

(2) (a) A manual-control labelled "RANGE" shall be provided for the adjustment of radio-frequency or intermediate-frequency gain or both. The range of control shall be not less than 17 dB, and shall not exceed 23 dB:

(b) A preset control, not available at the exterior of the receiver, shall be provided for the adjustment of radio-frequency or intermediate-frequency gain or both. The range of control shall be not less than 20 dB, and shall not exceed 30 dB.

(3) (a) A manual control labelled "VOLUME" shall be provided for the adjustment of audio-frequency gain, and its range shall be not less than 17 dB, and shall not exceed 23 dB:

(b) A preset control, not available at the exterior of the receiver, shall be provided for the adjustment of audio-frequency gain. The range of control shall be not less than 13 dB, and shall not exceed 17 dB.

(4) With the exception of the controls specified in subclauses (2) (a) and (3) (a) of this clause and a receiver on/off switch, no other control shall be available at the exterior of the receiver.

(5) The receiver shall include a loudspeaker.

(6) (a) When the receiver is operated from a ship's main supply, the requirements of this specification shall be met for a range of supply voltage variations of plus and minus 10 percent relative to the nominal mains voltage:

(b) When the receiver is operated from a battery of secondary cells, the requirements of this specification shall be met for a range of supply voltage variations of plus 5 percent and minus 10 percent relative to the nominal battery voltage.

(7) The receiver shall not cause the ship's mains to be earthed.

3. Climatic and Durability Tests—The receiver shall comply with the "Climatic and Durability Testing of Marine Radio Equipment for Class B equipment.

4. Method of Test—(1) A Class A2 test signal shall, unless otherwise specified, be modulated 30 percent at 1000 Hz.

(2) The dummy aerial employed for testing shall be a 10 ohm non-inductive resistor in series with a capacitor, having any and every value between 100 and 250 pF.

(3) The level of the open-circuit voltage of the signal generator shall be regarded as the signal applied to the receiver under test.

5. Selectivity—The selectivity preceding the detector shall satisfy the following requirements:

Frequency (kHz)	Discrimination (dB Relative to Maximum Response)
2,178.5 to 2,185.5 inclusive	Not more than 6
Below 2,172 and above 2,192	At least 30
Below 2,162 and above 2,202	At least 60
Below 2,142 and above 2,222	At least 80

6. Sensitivity and Signal/Noise Ratio—(1) It shall be possible to adjust, by means of the radio-frequency or intermediate-frequency gain controls or both, the a.g.c. threshold between the limits of 20 dB and 55 dB above 1µV.

(2) With a Class A2 test signal at a level corresponding to the a.g.c. threshold, it shall be possible to vary the audio-frequency output over the range 1 to 100 mW by the adjustment of the audio-frequency gain controls.

(3) With a Class A2 test signal at 20 dB above 1µV and the a.g.c. threshold adjusted to 20 dB above 1µV, the signal/noise ratio shall be at least 10 dB.

7. A.G.C. Threshold—"a.g.c. threshold" shall be defined as the input level of a Class A2 test signal at which a 1 dB change of output results from a 2 dB change of input.

8. Automatic Gain-control—(1) The receiver shall be fitted with an automatic gain control capable of efficient operation on Classes A2 and A3 signals.

(2) With a Class A2 test signal at 20 dB above 1µV, the a.g.c. threshold adjusted to 20 dB above 1µV, and the audio-frequency gain controls adjusted to give an audio-frequency output of 50 mW, then—

(a) An increase in input level of 30 dB shall result in a signal/noise ratio of at least 30 dB; and

(b) An increase in input level of 80 dB shall not increase the output level by more than 10 dB.

9. Blocking—With a wanted signal of Class A2 of frequency 2182 kHz, at a level of 60 dB above 1µV, the a.g.c. threshold adjusted to any value between the limits 20 dB and 55 dB above 1µV and the audio-frequency gain controls adjusted to give an audio-frequency output of 50mW, the audio-frequency output shall not change by more than 3 dB when a signal of Class A1 and of frequency of 2142 kHz or 2222 kHz is applied to the receiver at a level of 100 dB above 1µV.

10. Cross Modulation—(1) The receiver shall be adjusted with the a.g.c. threshold at any value between the limits 20 dB and 55 dB above 1µV, to give an output of 50 mW with an input signal of Class A2 at a level of 60 dB above 1µV and of frequency 2182 kHz. The modulation only of this signal shall then be switched off.

(2) The simultaneous application of a Class A2 input signal at a level of 100 dB above 1µV and of frequency 2142 kHz or 2222 kHz shall not produce an output of more than 50µW.

11. Intermodulation—(1) For this test, the radio-frequency or intermediate-frequency gain controls or both shall be adjusted so that the automatic gain control threshold is 40 dB above 1µV. The audio-frequency gain controls shall be adjusted to give an output of 50 mW with a 2182 kHz input signal of Class A2 at a level of 30 dB above 1µV and the wanted signal shall then be removed.

(2) The simultaneous application of any two "interfering" signals, one of Class A1 and the other of Class A2, shall not produce an output exceeding 50 mW. Both interfering signals shall be of level 100 dB above 1µV, and neither shall be at such frequency as to give an appreciable output when modulated and applied alone.

12. Tuning Drift and Stability—The requirements of clause 5 of this Part of this Schedule shall be met within five minutes of first switching on. Thereafter they shall be met—

(a) At all ambient temperatures between -10°C and +40°C; and

(b) Irrespective of variations in supply voltage within the limits specified in clause 2 (6) of this Part of this Schedule.

13. Non-linear Distortion—With the radio-frequency or intermediate-frequency gain controls or both adjusted for maximum gain, the audio-frequency gain controls shall be adjusted to give an output of 100 mW with a Class A2 test signal of frequency 2182 kHz at a level of 60 dB above 1µV. An increase of modulation depth to 80 percent shall produce an output of not less than 500 mW .

The total harmonic distortion shall not then exceed 15 percent.

14. Fidelity—(1) When a Class A2 test signal of frequency 2182 kHz is applied to the receiver, the response shall be such that the audio-frequency output shall lie within a range of 8 dB as the modulation frequency of the signal is varied continuously from 250 to 3000 Hz, the level and modulation depth of the input signal being kept constant. For this test, the input signal may have any level and modulation depth, provided the output of the receiver does not exceed 50 mW. The response shall fall by at least 6 dB per octave for modulation frequencies above 3000 Hz.

(2) Nevertheless, an equipment which meets the requirement