Performance Standards for Enhanced Group Call (EGC) Equipment

Submitted by IHB

SUMMARY

Executive Summary: This document provides the current and revised text of the EGC Performance Standards

Action to be taken: 3

Related documents: IMO Resolutions A.664(16) and MSC.306(87)

1. A reported in WWNWS2/4/1A MSC 87 in May 2010 approved a revision of Resolution A.664(16) on the Performance Standards for EGC Equipment. The revised Performance Standards were issued as resolution 306(87) and will be effective for all EGC receivers installed after 1 July 2012. The text of this resolution is set out in Annex A.

2 EGC receivers installed prior to 1 July 2012 are required to meet the Performance Standards set out in resolution A.664(17). The text of this resolution is set out in Annex B.

3 The Sub-Committee is invited to note this information and take any action it considers appropriate.

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ANNEX 4

DRAFT MSC RESOLUTION MSC….([87])

(adopted on [21 May 2010])

REVISED PERFORMANCE STANDARDS FOR ENHANCED GROUP CALL (EGC) EQUIPMENT

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 2 8(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, should be performed by the Maritime Safety Committee on behalf of the Organization,

RECOGNIZING the need for performance standards for enhanced group call equipment 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 the ship,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its [eighty-seventh] session,

1. ADOPTS the Recommendation on Revised Performance Standards for Enhanced Group Call Equipment, the text of which is set out in the Annex to the present resolution;

2. NOTES that Annex B "System specific guidelines for Inmarsat-C" of the Inmarsat design and installation guidelines is similar to the present performance standards for enhanced group call equipment and to the performance standards for shipborne radio equipment – general requirements (resolution A.694(17));

3. INVITES Inmarsat to ensure that any amendments to Annex B "System specific guidelines for Inmarsat-C" of the Inmarsat design and installation guidelines 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 IMSO prior to their adoption;

5. RECOMMENDS Governments to ensure that EGC equipment:

.1 if installed on or after [1 July 2012], conforms to performance standards not inferior to those specified in the annex to the present resolution; and

.2 if installed before [1 July 2012], conforms to performance standards not inferior to those specified in the Annex to resolution A.664(16).

ANNEX

RECOMMENDATION ON REVISED PERFORMANCE STANDARDS FOR ENHANCED GROUP CALL (EGC) EQUIPMENT

1 INTRODUCTION

1.1 The EGC equipment to be used in the GMDSS should comply with the general requirements set out in Assembly resolution A.694(17); relevant IEC standards (IEC 61097-4 and IEC 60945) and the following minimum performance requirements.

1.2 The equipment should be capable of producing a printed copy of received information. Received EGC messages may be stored for later printing with an indication to the operator that the message has been received, except for the vital messages referred to in paragraph 3.2 which should be printed out upon receipt.

1.3 The EGC installation may be either separate or combined with other installations.[1]

2 TECHNICAL REQUIREMENTS

The equipment should be type-approved by Inmarsat and should comply with the environmental conditions and electromagnetic compatibility requirements specified in IEC 60945.

3 OPERATION

3.1 The equipment should provide a visual indication that the ship's position has not been updated during the last 12 hours. It should only be possible to reset this indication by revalidating the ship's position.

3.2 Means should be provided to enter the ship's position and current and planned NAVAREA/METAREA codes manually so that area group calls can be received. Means should also be provided to enter current and planned coastal warning service coverage areas and different classes of messages. Optionally, the ship's position, as determined by the navigational equipment, may be entered automatically and the NAVAREA/METAREA code automatically derived therefrom.

3.3 Provision should be made for a specific aural alarm and visual indication at the position from which the ship is normally navigated, to indicate receipt of a distress or urgency priority EGC message. It should not be possible to disable this alarm and it should only be possible to reset it manually and only from the position where the message is displayed or printed.

3.4 The equipment should indicate when it is not correctly tuned or synchronized to the EGC carrier.

3.5 Any message should be printed regardless of the character error rate of its reception. The equipment should print a low line mark if a character is received corrupted.

3.6 Acceptance or rejection of service codes[2] should be under the operator's control except that equipment should always receive navigational warnings, meteorological warnings

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1 Elements of other installations, e.g., the antenna, low noise amplifier and down-converter of the ship earth station, may be shared for the reception of EGC messages.

2 The meaning of the service codes is in accordance with the Recommendation ITU-R M.540-2 1990, Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships.
Note: ISO 2022, "Information technology – Character code structure and extension techniques" standards.

and forecasts, search and rescue information and shore-to-ship distress alerts, which are directed to a fixed or absolute geographical area within which the ship is operating.

3.7 Means should be provided to prevent the re-printing of a message once it has been received without error.

3.8 The printing device should be capable of printing at least the standard International Alphabet Number 5 (IA5) character set. Other character sets are optionally used according to ISO 2022[3] standards or CCITT Recommendation T.61.

3.9 The printing device should be able to print at least 40 characters per line.

3.10 The signal processor and printing device should ensure that if a word cannot be accommodated in full on one line, it should be transferred to the next line. The printing device should automatically feed five lines after completing the printed messages.

