



Planet Ocean Ltd



ACTIVE-X Active Radar Reflector



Active-X directly improves your safety at sea by ensuring that you are seen by other vessels' radar at longer ranges. Additionally, Active-X provides an audible indication that active radar is in the vicinity, and is therefore an invaluable tool for small science or fishing boats where attention is often diverted elsewhere. Active-X provides a comfortable 10 nm range to vessel and 30 nm to an aircraft.

Recent tests by QinetiQ show excellent performance through ± 10 and 20 degrees of heel and in the vertical position, fully meeting the performance requirement of the new ISO8729-2 at X-band 9.4GHz used by pleasure and commercial vessels alike

The benefits of Active-X are greatest in poor visibility or at night. Risk of collision is greatly reduced by increasing the platforms radar cross section by using the very latest in solid state technology to achieve exceptional performance for its size.

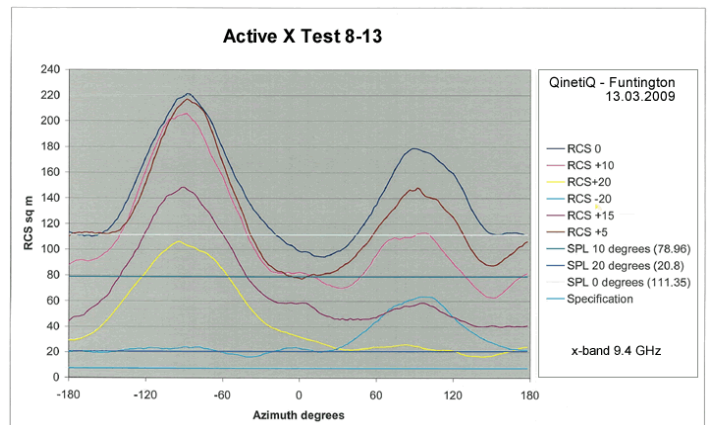
The operating range of the Active-X ARR is up to 30 nautical miles, depending on the height of the elecActive-Xic unit and the radar height of the vessel carrying the

radar. With a radar height of 20m and the Active-X ARR placed at 1m a.s.l. the range will be up to 10 nautical miles. Active-X should be placed in a vertical position and as high up as possible in order to achieve maximum coverage. Several mounting brackets and mounting aids are developed to ease a correct mounting and use of the radar transponder. When the Active-X is interrogated (hit) by a radar signal, it will immediately return an echo which is detected on the radar screen and can be used to find the distance and bearing to the Active-X.

Applications: Features:

Buoys
RIB's
Science vessels
Fishing vessels
Life boats
Seismic markers
Piers & Jetty's

Lightweight & Compact (0.327 kg)
Rugged
High output
Fully weather proof
Simple installation
Maintenance free
Low power



SPECIFICATIONS:

- Reception frequency: X band 9.3 - 9.5GHz
- Operating Temp:-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
- Typical 24 hour period e.g
- 5 radar in the area: <.55Ah
- 10 radar in the area: <.75Ah
- EIRP: 1W (typically)

Performance response

- Zero degrees 111.36M2
 - +/-10 degrees of heel 78.96M2
 - +/-20 degrees of heel 20.80M2
- * Stated performance level - QinetiQ Anechoic Chamber Funtington 13th March 09
Exceeds ISO 8729-2 effective 22nd July 09 X band performance requirements
7.5M2 @ 10 degrees of heel for motor vessels and 20 degrees of heel for sailing vessels

Dimensions

- Length 478mm width 40.5mm
- Control box width 92mm height 51mm depth 38mm
- Weight 327 gms excluding cable
- Cable length 24M 2 core 0.5mm2 cable wt. 969grms

Control Box (for interior installation)

- Surface mount with optional base or rear entry cable facility
- Red LED to indicate power on.
- Green LED illuminates when being painted by radar
- One short flash in 2.4 seconds indicates one radar signal.
- Multiple flashes in 2.4 seconds indicates multiple radar signals
- Note: 2.4 seconds is time for revolution of normal speed radar. High speed radar will repeat every 1.5 seconds
- 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

PROFESSIONAL VESSELS

ACTIVE-X has proved itself in free trials showing an improvement of visibility for small craft when viewed by radar. ACTIVE-X when used with fishing and professional vessels enable launches to be clearly identified out to 10 nm.

There are a number of clear advantages associated with the use of ACTIVE-X on professional craft enhancing safety. Excellent visibility of small craft, particularly those made from composite materials; collision avoidance, and control of "daughter" vessels from a "mother" craft. ACTIVE-X is highly visible against sea clutter and is extremely important from a safety aspect in foul weather.

ACTIVE-X has also attracted interest in trials on small fast rescue boats in the North Sea where huge improvements in visibility helps operational duties in terms of identification and direction.

AIDS TO NAVIGATION

ACTIVE-X has a proven track record of improving radar visibility for markers, specifically channel buoys, turning markers, and jetty lights.

ACTIVE-X gives consistent paints when viewed by radar, especially during foul weather and is ideal for use where modern plastic buoys are regularly in collision with vessels due to their poor radar visibility.

The ACTIVE-X with its low power consumption, robust yet lightweight construction (weighs only 0.327 kg) is ideal for use on almost all types of buoy. With maintenance free operation, the unit is compact and can be fitted in minutes.