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ECHOMAX

Active-X-Band



Radar Target Enhancer



Echomax Active-X-Band RTE shown with optional Stainless base fitting

The Echomax Active-X-Band Radar Target Enhancer (RTE) is designed to respond to interrogating X band radar (9.3 – 9.5GHz) by receiving a transmitted pulse and amplifying the pulse and re-transmitting the pulse back to the radar at the same frequency with minimum delay, thereby improving the radar detection range and visibility of small targets. It will not enhance significantly vessels with large radar cross section.

The RTE is primarily intended for small vessels with no radar fitted and typically should enhance the RCS (radar cross section) of vessels up to 25m in length. For small craft/rigid inflatables improvements will start to be seen at around 1-2 miles extending to 8-10 miles or more depending on prevailing conditions. The response of the RTE will vary according to range, RTE and radar height above sea level, radar power and condition. Poor weather, sea state and precipitation will greatly reduce the response.

SPECIFICATION

- **Reception frequency:** X band 9.32 – 9.5 GHz
- **Operating Temperature:** -20 to +60 degrees C
- **Voltage:** 12V DC - +30%-10% (voltage surge and cross polarity protected)
- **Stand by current consumption:** <15mA
- **Position accuracy:** Within 1 meter
- **5 interrogating radar:** <23mA (typically) 10 interrogating radar: <32mA (typically)
- **EIRP:** 1W (typically)

DIMENSIONS and WEIGHTS

Antenna length: 478mm	Control Box width: 92mm	Cable length: 24m 2 core
Antenna width: 40.5mm	Control Box height: 51mm	0.5mm ²
Antenna weight: 327gms excluding cable	Control Box depth: 38mm	Cable weight: 969 gms
	Control Box weight: 99gms	

CONTROL BOX

- **Surface mount or flush mount:** For interior installation with new optional flush mount kit. Optional base or rear entry cable facility
Red switch powers up unit and Red LED indicates power
Green LED illuminates when being painted by radar
Green switch controls internal buzzer
One short flash in 2.4 seconds indicates one radar signal. Multiple flashes in 2.4 seconds indicates multiple radar signals
 - **Externally accessible fuse**
 - **Triple alarm facility:** Green LED indicates being painted by radar – Switchable internal buzzer which sounds when being painted by radar – Volt free relay contact for switching up to 8A to control vessels deck horn, klaxon or deck light
- (Note: 2.4 seconds is time for revolution of normal speed radar. High speed radar will repeat every 1.5 seconds)



STATED PERFORMANCE LEVEL SPL

Exceeds ISO 8729-2 effective 22nd July 09. X-Band performance requirement of 7.5m² SPL @ +/-10 degrees of heel for motor vessels and +/-20 degrees of heel for sailing vessels. Active-X tested at QinetiQ –13th March 09 for linear diagrams see our website.
Zero degees: 111.36 m² **+/-10 degrees:** 78.96 m² **+/-20 degrees:** 20.80 m²

FITTING (recommended fitting is as high as possible with 360° clear azimuth)

Base fitting: female 1 inch - 14NF

OPTIONAL EXTRAS

- Waterproof control box for RIBS or remote
- Control box flush mount kit
- Offset mast head bracket
- Base fitting for cabin roofs, A frames etc

Production units comply with:

IEC60945: and meets essential requirements of R&TTE directive (CEO191). Performance requirements of ISO 8729-2 X band.



Echomax Active-X-Band RTE being subjected to sustained 75 psi high pressure water jet.

