



WIRELESS TELEGRAPHY ACT, 1949

AMATEUR (SOUND) LICENCE B

Date of issue 20 February 1969 ..... Fee on issue ..... £3

Renewable 20 February in each year Fee on renewal ..... £3

Call Sign .....

1. (1) Licence .....

of .....

(hereinafter called "the Licensee") is hereby licensed, subject to the terms, provisions and limitations herein contained:-

(a) to establish in the United Kingdom an amateur sending and receiving station for wireless telegraphy (hereinafter called "the Station") at:

(i)

(hereinafter called "the main address"): or

(ii) any premises (hereinafter called "the temporary premises") or any location (hereinafter called "the temporary location") for separate periods none of which shall exceed four consecutive weeks; or

(iii) any premises (hereinafter called "the alternative premises") provided that at least 7 days before the Station is established at the alternative premises notice in writing is given to the General Post Office Telephone Manager (E/Radio) for the area in which the alternative premises are situate of the postal address of the alternative premises. The said Telephone Manager shall also be notified in writing when the Station is no longer established at the alternative premises;

(b) to use the Station for the purpose of sending to, and receiving from, other licensed amateur stations as part of the self-training of the Licensee in communication by wireless telegraphy:

(i) Messages in plain language which are remarks about matters of a personal nature in which the Licensee, or the person with whom he is in communication, has been directly concerned;

(ii) Signals (not being in secret code or cypher) which form part of, or relate to, the transmission of such messages;

(c) to use the Station, as part of the self-training of the Licensee in communication by wireless telegraphy, during disaster relief operations conducted by the British Red Cross Society, the St. John Ambulance Brigade or any police force in the United Kingdom, or during any exercise relating to such operations, for the purpose of sending to other licensed amateur stations such messages as the Licensee may be requested by the said Society, Brigade or such police force to send, and of receiving from any other licensed amateur station such messages as the person licensed to use such other licensed amateur station may be requested by the said Society, Brigade or such police force to send;

(d) to use the Station for the purpose of receiving transmissions in the Standard Frequency Service.

(2) Limitations. The foregoing Licence to establish and use the Station is subject to the following limitations:-

(a) The Station shall not be established or used on the sea or within any estuary, dock, or harbour, or in any moving vehicle, vessel or aircraft.

(b) The Station shall be used only with emissions which are of the classes specified in the Schedule hereto and are within the frequency bands specified in the Schedule hereto in relation to those respective classes of emission, and with a power not exceeding that specified in the Schedule hereto in relation to the class of emission and frequency band in use at the time.

(c) The Station shall be operated only (i) by the Licensee personally, or (ii) in the presence of and under the direct supervision of the Licensee, by any other person who holds a wireless telegraphy licence issued by the Postmaster General to use another amateur station or who holds an Amateur Radio Certificate issued by the Postmaster General.

(d) Messages shall not be broadcast to amateur stations in general, but shall be sent only to (i) amateur stations with which communication is established separately and singly, or (ii) groups of particular amateur stations provided that communication is first established separately and singly with each station in any such group.

(e) When the Station is used for the purpose of sending messages by the type of transmission known as Radio Teleprinter (RTTY) it shall be used only with International Telegraph Code No. 2 (5 - Unit Start-Stop) and with speeds of transmission of 45.5 or 50 bands.

(f) No message which is grossly offensive or of an indecent or obscene character shall be sent.

2. International Requirement. The Licensee shall observe and comply with the relevant provisions of the Telecommunication Convention.

3. Frequency Control and Measurement.

(1) A satisfactory method of frequency stabilisation shall be employed in the sending apparatus comprised in the Station.

(2) Equipment for frequency measurement shall be provided capable of verifying that the sending apparatus comprised in the Station is operating with emissions within the authorised frequency bands.

4. Non-Interference.

(1) The apparatus comprised in the Station shall be so designed, constructed, maintained and used that the use of the Station does not cause any undue interference with any wireless telegraphy.

(2) At all times, every precaution shall be taken to avoid over-modulation, and to keep the radiated energy within the narrowest possible frequency bands having regard to the class of emission in use. In particular, the radiation of harmonics and other spurious emissions shall be suppressed to such a level that they cause no undue interference with any wireless telegraphy. To ensure that the requirements of this subclause are met, tests shall be made from time to time and details of those tests shall be recorded in the Log as required in clause 6 hereof.

