

ANNEX 5

**RESOLUTION MSC.80(70)
(adopted on 8 December 1998)**

**ADOPTION OF NEW PERFORMANCE STANDARDS FOR
RADIOCOMMUNICATION EQUIPMENT**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organisation concerning the functions of the Committee,

RECALLING ALSO resolution A.825(19), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, shall be performed by the Maritime Safety Committee on behalf of the Organization,

RECALLING FURTHER regulation IV/7.5 of the International Convention on the Safety of Life at Sea (SOLAS), 1974, as amended by the 1995 SOLAS Conference, which requires every passenger ship to carry means for two-way on-scene radiocommunications for search and rescue purposes using aeronautical frequencies 121.5 MHz and 123.1 MHz,

HAVING CONSIDERED new performance standards prepared at the third session of the Sub-Committee on Radiocommunications and Search and Rescue,

1. ADOPTS the Recommendation on Performance Standards for On-Scene (Aeronautical) Portable Two-Way VHF Radiotelephone Apparatus and the Recommendation on Performance Standards for On-Scene (Aeronautical) Two-Way VHF Radiotelephone Apparatus for Fixed Installations, set out in Annexes 1 and 2, respectively, to the present resolution;
2. RECOMMENDS Member Governments to ensure that on-scene (aeronautical) two-way VHF radiotelephone apparatus for use in search and rescue operations installed on or after 1 July 2001 conform to performance standards not inferior to those specified in the attached Annexes.

ANNEX 1

RECOMMENDATION ON PERFORMANCE STANDARDS FOR ON-SCENE (AERONAUTICAL) PORTABLE TWO-WAY VHF RADIOTELEPHONE APPARATUS

1 INTRODUCTION

The on-scene (aeronautical) portable two-way VHF radiotelephone, in addition to meeting the requirements of the Radio Regulations, the relevant ITU-R Recommendations, the relevant requirements of Annex 10 to the ICAO Convention, and the general requirements set out in resolution A.694(17), should comply with the following performance standards.

2 GENERAL

2.1 The equipment should be portable and capable of being used for on-scene communication between a ship and aircraft.

2.2 The equipment should comprise at least:

- .1 an integral transmitter/receiver including antenna and battery;
- .2 an integral control unit including a press-to-transmit switch; and
- .3 a microphone and loudspeaker

2.3 The equipment should:

- .1 be capable of being operated by unskilled personnel;
- .2 withstand drops on to a hard surface from a height of 1 m;
- .3 be of small size and light weight;
- .4 be capable of operating in the ambient noise level likely to be encountered during SAR operations;
- .5 have provisions for the use of external microphone/headset; and
- .6 have a colour which distinguishes it from the portable equipment specified in resolution A.809(19).

2.4 Unless otherwise stated, the equipment should comply with the requirements of chapter II, part 2, paragraph 2.3 of Annex 10 to the ICAO Convention.

3 CLASS OF EMISSION, FREQUENCY BANDS AND CHANNELS

The two-way radiotelephone should be amplitude-modulated and capable of operation on the frequencies 121.5 MHz and 123.1 MHz.

4 CONTROLS AND INDICATORS

4.1 An on/off switch should be provided with a positive visual indication that the radiotelephone is switched on.

4.2 The receiver should be provided with a manual volume control by which the audio output may be varied.

4.3 Frequency selection should be easily performed and the frequencies should be clearly discernible.

5 PERMISSIBLE WARMING-UP PERIOD

The equipment should be operational within 5 s of switching on.

6 SAFETY PRECAUTIONS

The equipment should not be damaged by the effects of open-circuiting or short-circuiting the antenna.

7 TRANSMITTER POWER

The carrier power should be between 50 mW and 1.5 W.

8 RECEIVER OUTPUT

8.1 The audio output should be sufficient to be heard in the ambient noise level likely to be encountered during SAR operations.

