(5) Distortion—The Standard Test Signal at a level of ($\alpha-25$) dBm shall be applied to the Standard Input Network, and the receiver shall be adjusted to give 2 watts of audio-frequency output. The total distortion of the audio frequency output voltage plus noise shall not exceed 10 percent of the audio-frequency output when measured with a distortion factor meter.

(6) Audio Output-When the Standard Test Signal is applied to the Standard Input Network at a level of ($\alpha-82$) dBm for A3H emissions and ($\alpha-88$) dBm for A3A and A3J emissions, the receiver shall produce for loudspeaker reception at least 2 watts of audio-frequency output.

The audio-frequency output power shall be measured in a resistance of value substantially equal to the modulus of the impedance of the loudspeaker.

(7) Automatic Gain Control—The automatic gain control shall be such that when the receiver is adjusted to give Standard Power Output with a Standard Test Signal applied to the Standard Input Network of ($\alpha-89$) dBm, for A3H and ($\alpha-95$) dBm for A3J and A3A emissions,an increase in Standard Test Signal level of 60dB in either case does not vary the receiver output by more thar l0dB.

(8) Blocking—Two signal generators, 'A' and 'B', shall be connected to the input of the receiver through the Standard Input Network. With signal generator 'B' switched off in a manner which does not alter its output impedance, the appropriate Standard Test Signal shall be applied to the Standard Input Network from signal generator 'A' at a level of ($\alpha-90$) dBm and the receiver adjusted for Standard Power Output.

The unmodulated signal from signal generator 'B' shall then be applied at various frequencies to the network input at a level of ($\alpha-30$) dBm simultaneously with the signal from signal generator 'A'.

A signal applied from signal generator 'B' at any frequency removed from the frequency of signal generator 'A' by 18 kHz and greater shall not cause the output Power of the receiver to change by more than 3dB.

(9) Intermodulation—Three signal generators, 'A', 'B', and 'C', shall be connected to the input to the receiver through the Standard Input Network. The appropriate Standard Test Signal shall be applied to the Standard Input Network from signal generator 'A' alone, and at the level required to produce a SINAD ratio of 12dB at the receiver output. The receiver shall be adjusted to give Standard Power Output. Signal generators 'B' and 'C' shall then be used to apply the signals given in the following table:

Mode of Reception	Generator	Modulation Frequency (Type A2 Emission 30 percent Modulated)	Frequency Relative to Signal Generator 'A' kHz	
			Test 1	Test 2
A3H	B	Zero	+12	−12
	C	400 Hz	+24	−24
A3J and A3A	B	Zero	+6.5	−5.5
	C	Zero	+12	−12

The outputs of signal generators 'B' and 'C' shall be at the same level, and shall be increased until the SINAD ratio resulting from signal generator 'A' is reduced to 6dB. In the case of measurements on A3H receivers, the frequency of signal generator 'B' shall be adjusted to produce maximum interference due to modulation products including any beat note that may be present. The ratio of the output of signal generator 'B' (or signal generator 'C') to that of signal generator 'A' measures the intermodulation response. Tests shall be repeated with signal generator 'A' set to produce a signal level +20 and +4OdB relative to that which produces a 12dB SINAD ratio as shown in the following table:

Output of Signal Generator 'A' (dB) Relative to the Output at which a 12dB SINAD Ratio is Obtained	Output Voltage Ratio of Signal Generator 'B' (or 'C') to Signal Generator 'A' (dB)
0	+50
+20	+40
+40	+30

The intermodulation response shall meet the mininium standard shown in the table.

(10) Cross Modulation— The cross modulation performance of the receiver shall be measured in the A3J mode of operation. Two signal generators, 'A' and 'B', shall be connected to the input of the receiver through the Standard Input Network. The Standard Test Signal shall then be applied to the Standard Input Network from signal generator 'A' alone and at a level of ($\alpha-67$) dBm. The receiver shall be adjusted to produce Standard Power Output and a filter connected at the receiver output shall then be adjusted to reject the 1 kHz tone.

Generator 'B' shall then be 30 percent modulated A2 at 400 Hz and applied at a frequency removed 20 kHz from the frequency of generator 'A' and it a level of ($\alpha-27$) dBm.

The total unwanted power in the receiver output due to cross modulation shall be at least 2OdB below Standard Power Output.

(11) Frequency—Measurements shall be made in the A3J mode of operation. The clarifier shall initially be adjusted at Standard Ambient Air Temperature and Standard Test Voltage so that, with the Standard Test Signal applied. the receiver audio output frequency is 1000 Hz. The setting of the clarifier control shall not be altered during the subsequent tests. The Standard Test Signal shall be applied throughout the tests and the receiver audio output frequency measured.

The measured frequency shall meet the following requirements:

(a) Frequency Error—The maximum deviation of the audio output frequency from its nominal frequency of 1000 Hz shall not exceed ±100 Hz under any condition of test:

(b) Short Term Stability—Over a 15-minute period, at Standard Ambient Air Temperature and Standard Test Voltage, the difference between the maximum and minimum output frequencies, shall not exceed 20 Hz.

(c) Frequency Variation due to Vibration—During the vibration test (clause 5 (5)), any frequency deviation of the output signal shall be measured using a suitable discriminator and shall not exceed ±25 Hz.

(12) Spurious Emissions—

(a) Radiation—Emission by direct radiation from components and wiring of receivers shall be minimised.

(b) Emissions at the Aerial Input Terminals—The mean power of any emission measured in a termination of 20 ohms in series with 160 pF shall not exceed 20 nanowatts (20×10^{-9} watts) at any frequency.

(13) Receiver Protection—The receiver shall be capable of with standing an e.m.f. of 30 volts r.m.s. applied to its aerial terminals via the Standard Test Loads specified in clause 5 (7) of this Part of this Schedule, at any frequency in the Maritime Mobile Bands between 400 kHz and 27.5 MHz for 15 minutes without damage.

PART II

Radiotelephone Alarm-signal Generating Device (Audio-frequency)

1. Scope of Specification—This specification covers the