

**PARTE II RULES FOR THE CONSTRUCTION
AND CLASSIFICATION OF SHIPS
IDENTIFIED BY THEIR MISSIONS**

TITLE 21 PASSENGER SHIPS

SECTION 8 NAUTIC AND ELECTRONICS

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CHAPTER A SCOPE

CHAPTER CONTENTS

- A1. APPLICATION
 - A2. STANDARDS AND REGULATIONS
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A1. APPLICATION

100. Systems covered by this Chapter

101. The present Chapter is additional to Part II, Title 11, Section 8 and applies to passenger ships with $GT \geq 500$.

A2. STANDARDS AND REGULATIONS

100. Industrial standards

See Part II, Title 11, Section 8

200. Regulations

201. The requirements of the present section 8 of the Rules are according to:

- a. SOLAS III/B-I/6 Chapter 5 – Public Address Systems for Passenger Ships
- b. IMO MSC/Circ.808

CHAPTER E NAVIGATIONAL AIDS, SIGNALS AND COMMUNICATION EQUIPMENTS

CHAPTER CONTENTS

- E1. NAVIGATIONAL AIDS
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 - E2. LIGHTS AND SHAPES
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 - E3. COMMUNICATION
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Part II, Title 11, Section 8
 - E5. PUBLIC ADDRESS SYSTEM IN PASSENGER
SHIPS
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E5. PUBLIC ADDRESS SYSTEM IN PASSENGER SHIPS

100. Public address systems on passenger ships

101. All passenger ships shall be fitted with a public address system which is to supplement the general emergency alarm. The performance standards in the present Subchapter E5 shall apply to public address systems required by SOLAS regulation III/6.5

102. The public address system shall be clearly audible above the ambient noise throughout the vessel.

103. The system may be combined with the general emergency alarm and fire detecting systems, and protected against unauthorized use.

104. If a decentralized type system is used, its overall performance is not to be affected by the failure of a single call station.

105. On passenger ships constructed on or after 1 July 1997:

- a. the public address system shall have at least two loops which shall be sufficiently separated throughout their length and have two separate and independent amplifiers; and
- b. the public address system and its performance standards shall be approved by the Administration having regard to the recommendations adopted by the Organization.

106. The public address system shall be connected to the emergency source of electrical power required by Part II, Title 21, Section 7, and is to operate on.

107. The public address system should be one complete system consisting of a loudspeaker installation which enables simultaneous broadcast of messages from the navigation bridge, and at least one other location on board for use when the navigation bridge has been rendered unavailable due to the emergency, to all spaces where crew members or passengers, or both are normally present and to assembly stations (i.e. muster stations).

108. The controls of the system on the navigation bridge should be capable of interrupting any broadcast on the system from any other location on board.

109. The entertainment sound system is to be automatically turned off when the general alarm system is activated.

- a. It should not require any action by the addressee.
- b. It should also be possible to address crew accommodation and work spaces separately from passenger spaces.

110. In addition to any function provided for routine use aboard the ship, the system should have an emergency function control at each control station which:

- a. is clearly indicated as the emergency function;
- b. is protected against unauthorized use;
- c. automatically overrides any other input system or programme; and
- d. automatically overrides all volume controls and on/off controls so that the required volume for the emergency mode is achieved in all spaces.

111. The system should be installed with regard to acoustically marginal conditions, so that emergency announcements are clearly audible above ambient noise in all spaces where crew members or passengers or both are normally present and to assembly stations (i.e. muster stations), as follows:

- a. With the ship underway in normal conditions, the minimum sound pressure levels for broadcasting emergency announcements should be:
 - a.1. in interior spaces 75 dB(A) and at least 20 dB(A) above the speech interference level; and
 - a.2. in exterior spaces 80 dB(A) and at least 15 dB(A) above the speech interference level.

112. The system should be arranged to prevent feedback or other interference.

113. The system should be arranged to minimize the effect of a single failure, e.g. by the use of multiple amplifiers with segregated cable routes. The public address systems should have at least two loops of flame retardant

cable which should be sufficiently separated throughout their length and have two separate and independent amplifiers.

114. Each loudspeaker should be individually protected against short circuits.

115. The public address system should be arranged to operate on the main source of electrical power, the emergency source of electrical power and transitional sources of electrical power as required by Part II, Title 21, Section 7.

116. The space containing a control unit of the public address system is a control station as defined in SOLAS chapter II-2.

200. Cabling for public address and alarm systems

201. Cables and wiring serving internal communications or signals should, as far as practicable, be routed clear of galleys, laundries, machinery spaces of category A and their casings and other high fire risk areas unless serving those spaces.

202. Where practicable, all such cables should be run in such a manner so as to preclude their being rendered unserviceable by heating of the bulkheads that may be caused by a fire in an adjacent space.

203. All areas of each fire zone should be served by at least two dedicated loops sufficiently separated throughout their length and supplied by independent amplifiers.

204. Equipment associated with the public address systems should meet the requirements for a vibration and electromagnetic interference in the current edition of publication 533 or publication 945 of IEC, as appropriate.

205. Electrically powered systems should provide a minimum degree of ingress protection appropriate to the location, in accordance with IEC 92-101 standard.

206. Relevant sections of the Code on Alarms and Indicators should also be applied.

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