(3) The use of "spark" sending apparatus is specifically forbidden.

5. Operators and access to Apparatus. The Licensee shall not permit or suffer any unauthorised person to operate the Station or to have access to the apparatus comprised therein. The Licensee shall ensure that persons operating the Station shall observe the terms, provisions and limitations of this Licence at all times.

6. Log

(1) An indelible record shall be kept in one book (not loose-leaf) (in this Licence called "the Log") showing the following:-

- (a) Date.
- (b) Time of commencement of every call made from the Station (including the tests referred to in clause 4(2) hereof).
- (c) Call signs of the stations from which messages addressed to the Station are received or to which messages are sent, times of establishing and ending communication with each such station, and the precise frequency (not frequency band) or frequencies (not frequency bands) and class or classes of emission in each case.
- (d) Time of closing down the Station.
- (e) The address of the temporary premises or the alternative premises or particulars of the temporary location when the Station is established other than as provided in clause 1(1)(a)(i) hereof.

All times shall be stated in G.M.T. No gaps shall be left between entries and all entries shall be made at the time of sending and receiving.

(2) If the Station is at any time operated by a person other than the Licensee (see clause 1(2)(c)(ii) hereof) the Licensee shall ensure that the Log is signed by that person with his full name, and that the call sign of the station which he is licensed to use, or, (if there is no such station) the number of his Amateur Radio Certificate, is shown in the Log.

7. Receiver. The Station shall be equipped for the reception of messages sent on the frequency or frequencies, and by means of the class or classes of emission, which are in current use at the Station for the purpose of sending.

8. Recorded messages.

(1) Messages addressed to the Station from any licensed amateur station with which the Licensee is in communication may be recorded and retransmitted in accordance with this Licence, provided that the retransmission is intended for reception by the originating station only, and that the call sign of that station is not included in the retransmission.

(2) Modulation is prohibited by means of recordings of any kind other than special recordings of sinusoidal tone or tones within the audio frequency spectrum which may be either constant or steadily changing in frequency.

(3) Gramophone or tape recordings of the type intended for entertainment purposes may not be transmitted for any purpose.

9. Call Sign and notification of location.

(1) Whenever the Station is used the call sign mentioned on the first page of this Licence shall be transmitted: Provided that when the Station is used -

(a) at an address other than the main address the Licensee shall, in order to indicate the country or place of use, vary the prefix letter to the call sign by using the prefix letter(s) appropriate to that country or place, being G for England, GM for Scotland, GW for Wales, GI for Northern Ireland, GC for the Channel Islands and GD for the Isle of Man;

(b) at the temporary premises the suffix "/A" shall be added to the call sign;

(c) at the temporary location the suffix "/P" shall be added to the call sign.

(2) The call sign shall be sent for identification purposes at the beginning and at the end of each period of sending, and whenever the frequency is changed. When the period of use exceeds 15 minutes the call sign shall be repeated (in the same manner) at the commencement of each succeeding period of 15 minutes.

(3) The letters of the call sign may be confirmed by the pronouncement of well-known words of which the initial letters are the same as those in the call sign; but words used in this manner shall not be of a facetious or objectionable character.

(4) When the Station is used at the temporary premises or the temporary location, particulars of the temporary location or of the address of the temporary premises shall be sent at the beginning and end of the establishment of communication with each separate amateur station, or at intervals of 15 minutes, whichever is the more frequent.

10. Inspection. The Station, this Licence and the Log shall be available for inspection at all reasonable times by duly authorised officers of the Post Office.

11. Station to close down. The Station shall be closed down at any time on the demand of an officer of the Post Office.

12. Period of Licence, Renewal, Revocation and Variation. This Licence shall continue in force for one year from the date of issue, and thereafter so long as the Licensee pays to the Postmaster General in advance in each year on or before the anniversary of the date of issue the renewal fee prescribed by or under the regulations for the time being in force under section 2(1) of the Wireless Telegraphy Act, 1949: Provided that the Postmaster General may at any time after the date of issue (i) revoke this Licence or vary the terms, provisions or limitations thereof by a notice in writing served on the Licensee, or by a general notice published in the London, Edinburgh and Belfast Gazettes, or in a newspaper published in London, a newspaper published in Edinburgh and a newspaper published in Belfast addressed to all holders of Amateur (Sound) Licences B, (ii) revoke this Licence by a general notice published by being broadcast by the British Broadcasting Corporation addressed to all holders of Amateur (Sound) Licences B. Any notice given under this clause may take effect either forthwith or on such subsequent date as may be specified in the notice.

