

Inmarsat-E

AUTHOR
Chris Wortham

TITLE/POSITION
Senior Maritime Operations Engineer

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The Inmarsat-E system provides global alerting services via Inmarsat satellites. Distress alerts transmitted from Inmarsat-E Emergency Position Indicating Radio Beacons (EPIRBs) are relayed through Inmarsat satellites to dedicated receiving equipment located at four Coast Earth Stations (CESs): Raisting, Germany (T-Mobil); Niles Canyon, USA (Stratos); Perth, Australia (Telstra); and BT Atlantic, UK (BT).

The distress alert transmitted by an EPIRB will be received by two Coast Earth Stations in each ocean region giving 100 percent duplication for each

ocean region in case of failures or outages associated with any of the CESs.

Following reception of the distress alert, it is immediately forwarded automatically to a Maritime Rescue Co-ordination Centre (MRCC) via an X.25 connection so that appropriate action can be taken.

The time taken from the transmission of a distress alert to reception at the MRCC is within five minutes and typically under two minutes.

The Inmarsat-E system supports "Float Free" EPIRBs which incorporate the following features:

- **Global Positioning System (GPS)** which is accurate to within 200 meters;
- **Automatic activation** when the EPIRB is released by "Floating free";
- **Remote activation and information input** from a vessel's bridge or other manned situation;
- **Optional Search and Rescue Radar Transponder (SART)**;
- **Optional 121.5MHz locator beacon**;
- **High intensity, low duty cycle flashing light.**

The size of the EPIRB is between 500cm and 700cm high and weighs about 5kg, (depending on manufacturer and model).

The EPIRB may be activated from a remote control position on the bridge or the conning position of the vessel; **manually** by using a switch on the side of the equipment if the EPIRB has been carried into a liferaft or lifeboat; or,

automatically as soon as the EPIRB has been released by immersion in water (hydrostatic release).

Carriage of a satellite EPIRB is required by the International Maritime Organisation's (IMO) Global Maritime Distress and Safety System (GMDSS). The carriage requirement for satellite EPIRBs came into effect on August 1, 1993.

GMDSS regulations apply to all vessels of over 300 gross registered tons and all passenger vessels engaged on international voyages. However, distress incidents occur on small craft not covered by IMO's GMDSS regulations, such as pleasure craft etc. much more frequently than on larger vessels. Inmarsat-E EPIRB models are available for such small craft enabling them to transmit distress alerts and obtain the services of rescue authorities much faster and more reliably than by conventional means.

It is imperative that owners of ALL Inmarsat-E EPIRBs register them with Inmarsat, giving details of the vessel or craft on which they are installed, as soon as possible after installation.

MRCCs hold details of all registered Inmarsat-E EPIRBs and as the position contained in the distress alert is accurate to within 200 metres, Search and Rescue (SAR) authorities can be alerted and take appropriate action.

The following is a list of Inmarsat-E EPIRB manufacturers and distributors. The manufacturers will be able to advise of their distributors in any country:

Kreiger Electronic Systems
Mr. Eduard Kreiger
Kreiger Gesellschaft mbH

Inmarsat-E

A-9020 Klagenfurt, Dammgasse 4
AUSTRIA
Tel: +43 463 43390
Fax: +43 463 47452

Nortel Dasa
Dr. Michael Kaiser
Nortel Dasa Network Systems GmbH &
Co. KG
D-88039 Friedrichshafen
GERMANY
Tel: +49 7545 962 651
Fax: +49 7545 962 704

Fastnet Radio
Mrs. S Harbach
Fastnet Radio
Deichstrasse 45
Hamburg
GERMANY
Tel: +49 40 36 98 980
Fax: +49 40 36 98 9810

Hagenuk
Mr. Nils Schwarz
Hagenuk Vertriebs Und Service GmbH
Albert Einstein Ring 6
D-22761
GERMANY
Tel: +49 40 899 720
Fax: +49 40 899 72110

OHB System
Dr. Bernd Hofer
Orbital Und Hydrotechnologie Bremen
System GmbH
Universitallee 27
D-28359 Bremen
GERMANY
Tel: +49 421 20208
Fax: +49 421 20207

**For more information, contact Chris
Wortham, Senior Maritime Operations
Engineer:
Phone: +44 171 728 1017
Fax: +44 171 728 1752
Internet e-mail:
Chris_Wortham@Inmarsat.org**