level due to Standard Test Modulation. Due allowance shall be made for the internal noise of the receiver:

(b) A3J and A3A—

(i) Standard Test Modulation shall be applied to the transmitter:

(ii) The transmitter ouput shall be coupled via an attenuator to the Standard Test Receiver:

(iii) The receiver shall be tuned to produce a 1000 Hz tone from the transmitter:

(iv) The level of the transmitter at the receiver input shall be adjusted by means of the attenuator to produce a SINAD ratio of 6dB at the receiver output and the attenuator setting noted:

(v) Modulation shall then be removed from the transmitter:

(vi) The attenuator shall then be adjusted until the transmitter noise-power level at the receiver input is equal to the receiver noise referred to the receiver input terminals:

The ratio of the levels as indicated by attenuator readings under subparagraphs (iv) and (v) of this paragraph shall be not less than 34dB.

(11) Continuous Operation—The transmitter shall be modulated in the A3J mode by 2 sinusoidal tones applied to the microphone input terminals at frequencies of 700 Hz and 2300 Hz respectively, and at a level such that each tone if applied separately would give 25 percent of the rated peak envelope power.It shall operate at Standard Ambient Air Temperature and Standard Test Voltage under these modulation conditions for a period of 15 minutes without harmful effect and less than ldB variation in output power.

(12) Operation with Aerial Terminals Open-circuited and Short-circuited—The transmitter, when modulated as required in subclause (11) of this clause, shall be capable of withstanding the effects of open-circuited or short-circuited aerial terminals for a period of 5 minutes.To meet these requirements the operation of a safety device will be permitted, provided it does not occur within 15 seconds of short-circuiting or open-circuiting the aerial terminals. As an alternative, a safety device which operates within 15 seconds will be acceptable,provided it is automatically reset within 60 seconds of removal of the simulated fault condition. A clear indication of the operation of any safety device shall be provided.

7. Receiver Performance—(1) General-Levels quoted in the following subclauses are values of power in decibels relative to 1 mW (dBm). Any gain control, apart from the audio gain control, shall be set to maximum.

The automatic gain- control system shall be operative. Where applicable the clarifier shall be set so as to give an audio frequency of 1000 Hz when the Standard Test Signal is applied. The Standard Input Network shall be used to connect signal generators to the receiver for all tests except under subclause (13) of this clause.

(2) Selectivity Including De-sensitisation-The selectivity shall be measured by a 2-signal method in which 2 signal generators 'A' and 'B',are connected through the Standard Input Network to the input of the receiver. 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 the level required to produce—

(a) For A3H, a SINAD ratio of 12dB at the receiver output, when it is adjusted to give Standard-Power Output. Signal generator 'B' shall then be switched on and modulated to 30 percent with a 400 Hz tone (A2 emission) and set, alternately, to frequencies—

(i) + 14 kHz:

(ii) − 14 kHz:

and more removed from signal generator 'A'.

(b) For A3J and A3A, a SINAD ratio of 12dB at the receiver output when it is adjusted to give Standard Power Output. Signal generator 'B' shall then be switched on and set, unmodulated, to frequencies—

(i) + 2.6 kHz:

(ii) − 1.8 kHz:

and more removed from signal generator 'A'.

When in the above cases, the ratio of the levels of signal generator 'B' to signal generator 'A' is 55dB, either the SINAD ratio (including interference from signal generator 'B') at the output of the receiver shall not be less than 6dB, or the output of the receiver when test signals from both signal generator 'A' and signal generator 'B' are simultaneously applied to its input, shall not fall by more than 3dB below the output obtained when signal generator 'B' is switched off.

(3) Sensitivity-The appropriate Standard Test Signal shall be applied to the receiver through the Standard Input Network at sufficient level to give a receiver audio output SINAD ratio of 20dB at the Standard Power Output. For receivers set for the reception of A3H emissions the frequency of the generator of the Standard Test Signal shall then be varied over the range Fα-1400 Hz to Fα-1800 Hz,where Fα is the Assigned Frequency.

The level of the Standard Test Signal applied to the Standard Input Network shall not be greater than—

(i) A3H: (α−84) dBm:

(ii) A3J and A3A: (α−90) dBm.

(4) Audio Frequency Response—

(a) A3H—The appropriate Standard Test Signal shall be applied at a level of (α−52) dBm to the Standard Input Network. The receiver shall be adjusted to give Standard Power Output. The frequency of the modulating signal shall then be varied and the output power measured.

The permitted amplitude variation of the measured output signal power shall be 6dB in the range of 350 Hz to 2700 Hz.

(b) A3J—Two signal generators, 'A' and 'B', shall be connected to 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 (α−52) dBm. The clarifier shall be adjusted to give an audio frequency output of 1000 Hz, and the receiver shall be adjusted to give Stardard Power Output. Signal generator 'B' shall then be switched on and set, unmodulated, to frequencies in the range Fα −1400 Hz to Fα + 1600 Hz (where Fα is the Assigned Frequency) and at a level l0dB below signal generator 'A'. The receiver output power due to signal generator 'B' shall be measured.

The permitted amplitude variation of the measured output signal power shall be 6dB in the range 350 to 2700 Hz.

(5) Distortion—The Standard Test Signal at a level of (α-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 (α-82) dBm for A3H emissions and (α-88) dBm for A3A and A3J emissions, the receiver shall produce for loudspeaker reception at least 2 watts of audio-frequency output and for headphone reception at least 10 mW 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 or headphones, whichever is appropriate, at 1000 Hz.