

regardless of any variations of the impedance of the aerial or dummy load to which it is connected. The transmitter shall also comply with these frequency tolerances over the normal range of speeds of the man-powered generator.

(5) Operating Facilities—The transmitter shall be ready for operation on full power within 30 seconds of switching on. In this context "switching on" shall include continuous generation of the requisite power supplies and connection of the aerial or dummy load.

(6) Protective Arrangements—The transmitter shall be so designed that, when it is in the marking condition and adjusted for maximum power, the aerial may be disconnected or the output terminals short circuited without damage being caused to any part of the equipment.

(7) Transmission Facilities—(a) Facilities for both automatic and manual transmission of telegraph signals shall be provided:

(b) The automatic transmission on 500 kHz shall consist of the radiotelegraph alarm-signal, comprising 12 four-second dashes separated by one second spaces, followed by the distress signal (three times) and two dashes of 10 to 15 seconds duration each. These dashes shall be separated by a space of between 0.5 and 1.5 seconds:

(c) The automatic transmission on 8364 kHz shall include the radiotelegraph distress signal (three times) followed by two dashes of 10 to 15 seconds duration each. These dashes shall be separated by a space of between 0.5 and 1.5 seconds. No objection will be made to the inclusion of the radiotelegraph alarm-signal if so desired:

(d) The automatic transmission of the distress signal (three times) shall be completed within a period of 7 to 14 seconds, and the tolerance on the radiotelegraph alarm-signal dashes and spaces shall be plus or minus 0.2 second over the normal range of man-powered generator speeds:

(e) The automatic radiotelegraph transmission shall cease and open the keying circuit after one complete transmission unless the mechanism is reset or rewound. An indication of the necessity for resetting or rewinding shall be given to the operator, and means shall be provided to ensure that the transmission commences at the beginning of the signal:

(f) For manual radiotelegraph transmission a morse key of approved design shall be fitted to the equipment in a position approved by the type-testing authority:

(g) The facilities for transmission on the frequency of 2182 kHz shall include a device for the generation of the radiotelephone alarm-signal. For this purpose, the device shall comply with the requirements of the performance specification for a radio telephone alarm-signal generating device (audio-frequency) applicable to devices which are an integral part of an equipment, except that the duration of the Radiotelephone alarm signal may be determined by manual control.

(8) Power—(a) For the purposes of this specification, the power of the transmitter is defined as:

- (i) On telegraphy—the mean radio-frequency power developed in the load during a marking period; and
- (ii) On telephony—the total unmodulated carrier power delivered to the load.

In neither case shall it include power dissipated in any component such as an aerial tuning inductor properly to be regarded as a part of the transmitter:

- (b) On 500 kHz the power of the transmitter shall be—
 - (i) Not less than $[(3.8 \log_{10} c) - 5.5]$ watts (c being the capacitance of the dummy load in pF) or 1 watt, whichever is the greater, when measured with a dummy load consisting of a 15 ohm non-inductive resistor in series with a capacitor, having any and every value between a minimum of 10 pF less than that of the aerial provided in accordance with the requirement of clause 4

(1) (1)) of this Part of this Schedule and a maximum of 110 pF:

(ii) Not less than 3.5 watts measured with a dummy load consisting of a 30 ohm non-inductive resistor in series with a capacitor, having any and every value between 200 and 300 pF:

(c) On 2182 kHz the power of the transmitter shall be

(i) Not less than 1.5 watts when measured with a dummy load consisting of a 15 ohm non-inductive resistor in series with a capacitor, having any and every value between a minimum of 10 pF less than that of the aerial provided in accordance with the requirement of clause 4 (1) (a) of this Part of this Schedule and a maximum of 110 pF:

(ii) Not less than 3.5 watts when measured with a dummy load consisting of a 30 ohm non-inductive resistor in series with a capacitor, having any and every value between 300 and 400 pF:

(d) On 8364 kHz the power of the transmitter shall be—

(i) Not less than 1.5 watts when measured with a dummy load consisting of a 20 ohm non-inductive resistor in series with a capacitor, having any and every value between 70 and 100 pF:

(ii) Not less than 3 watts when measured with a dummy load consisting of a 40 ohm non-inductive resistor in series with any and every reactance in the range minus 200 to plus 60 ohms.

(9) Tuning Controls—A tuning control shall be provided in the aerial circuit or circuits, for use with all types of aerial provided, and the aerial circuit or circuits shall include a tuning indicator (or indicators), failure of which shall not disconnect the aerial.

(10) Transmitter Testing—A dummy load (or loads) shall be provided within the equipment for short-period testing of the transmitter on full power. Means shall be provided for testing the automatic transmission facilities without the generation of radio-frequency energy.

7. Receiver—(1) Method of Test:

(a) The dummy aerials employed for testing shall, unless otherwise specified, consist of:

(i) A 15 ohm non-inductive resistor in series with a capacitor, having any and every value in the range specified in Clause 6 (8) (b) (i) of this Part of this Schedule; and

(ii) A 30-ohm non-inductive resistor in series with a capacitor, having any and every value in the range 200 to 400 pF.

(b) Signals employed for testing shall, unless otherwise specified, be Class A2 signals modulated to a depth of 30 percent at 1000 Hz.

(2) General—Reception facilities shall be provided for use on 500 kHz and on 2182 kHz.

(a) When the receiver is operating on 500 kHz, it shall be fixed-tuned and suitable for reception of Class A2 emissions over the band 495 to 505 kHz:

(b) When the receiver is operating on 2182 kHz, it shall be fixed tuned and suitable for reception of Class A3 emissions over the band 2177 to 2187 kHz:

(c) The receiver shall be used with headphones that are watertight and of a form designed to exclude extraneous noise. These headphones shall be permanently attached to the receiver.

(3) Standard Output Level—The standard audio-frequency output level shall be 1 mW into a resistance substantially equal to the modulus of the impedance of the headphones at 1000 Hz.