



ASSEMBLY  
19th session  
Agenda item 10

**RESOLUTION A.807(19)**  
adopted on 23 November 1995

**PERFORMANCE STANDARDS FOR INMARSAT-C SHIP EARTH  
STATIONS CAPABLE OF TRANSMITTING AND RECEIVING  
DIRECT-PRINTING COMMUNICATIONS**

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,

RECALLING ALSO regulations IV/8.1.5.1, IV/9.3.2, IV/10.1.1 and IV/14.1 of the 1988 amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, concerning radiocommunications for the Global Maritime Distress and Safety System (GMDSS), which require, respectively, that ships be provided with an Inmarsat-C ship earth station capable of transmitting and receiving direct-printing communications and that such ship earth stations shall conform to appropriate performance standards not inferior to those adopted by the Organization,

RECOGNIZING the need to prepare performance standards for Inmarsat-C ship earth stations operating through the geostationary Inmarsat satellite system to be used in the 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 on board ship,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its sixty-fifth session,

1. **ADOPTS** the Recommendation on Performance Standards for Inmarsat-C Ship Earth Stations Capable of Transmitting and Receiving Direct-Printing Communications set out in the Annex to the present resolution;
2. **NOTES** that part A of the Inmarsat-C design and installation guidelines is similar to the present performance standards for Inmarsat-C ship earth stations and to the general requirements for shipborne radio equipment set out in resolution A.694(17);
3. **RECOMMENDS** Governments to ensure that every Inmarsat-C ship earth station which forms part of the GMDSS:
  - (a) if installed on or after 23 November 1996, conforms to performance standards not inferior to those specified in the Annex to the present resolution;

- (b) if installed before 23 November 1996, conforms to performance standards not inferior to those specified in the Annex to resolution A.663(16),

which are in accordance with part A of the Inmarsat design and installation guidelines;

4. INVITES Inmarsat to ensure that any amendments to part A of the Inmarsat-C design and installation guidelines are agreed with the Organization prior to their adoption;
5. REQUESTS the Maritime Safety Committee to ensure that any proposed amendments to this resolution are agreed with Inmarsat prior to their adoption;
6. REQUESTS ALSO the Maritime Safety Committee to keep these Performance Standards under review and to adopt amendments thereto, as necessary.

ANNEX

**RECOMMENDATION ON PERFORMANCE STANDARDS FOR INMARSAT-C  
SHIP EARTH STATIONS CAPABLE OF TRANSMITTING AND  
RECEIVING DIRECT-PRINTING COMMUNICATIONS**

**1 INTRODUCTION**

1.1 The Inmarsat-C ship earth station installation capable of transmitting and receiving direct-printing communications should comply with the general requirements set out in resolution A.694(17) and with the following minimum performance requirements.

1.2 The performance of any enhanced group call facility provided by the ship earth station should be in accordance with the performance standards for enhanced group call equipment set out in resolution A.664(16).

**2 TECHNICAL REQUIREMENTS**

The ship earth station should be type-approved by Inmarsat and should comply with the environmental conditions specified in its technical requirements for Inmarsat-C ship earth stations.

**3 OPERATION**

3.1 No control external to the equipment should be available for alteration of the ship station identity.

3.2 It should be possible to initiate and make distress calls from the position from which the ship is normally navigated and from at least one other position designated for distress alerting.

3.3 A distress alert should be activated only by means of a dedicated distress button. This button should not be any key of an ITU-T digital input panel or an ISO keyboard provided on the equipment.

3.4 The dedicated distress button should:

- .1 be clearly identified; and
- .2 be protected against inadvertent operation.

3.5 The distress alert initiation should require at least two independent actions.

3.6 The equipment should indicate the status of the distress alert transmission.

3.7 It should be possible to interrupt and initiate distress messages at any time.

3.8 Provisions should be made for:

- .1 automatic and manual entry of the position information; and
- .2 automatic and manual entry of the time at which the position was determined.

#### 4 RADIO FREQUENCY HAZARDS

In order to permit a warning of potential radiation hazards to be displayed in appropriate locations, a label should be attached to the radome indicating the distances external to the radome at which radiation levels of  $100 \text{ W/m}^2$ ,  $25 \text{ W/m}^2$  and  $10 \text{ W/m}^2$  exist. However, the distances which are within a radome need not be indicated.

#### 5 POWER SUPPLY

5.1 The ship earth station should normally be powered from the ship's main source of electrical energy. In addition, it should be possible to operate the ship earth station and all equipment necessary for its normal functioning, including the antenna tracking system, where provided, from an alternative source of energy.

5.2 Changing from one source of supply to another or any interruption of up to 60 s duration of the supply of electrical energy should not require the equipment to be manually re-initialized and should not result in loss of received messages stored in the memory.

#### 6 ANTENNA SITING

6.1 Where an omnidirectional antenna is used it should, if practicable, be sited in such a position that no obstacle likely to degrade significantly the performance of the equipment appears in the fore and aft directions down to  $-5^\circ$  and in the port and starboard directions down to  $-15^\circ$ . For omnidirectional antennas, objects, especially those within 1 m of the antenna, which cause a shadow sector of greater than  $2^\circ$ , are likely to degrade significantly the performance of the equipment.

6.2 Where a stabilized directive antenna is used it should, if practicable, be sited in such a position that no obstacle likely to degrade significantly the performance of the equipment appears in any azimuth down to  $-5^\circ$ . For directive antennas with a gain of approximately 20 dB, objects, especially those within 10 m of the antenna, which cause a shadow sector of greater than  $6^\circ$ , are likely to degrade significantly the performance of the equipment.

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#### **6 ANTENNA SITING**

6.1 Where an omnidirectional antenna is used it should, if practicable, be sited in such a position that no obstacle likely to degrade significantly the performance of the equipment appears in the fore and aft directions down to -5° and in the port and starboard directions down to -15°. For omnidirectional antennas, objects, especially those within 1 m of the antenna, which cause a shadow sector of greater than 2°, are likely to degrade significantly the performance of the equipment.

6.2 Where a stabilized directive antenna is used it should, if practicable, be sited in such a position that no obstacle likely to degrade significantly the performance of the equipment appears in any azimuth down to -5°. For directive antennas with a gain of approximately 20 dB, objects, especially those within 10 m of the antenna, which cause a shadow sector of greater than 6°, are likely to degrade significantly the performance of the equipment.

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