

RESOLUTION A.611(15) adopted on 19 November 1987
PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EMERGENCY POSITION-INDICATING
RADIO BEACONS OPERATING ON 406 MHz

INTERNATIONAL MARITIME
ORGANIZATION



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PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EMERGENCY POSITION-
INDICATING RADIO BEACONS OPERATING ON 406 MHz

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECOGNIZING the need to prepare performance standards for float-free satellite EPIRBs operating through a polar orbiting satellite system on 406 MHz to be used in the global maritime distress and safety system (GMDSS) in order to ensure the operational reliability of such equipment and to avoid, as far as practicable, adverse interaction between such equipment and other communication and navigation equipment aboard ship,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its fifty-third session,

1. ADOPTS the Recommendation on Performance Standards for Float-Free Satellite EPIRBs Operating on 406 MHz, the text of which is set out in the Annex to this resolution;
2. RECOMMENDS Member Governments to ensure that float-free satellite EPIRBs operating on 406 MHz which will form part of the global maritime distress and safety system (GMDSS) conform to performance standards not inferior to those specified in the Annex to this resolution;

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3. INVITES COSPAS-SARSAT Partners to ensure that any amendments to the specification for COSPAS-SARSAT 406 MHz distress beacons be agreed with the Organization prior to their implementation;
4. REQUESTS the Maritime Safety Committee to ensure that any proposed amendments to this resolution be agreed with COSPAS-SARSAT Partners prior to their consideration by the Assembly.

ANNEX

RECOMMENDATION ON PERFORMANCE STANDARDS FOR FLOAT-FREE
SATELLITE EPIRBs OPERATING ON 406 MHz

PART A - GENERAL

1 Introduction

The satellite emergency position-indicating radiobeacon (EPIRB) should, in addition to meeting the requirements of the Radio Regulations, the relevant CCIR Recommendations and the general requirements set out in resolution A.569(14), comply with the following performance standards.

2 General

2.1 The satellite EPIRB should be capable of transmitting a distress alert to a polar orbiting satellite.

2.2 The EPIRB should be of an automatic float-free type. The equipment, mounting and releasing arrangements should be reliable even under extreme conditions.

2.3 The satellite EPIRB should:

- .1 be fitted with adequate means to prevent inadvertent activation;
- .2 be so designed that the electrical portions are watertight at a depth of 10 m for at least 5 min. Consideration should be given to a temperature variation of 45°C during transitions from the mounted position to immersion. The harmful effects of a marine environment, condensation and water leakage should not affect the performance of the beacon;
- .3 be automatically activated after floating free;
- .4 be capable of manual activation and manual deactivation;
- .5 be provided with means to indicate that signals are being emitted;

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- .6 be capable of floating upright in calm water and have positive stability and sufficient buoyancy in all sea conditions;
- .7 be capable of being dropped into the water without damage from a height of 20 m;
- .8 be capable of being tested, without using the satellite system, to determine that the EPIRB is capable of operating properly;
- .9 be of highly visible yellow/orange colour and be fitted with retroreflecting material;
- .10 be equipped with a buoyant lanyard suitable for use as a tether, which should be so arranged as to prevent its being trapped in the ship's structure when floating free;
- .11 be provided with a low duty cycle light (0.75 cd) activated by darkness to indicate its position for the survivors nearby and rescue units;
- .12 not be unduly affected by seawater or oil; and
- .13 be resistant to deterioration in prolonged exposure to sunlight.

2.4 The battery should have sufficient capacity to operate the satellite EPIRB for a period of at least 48 h.

2.5 The satellite EPIRB should be so designed as to operate under any of the following environmental conditions:

- .1 ambient temperatures of -20°C to $+55^{\circ}\text{C}$;
- .2 icing;
- .3 relative wind speeds up to 100 knots; and
- .4 after stowage at temperatures between -30°C and $+65^{\circ}\text{C}$.

2.6 The installed satellite EPIRB should:

- .1 have local manual activation; remote activation may also be provided from the navigating bridge, while the device is installed in the float-free mounting;
- .2 be capable, while mounted on board, of operating properly over the ranges of shock and vibration and other environmental conditions normally encountered above deck on seagoing vessels; and
- .3 be designed to release itself and float free before reaching a depth of 4 m at a list or trim of up to 45°.

3 Labelling

In addition to the items specified in resolution A.569(14) on general requirements, the following should be clearly indicated on the exterior of the equipment:

- .1 brief operating instructions; and
- .2 expiry date for the primary battery used.

PART B - SATELLITE SIGNAL

- 1 The satellite EPIRB distress alerting signal should be transmitted on the frequency of 406.025 MHz using G1B class of emission.
 - 2 The technical characteristics of the transmitted signal and the message format should be in accordance with CCIR Recommendation 633.
 - 3 Provisions should be included for storing the fixed portion of the distress message in the satellite EPIRB using non-volatile memory.
 - 4 A unique ship station identity should be made part of all messages.
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