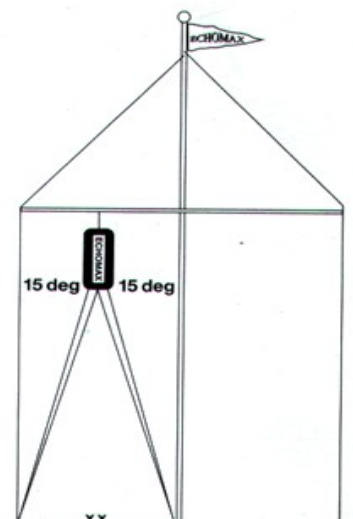
### Sailing Yachts—Halyard Mount—Midi

Echomax radar reflectors consist of a symmetrical arrangement of interacting corners. John Firth the inventor of the Echomax Patent always maintained that no radar reflector should be fitted on the mast due to mast shadow of about 22 degrees—see chart on website. To counter this and help compensate for heel we show to the right John Firths preferred halyard mount drawing. The reflector can then be trimmed as required to give the best possible response.

#### IMPORTANT

Yachtsmen will be aware of the need to trim the reflector when on the reverse tack, failure to do so will result in compounding the angle of heel rendering the reflector inefficient.

Note: Reflector trimmed to leeward 15 degrees. Mast heeling to 30 degrees.



Echomax 230mm response =  $6\text{m}^2$

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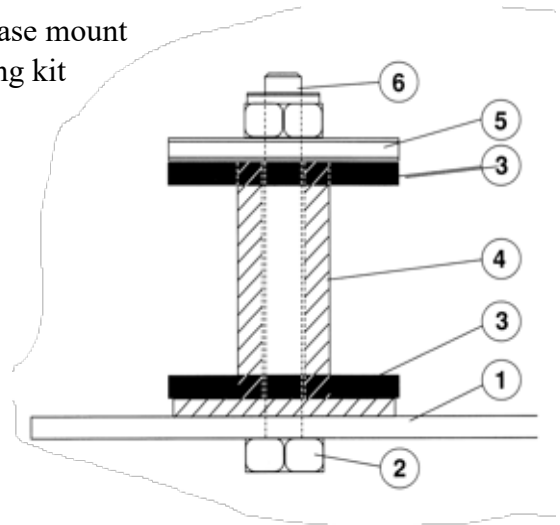
## Sailing Yachts—Motor Vessels—Mast Mounting

Echomax may be fitted in any position around the mast i.e. fore or aft. Hypothetical figures on mast shadow may be viewed on our Website. If the mast on the motor vessel is not perpendicular ensure the reflector is mounted in the vertical position. Utilising Echomax stainless steel mast brackets fit reflector as high as possible on the mast, using Monel or stainless steel rivets (3/16 x 1/2 inch 4.8 x 12.7mm). To avoid electrolytic action use closed cell foam between bracket and mast. Firstly fix top bracket to mast in the required position, measure distance vertically between centres, mark position of lower bracket then drill and fix. Use two stainless steel hexagonal bolts 8mm dia x 30mm long to fix Echomax to the mounting brackets.

## Midi Basemount— Compact—Compact Plus

Midi Basemount—is designed for A frames, pole mounting or base mount with suitable base for fixing on wheelhouse roofs, using the fixing kit supplied and itemised below.

Item	Description	Quantity
6	M6—Nyloc-nut	4
5	30mm dia stainless steel washer	4
4	Nylon insert	4
3	30mm dia neoprene rubber washer	8
2	50mm M6 stainless steel bolt	4
1	A frame mounting	



For cabin roof mounting you will need to fit longer bolts as required.

**N.B Reflector must be fitted on a flat surface**

## Basemount QD Adaptor Plate

Designed to enable the basemount units to be Quickly Detachable from the cabin roof or A frame to avoid damage by trees, low objects or restrictive barn or garage entrances.

Fit and remove your Echomax in seconds. Made from robust 3mm stainless plate with 12mm Stainless fittings. 150mm diameter with 4 x 6mm fixings @ 80mm centres. Weight 0.9kg



**New Combi bracket for  
Basemount units.**