8.2 In the transmit condition, the output of the receiver should be muted.

9 POWER SUPPLY

9.1 The source of energy should be a primary battery integrated in the equipment and may be replaceable by the user. In addition, provision may be made to operate the equipment using an external source of electrical energy.

9.2 The primary battery should have sufficient capacity to ensure 8-hour operation at its highest rated power with a duty cycle of 1:9. This duty cycle is defined as 6-second transmission, 6-second reception above squelch opening level and 48-second reception below squelch opening level.

9.3 Primary batteries should have a shelf life of at least 2 years.

10 LABELLING

10.1 In addition to the general requirements specified in resolution A.694(17), the following should be clearly indicated on the exterior of the equipment:

- .1 brief operating instructions;
- .2 expiry date for the primary batteries; and
- .3 the following text: "only for emergency communications with aircraft".

ANNEX 2

**RECOMMENDATION ON PERFORMANCE STANDARDS FOR ON-SCENE
(AERONAUTICAL) TWO-WAY VHF RADIOTELEPHONE APPARATUS
FOR FIXED INSTALLATIONS****1 INTRODUCTION**

The on-scene (aeronautical) two-way VHF radiotelephone for fixed installations, in addition to meeting the requirements of the Radio Regulations, the relevant ITU-R Recommendations, the relevant requirements of Annex 10 to the ICAO Convention, and the general requirements set out in resolution A.694(17), should comply with the following performance standards.

2 GENERAL

2.1 The equipment should be capable of being used for on-scene communication between the ship and airborne rescue unit(s).

2.2 The equipment should comprise at least:

- .1 a transmitter and receiver;
- .2 an antenna which may be fixed to the equipment or mounted separately, and
- .3 a microphone with a press-to-talk switch and a loudspeaker.

2.3 The equipment should :

- .1 be capable of being operated by unskilled personnel; and
- .2 be capable of operating in the ambient noise level likely to be encountered on board ships.

2.4 Unless otherwise stated, the equipment should comply with the requirements of chapter II, part 2, paragraph 2.3 of Annex 10 to the ICAO Convention.

3 CLASS OF EMISSION, FREQUENCY BANDS AND CHANNELS

The two-way radiotelephone should be amplitude-modulated and capable of operation on the frequencies 121.5 MHz and on 123.1 MHz.

4 CONTROLS AND INDICATORS

4.1 An on/off switch should be provided with a positive visual indication that the radiotelephone is switched on.

4.2 The receiver should be provided with a manual volume control by which the audio output of the loudspeaker may be varied.

4.3 Frequency selection should be easily performed and the frequencies should be clearly discernible.

5 PERMISSIBLE WARMING-UP PERIOD

The equipment should be operational within 5 s of switching on.

6 SAFETY PRECAUTIONS

The equipment should not be damaged by the effects of open-circuiting or short-circuiting the antenna.

7 TRANSMITTER POWER

The carrier output power should be between 50 mW and 1.5 W.

8 RECEIVER OUTPUT

8.1 The audio output should be sufficient to be heard in the ambient noise level likely to be encountered on board ships.

8.2 In the transmit condition, the output of the receiver should be muted.

9 POWER SUPPLY

9.1 The radio installation should be powered from the ship's main source of electrical energy. In addition, it should be possible to operate the installation from an alternative source of electrical energy.

9.2 Alternatively, the source of energy may be a primary battery integrated in the equipment and may be replaceable by the user.

9.3 The primary battery should have sufficient capacity to ensure 8-hour operation at its highest rated power with a duty cycle of 1:9. This duty cycle is defined as 6-second transmission, 6-second reception above squelch opening level and 48-second reception below squelch opening level.

9.4 Primary batteries should have a shelf life of at least 2 years.

10 LABELLING

10.1 In addition to the general requirements specified in resolution A.694(17), the following should be clearly indicated on the exterior of the equipment:

- .1 brief operating instructions;
- .2 the following text: "only for emergency communications with aircraft"; and
- .3 if applicable, expiry date for the primary batteries.