3.11 A local audible alarm should be sounded to give advanced warning of the printing device "paper low" condition. It should not be possible to confuse the sound of the "paper low" alarm with that of the distress or urgency alarm caused by the reception of a distress or urgency priority message.

4 SOURCES OF ENERGY

4.1 The EGC equipment should normally be powered from the ship's main source of electrical energy. In addition, it should be possible to operate the EGC equipment, and all other equipment necessary for its normal functioning, from an alternative source of energy.

4.2 Changing from one source of supply to another, or any interruption of up to 60 seconds' 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.

5 ANTENNA SITING

5.1 Where an omni-directional antenna is used, it is desirable that the antenna 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°.

5.2 Where a stabilized directive antenna is used, it is desirable that the antenna 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°.

5.3 For omni-directional 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.

5.4 For directive antennas, 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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[3] Note: ISO 2022, "Information technology – Character code structure and extension techniques" standards.

RESOLUTION A.664(16)
Adopted on 19 October 1989
Agenda item 10

PERFORMANCE STANDARDS FOR ENHANCED GROUP CALL EQUIPMENT

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 enhanced group call equipment 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 the ship,

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

1. ADOPTS the Recommendation on Performance Standards for Enhanced Group Call Equipment, the text of which is set out in the Annex to the present resolution;

2. NOTES that part A of the INMARSAT design and installation guidelines for enhanced group call equipment is similar to the present performance standards for enhanced group call equipment and to the performance standards for shipborne radio equipment - general requirements (resolution A.569(14));

3. RECOMMENDS Member Governments to ensure that every enhanced group call equipment which will form part of the global maritime distress and safety system conforms to performance standards not inferior to those specified in the Annex to this resolution, which are in accordance with part A of the INMARSAT design and installation guidelines for enhanced group call equipment;

4. INVITES INMARSAT to ensure that any amendments to part A of the INMARSAT design and installation guidelines for enhanced group call equipment be agreed with the Organization prior to their implementation;

5. REQUESTS the Maritime Safety Committee to ensure that any proposed amendments to this resolution be agreed with INMARSAT prior to their consideration by the Assembly.

ANNEX

RECOMMENDATION ON PERFORMANCE STANDARDS FOR ENHANCED GROUP CALL EQUIPMENT

1 INTRODUCTION

1.1 The enhanced group call equipment to be used in the INMARSAT system should comply with the general requirements set out in Assembly resolution A.569(14) and the following minimum performance requirements.

1.2 The equipment should be capable of producing a printed copy of received information. Received EGC messages may be stored, with indication that the message has been received, for later printing, except for the vital messages referred to in paragraphs 3.2 and 3.5, which should be printed out upon receipt.

1.3 The enhanced group call installation may be either separate or combined with other installations.*

* Elements of other installations, e.g. the antenna, low noise amplifier and down-converter of the ship earth station, may be shared for the reception of enhanced group call messages.

2 TECHNICAL REQUIREMENTS

The equipment should be type-approved by INMARSAT and should comply with the environmental conditions specified in the INMARSAT technical requirements for the enhanced group call receiver.

3 OPERATION

3.1 Means should be provided to enter the ship's position and area code manually so that area group calls can be received. Optionally, the ship's position, as determined by the navigational equipment, may be entered automatically and the area code automatically derived therefrom.

3.2 Provision should be made for a specific aural alarm and visual indication at the position from which the ship is normally navigated to indicate receipt of a distress or urgency call or a call having distress category. It should not be possible to disable this alarm and it should only be possible to reset it manually.

3.3 The equipment should indicate when it is not correctly tuned or synchronized to the enhanced group call carrier,

3.4 Any message should be printed regardless of the character error rate of its reception. The equipment should print a low line mark if a character is received mutilated,

3.5 Acceptance or rejection of service codes ** should be under the operator's control except that equipment should be unable to reject relevant navigational warnings, meteorological warnings, search and rescue information and certain special warnings, which are directed to a geographical area within which the ship is operating.

** The meaning of the service codes is the same as for the NAVTEX system (see CCIR Recommendation 540 and the NAVTEX Manual).

3.6 Means should be provided not to reprint the same message after it has been received without error.

3.7 The printing device should be capable of printing at least the Standard IA Number 5 character set. Other character sets are optionally used according to ISO 2022 or CCITT Recommendation T.61.

3.8 The printing device should be able to print at least 40 characters per line.

3.9 The signal processor and printing device .should ensure that if a word cannot be accommodated in full on one line, it should be transferred to the next line. The printing device should automatically feed five lines after completing the printed messages.

4 POWER SUPPLY

4.1 The enhanced group call equipment should normally be powered from the ship's main source of electrical energy. In addition, it should be possible to operate the enhanced group call equipment, and all other equipment necessary for its normal functioning, from an alternative source of energy.

4.2 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.

5 ANTENNA SITING

5.1 Where an omnidirectional antenna is used, it is desirable that the antenna 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°.

5.2 Where a stabilized directive antenna is used, it is desirable that the antenna 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°.

5.3 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.

5.4 For directive antennas, 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.