13. This Licence is not transferable.

14. Return of Licence. This Licence shall be returned to the Postmaster General when it has expired or been revoked.

15. Previous Licences Revoked. Any licence, however described, which the Postmaster General has previously granted to the Licensee in respect of the Station is hereby revoked.

16. Interpretation.

(1) In this Licence:-

(a) The expressions -

(i) "messages" and "signals" shall not include visual images sent by television, facsimile transmission, or other means;

(ii) "remarks about matters of a personal nature" shall not include messages about business affairs;

(iii) "Standard Frequency Service" shall have the same meaning as in the Radio Regulations and Additional Radio Regulations in force under the International Telecommunication Convention signed at Montreux on the 12th day of November, 1965, where it is defined as "A radio-communication service for scientific, technical and other purposes, providing the transmission of specific frequencies of stated high precision, intended for general reception";



(iv) "the Telecommunication Convention" shall mean the International Telecommunication Convention signed at Montreux on the 12th day of November, 1965, and the Radio Regulations and Additional Radio Regulations in force thereunder and includes any Convention and Regulations which may from time to time be in force in substitution for or in amendment of the said Convention or the said Regulations;

(v) "the United Kingdom" shall mean the United Kingdom of Great Britain and Northern Ireland, the Isle of Man and the Channel Islands.

(b) References to the operation of the Station shall include references to the speaking into the microphone comprised in the Station;

(c) Except where the context otherwise requires other words and expressions shall have the same meaning as they have in the Wireless Telegraphy Act, 1949 or in the Regulations made under Part I thereof.

(2) Section 19(5) of the Wireless Telegraphy Act, 1949 shall apply for the purposes of this Licence as it applies for the purpose of the Act.

(3) Nothing in this Licence shall be deemed to authorise the use of the Station for business, advertisement or propaganda purposes or (except as provided by clause 1 (1)(c) hereof) for the sending or receiving of news or messages of or on behalf of, or for the benefit or information of any social, political, religious or commercial organisation, or anyone other than the Licensee or the person with whom he is in communication.

Signed on behalf of Her Majesty's Postmaster General

*A. J. Campbell*

THE SCHEDULE

Footnote No.	FREQUENCY BANDS (In Mc/s) (See A below)	CLASSES OF EMISSION (See B below)	POWER	
			MAXIMUM DC INPUT POWER (See C below)	RADIO FREQUENCY OUTPUT PEAK ENVELOPE POWER FOR A3A and A3J EMISSIONS ONLY (See D below)
1, 3 and 4	144- 145	A3, A3A, A3H A3J and F3	150 watts	400 watts
4	145- 146			
1	425- 429			
1	432- 450			
1	1,215- 1,325			
1	2,300- 2,450			
1	3,400- 3,475			
1	5,650- 5,850			
1	10,000-10,500			
	21,000-22,000			
1 and 2	2,350- 2,400	P3D and P3E	25 watts mean power and 2.5 kilowatts peak power	
1 and 2	5,700- 5,800			
1 and 2	10,050-10,450			
	21,150-21,850			

FOOTNOTES:-

1. These bands are all allocated to stations in the amateur service on a secondary basis on condition that they shall not cause interference to other services.
  2. Use by the Licensee of emissions of class P3D or P3E on any frequency in this band shall be only with the prior written consent of the Postmaster General.
  3. The following spot aeronautical frequencies must be avoided whenever this band is used:- 144.0, 144.09, 144.18, 144.27, 144.36, 144.45, 144.54, 144.63, 144.72, 144.81 and 144.9 Mc/s.
  4. In these bands, but in no others, messages and signals may be relayed via artificial satellites.
- A. The type of transmission known as Radio Teleprinter (RTTY) may be used in any frequency bands authorised by this Licence using classes of emission A1, A2, F1, F2, P1D, P2D and P2E.
- B. The Symbols used to designate the classes of emission have the meanings assigned to them in the Telecommunication Convention. They are:-

Amplitude Modulation

- A3 Telephony, double sideband
- A3A Telephony, single sideband, reduced carrier
- A3H Telephony, single sideband, full carrier
- A3J Telephony, single sideband, suppressed carrier

Frequency (or phase) Modulation

F3 Telephony

Pulse Modulation

- P3D Telephony, amplitude modulated pulses
- P3E Telephony, width (or duration) modulated pulses.

