shall not produce an output level higher than 30 dB below the standard output.

11. Intermodulation and Harmonic Production—(1) The receiver shall be operated with an input wanted Class A2 signal at a level of 40 dB above 1μV, with the automatic gain control operating and with the audio gain control set for standard output. The automatic gain control shall then be rendered inoperative and the receiver adjusted for standard output without readjustment of the audio volume control. The wanted signal shall then be removed.

(2) The simultaneous application of any two "interfering" signals, one of Class Al and the other of Class A2, which may produce an intermodulation product of 500 kHz, shall not produce an output exceeding the standard output. Both interfering signals shall be of level 110 dB above 1μV, and neither shall be at a frequency within the range 475 to 525 kHz.

(3) The application of a Class A2 signal of level 116 dB above 1μV whose frequency is a sub-harmonic of 500 kHz shall not produce an output exceeding the standard output.

12. Limiting—The receiver shall be adjusted to give the standard with a Class A2 test signal at a level of 40 dB above 1μV.

Without further adjustment of the receiver and with the test signal modulated to a depth of 80 percent, the output shall increase to at least 250 mW.

13. Fidelity—The modulation-frequency response characteristic of the receiver shall be within a range of 8 dB for modulation-frequencies from 300 to 1500 Hz, the modulation depth of the input signal being kept constant. The response shall fall by at least 10 dB per octave at modulation-freqencies above 3000 Hz. For this test, the input signal may have any level and modulation depth, provided the output of the receiver does not exceed the standard output.

14. Radiation—The receiver shall not, in normal service, produce a field exceeding 0.1μV/metre at a distance of 1 nautical mile. This shall normally be regarded as satisfied if the following requirements are met:

The receiver shall be placed centrally in a screened earthed enclosure of dimensions at least 1.8 m cube.

The earth terminal of the receiver shall be connected to the inside of the screen.

The aerial terminal shall be connected through an unscreened four-turn rectangular search coil (of dimensions 30 cm. square) and an unscreened lead to a resistive measuring instrument mounted outside the enclosure, having its other terminal earthed.

If headphone reception is provided, the headphones shall be connected.

The power measured by the measuring instrument shall not exceed $4\times10-']^{10}$ watts, irrespective of the resistance of the measuring instrument or the adjustment of the receiver. At the discretion of the testing officer, the search coil may be moved during the test in any way provided it does not approach within 15 cm. of the receiver case or it may be short-circuited.

15.Tuning Drift and Stability—The requirements of clause 6 of this Part of this Schedule shall be met within five minutes of first switching on. The range of ambient temperature variation over which this test is applied shall be limited to between 0°C and 50°C.

16.Protective Arrangements—(1) Provision shall be made for protecting the receiver when a transmitter in the same installation is radiating on 500 kHz.

(2) The receiver shall be capable of withstanding, for 15 minutes without damage, 30 volts r.m.s. applied to its aerial terminals via a dummy aerial in accordance with clause 5 (2) of this Part of this Schedule at any frequency in the maritime mobile bands between 100 kHz and 26 MHz.

17. Combined Receivers—The following conditions shall be observed if the loudspeaker watch receiver facilities are incorporated in a reserve receiver or a radiotelegraph automatic alarm equipment:

(a) It shall be possible readily to set the receiver to the loudspeaker watchkeeping condition. If this setting is not by means of a single control, a positive indication shall be given by means of a lamp or lamps when the receiver is in the 500 kHz loudspeaker watchkeeping condition:

(b) When the receiver is in the loudspeaker watchkeeping condition, it shall meet all the requirements of this specification, and controls other than those referred to in clause 2 (6) of this Part of this Schedule shall not affect the operation of tlie receiver:

(c) Controls which affect the operation of the loudspeaker watchkeeping receiver shall be clearly labelled.

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

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

(a) Under all conditions of service referred to in clause 3 of this Part of this Schedule the maker's maximun ratings for each type of semiconductor device shall not in any respect be disregaded.

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 receiver 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.

(2) Although it is not possible to specify the intensity of r.f. fields which may be encountered, attention is drawn to the need for screening and filtering to protect semiconductor devices from damage due to r.f. energy.

SECOND SCHEDULE

Part I(A)

Main Radiotelephone Installation for Class III, Class IV, and Class V Ships—(1) Scope—This Schedule covers the minimum performance of a single sideband radio transmitter and receiver, suitable for use in ships compulsorily fitted for radiotelephony and, as such, may form the basis for type-testing. This Schedule shall be assumed to cover, in addition to the transmitter and receiver proper, all equipment necessary for their operation but not the source of electrical energy or the aerial system with which the equipment is associated.

2. Definitions—(1) Frequency Definitions—

(a) Assigned Frequency-The assigned frequency is defined as the centre of the frequency band assigned to a station.

(b) Carrier Frequency—The carrier frequency is defined as a frequency 1400Hz below the assigned frequency. Unless otherwise stated, frequencies given in this Schedule are carrier frequencies.

(2) Emissions—

(i) A3H-Amplitude modulated, single sideband, radiotelephony: full carrier. For class A3H emission, the