

(3) Devices which are not an integral part of a radiotelephone equipment shall—

(a) Meet the requirements of the "Climatic and Durability Testing of Marine Radio Equipment" for Class B equipment; and

(b) When operated from a battery of secondary cells, meet the requirements of this specification for a variation in supply voltage of plus 5 percent and minus 10 percent relative to the nominal battery voltage; and

(c) When operated from ship's main supply, meet the requirements of this specification for a variation in supply voltage of plus and minus 10 percent relative to the nominal mains supply voltage.

(4) The device shall not cause the ship's mains to be earthed.

3. Performance—The device shall be capable of generating the radiotelephone alarm signal for a period of not less than 30 and not more than 60 seconds. This signal shall consist of two substantially sinusoidal tones, one having a frequency of 2200 Hz \pm 1.5 percent and the other 1300 Hz \pm 1.5 percent produced alternately; the duration of each tone shall be 250 milliseconds; the interval between successive tones shall not exceed 50 milliseconds.

(2) (a) Devices which are an integral part of a radiotelephone equipment shall be capable of modulating the ship's radiotelephone transmitter by each tone to a depth in the range 80 to 95 percent:

(b) Devices which are not an integral part of a radiotelephone equipment, and which are intended for use with specific manufacturers' types of radiotelephone transmitters, shall be capable in an installation of modulating each of those transmitters, by each tone, to a depth in the range 80 to 95 percent, or within the range 0.83 to 1.0 of the maximum depth of modulation possible on the transmitter if that maximum depth of modulation is less than 95 percent. The device shall be labelled to show the types of transmitters to which its use is restricted:

(c) Devices which are not an integral part of a radiotelephone equipment, and which are intended for general use, shall be capable in an installation of modulating the ship's radiotelephone transmitter, by, each tone, to a depth in the range 80 to 95 percent, or within range 0.83 to 1.0 of the maximum depth of modulation possible on the transmitter, provided the maximum depth of modulation does not exceed 95 percent.

(3) Devices for general use which are not an integral part of a radiotelephone equipment, and which cannot readily be tested at works for compliance with the requirements of subclause (2) (c) of this clause, shall meet initially either of the following requirements:

(a) For electrically coupled devices, it shall be possible to adjust the relative level of the two tones, each to the other, to any value from 0 to + 6 dB. With the power of the two tones equal, it shall be possible to vary the power output of the device over the range - 20 to + 10 dB relative to 1 mW into a load resistance of all values in the range 30 to 300 ohm; or

(b) For acoustically coupled devices, the output at each tone frequency shall be adjustable so as to give, in the plane of the microphone mouthpiece with which the device will be associated, any sound pressure whose r.m.s. value lies between 15 and 50 dynes/sq. cm.

For this test, the distance between the sound reproducer and the plane in which the sound pressure is measured shall be that quoted by the manufacturer.

Devices which satisfy paragraph (a) or paragraph (b) of this subclause must, however, also comply with subclause (2) (c) of this clause when installed.

(4) The device shall be ready to generate the Radiotelephone

alarm signal within a period of 30 seconds from the time the device is energised.

(5) After generating the Radiotelephone alarm-signal, the device shall be ready to repeat the signal, in accordance with the requirements of subclause (1) of this clause, after an interval of not more than two minutes.

(6) (a) Where a device is an integral part of a radiotelephone equipment,

(i) There shall be included in that equipment a sound reproducer to give an audible reproduction of the generated signal whenever the radiotelephone alarm signal is generated by the device; and

(ii) It shall be possible to test the device without the generation of radio-frequency energy:

(b) Where a device is not an integral part of a radiotelephone equipment—

(i) The device shall include a sound reproducer whereby an audible reproduction of the generated signal is present whenever the radiotelephone alarm-signal is generated by the device; and

(ii) The device shall be so designed that it can be tested using a Radiotelephone alarm-signal automatic receiving device (audio-frequency) ; and

(iii) It shall be possible to test the device without the generation of radio-frequency energy.

(7) (a) Not more than two operating controls shall be available at the exterior of the device. Each control shall be clearly labelled to show its purpose, and shall be such as to permit normal operations to be carried out by a person wearing thick gloves:

(b) Controls, where provided, for the adjustment of frequency, duration, or level of the signal elements shall be preset controls not available at the exterior of the device.

(8) The device shall be capable of being taken out of service at any time.

4. Protective Arrangements—(1) All parts and wiring shall be protected from accidental access, and shall be isolated automatically from all sources of high voltage when the means of protection are removed. The term "high voltage" shall be taken to apply to all circuits in which the direct and alternating voltages (other than radio-frequency voltages) combine to give instantaneous voltages greater than 50 volts.

(2) Electrical devices shall incorporate a fuse or fuses.

5. Construction—In all respects the mechanical and electrical construction and the finish of the device shall conform to good standards of engineering practice, and the device shall be suitable for use on board ships at sea.

6. Additional Safeguards to be Incorporated Where The Equipment Includes Semiconductor Devices—(1) Where the semiconductor devices are incorporated in the equipment, the following requirements shall be met:

(a) Under all conditions of service referred to in subclauses (2) and (3) of clause 2 of this Part of this Schedule, the maker's maximum ratings for each type of semiconductor device shall not in any respect be disregarded. In Particular, the maker's recommended maximum junction temperature shall never be exceeded:

(b) The semiconductor devices shall be effectively protected from damage if the power supply is subject to transient voltage changes:

(c) When the device is operated from a battery of secondary cells, the semiconductor devices shall not be damaged by a sustained increase in power supply voltage of 25 percent relative to the nominal battery voltage:

(d) Means shall be incorporated for the protection of the semiconductor devices from damage due to the accidental reversal of power supply polarity.