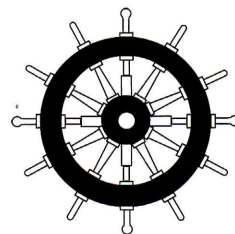


# ECHOMAX

*a significant advance in marine safety*



## EM 230(BR) EM 230BM3 Radar Reflector

### Ships Wheel Mark for lifeboats and rescue craft

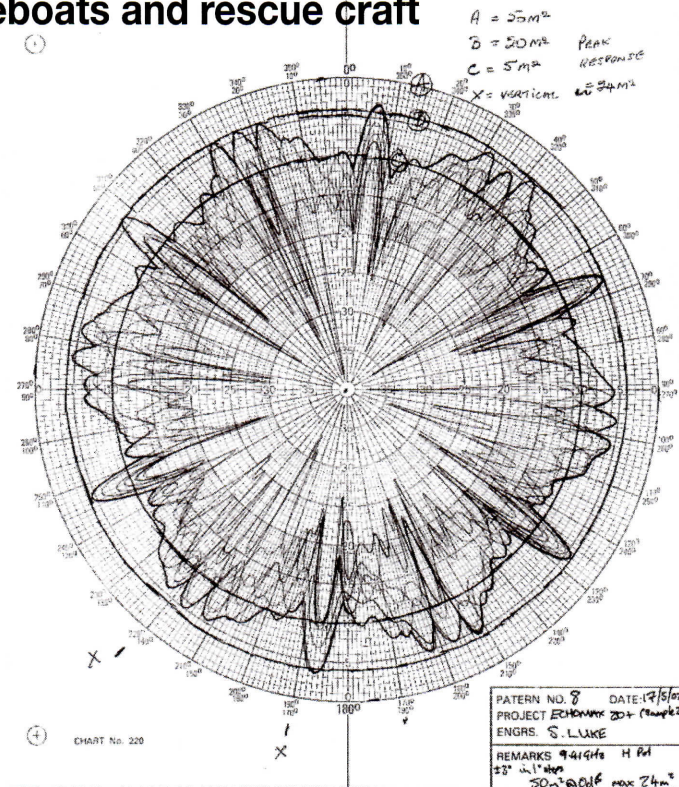
Echomax models EM230 - 230BR - EM230BM3 - Ships Wheel Mark radar reflectors for life boats and rescue craft by virtue of TUV - BABT MED Module B Type certificate dated 3rd January 2013 in compliance with Directive 96/98/EC, as amended by Commission Directive 2011/75/EU - meeting ISO 8729 2nd Edition published November 1997 and in Europe as EN ISO 8729-1998 and UK as BS EN ISO 8729-1999.

Echomax EM230 has NATO Stock No.5840-99-742-6193 following the adoption and use of the Echomax EM230 by the UK Military Forces and others throughout the World.

We hereby certify that the polar diagram opposite was issued on the 17th May 2002 by QinetiQ radar testing laboratory and that the array tested is identical in all respects to that fitted in the EM230 - EM230BR or EM230BM3. This recorded a maximum response of 24M<sup>2</sup> and a stated performance level (SPL) of 4.7M<sup>2</sup> at +/- 3 degrees of heel.

Signed

Managing Director



## Radar Reflector Mounting Instructions

### RECOMMENDED MOUNTING HEIGHT

The Ships Wheel Mark - MED Module B certificate states mounting height should be at least 2m above sea level. The RORC recommend a mounting height where possible of 4m above sea level. Due to the curvature of the earth Echomax advice is 'The higher the better'.

### EM230 - 230BR - HALYARD SUSPENSION

To counter mast shadow of about 22 degrees and help compensate for heel mount as illustrated opposite - the reflector can be trimmed as required to give the best possible response.

**Important** the reflector must be trimmed when on the reverse tack - failure to take this action will compound the angle of heel rendering the reflector inefficient.

### SAILING VESSELS - MAST MOUNT

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.

**Echomax stainless steel mast brackets have right angle sections which are provided to reduce halyard, rope wear or chaffing and must be fitted with these facing outwards on both top and bottom brackets.**

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.