C. DC input power is the total direct current power input to (i) the anode circuit of the valve(s) or (ii) any other device energising the aerial.

D. As an alternative, for A3A and A3J single sideband types of emission, the power shall be determined by the peak envelope power (P.E.P.) under linear operation. The radio frequency output peak envelope power under linear operation shall be limited to 2.667 times the DC input power appropriate to the frequency band concerned. This column gives the maximum power determined by this method which may be used.

## NOTES

- (a) The Postmaster General should be notified promptly of any change in the correspondence address of the Licensee. Except as provided in (b) below, correspondence should be sent to the Postmaster General, Radio Services Department, General Post Office LONDON, E.C.1.
- (b) Remittances and correspondence about payments to the Postmaster General required under this Licence should be sent to the Accountant General's Department, General Post Office, Chetwynd House, West Bars, CHESTERFIELD, Derbyshire. It is unnecessary to send the Licence when making remittances.
- (c) Clause 4(1) of the Licence requires that the apparatus comprised in the Station shall be so designed, constructed, maintained and used that the use of the Station does not cause any undue interference with any wireless telegraphy. In order to prevent interference due to close coupling of aerials, the aerial to be used for the Station should be sited as far as possible from any existing television or other receiving aerials in the vicinity. This is particularly important if it is proposed to instal an indoor transmitting aerial, e.g. in the loft, where interference may be conducted through the electricity supply wiring. In some circumstances it might not be possible to use an indoor aerial.
- (d) If power for the working of the Station is taken from a public electricity supply, no direct connection should be made between the supply mains and the aerial.
- (e) If the Station is situated within half a mile of the boundary of any aerodrome, the height of the aerial or any mast supporting it must not exceed 50 feet above the ground level. An aerial which crosses above or is liable to fall or to be blown on to any overhead power wire (including electric lighting and tramway wires) or power apparatus must be guarded to the reasonable satisfaction of the owner of the power wire or power apparatus concerned.
- (f) Demands for closing down (see clause 11) can be expected to be received, inter alia, in connection with national emergencies or when interference is being caused to a Government wireless station or other important services. An oral demand by an officer of the Post Office to close down the Station will be confirmed in writing.
- (g) Under section 1 of the Wireless Telegraphy Act, 1949, it is an offence to use any station or apparatus for wireless telegraphy except under and in accordance with a licence granted by the Postmaster General. Breach of this provision may result in this Licence being revoked and the offender being prosecuted.
- (h) If any message, the receipt of which is not authorised by this Licence, is received by means of the Station, neither the Licensee nor any person operating the Station should make known the contents of any such message, its origin or destination, its existence or the fact of its receipt to any person except a duly authorised officer of Her Majesty's Government or a competent legal tribunal, and should not retain any copy or make any use of any such message, or allow it to be reproduced in writing, copied or made use of. It is an offence under section 5 of the Wireless Telegraphy Act, 1949, deliberately to receive messages the receipt of which is unauthorised or (except in the special circumstances mentioned in that section of the Act) to disclose any information as to the contents, sender or addressee of any such message.
- (j) It is an offence under section 5 of the Wireless Telegraphy Act, 1949, to send by wireless telegraphy certain misleading messages.
- (k) This Licence does not authorise the Licensee to do any act which is an infringement of any copyright which may exist in the matter sent or received.
- (l) This Licence does not absolve the Licensee from obtaining any necessary consent before entering on private property with any apparatus.
- (m) For the reception of broadcast programmes a separate broadcast receiving licence is necessary.



(n) The Postmaster General regards himself as free to publish the Licensee's name and address at his discretion unless within one month of the date of issue of this Licence the Licensee specifically asks that this should not be done.

(o) The expression "wireless telegraphy" used in this Licence has the meaning assigned to it in the Wireless Telegraphy Act, 1949, and includes, inter alia, radiotelephony.

(p) With reference to clause 9(3) of this Licence it is recommended that for uniformity the phonetic alphabet contained in Appendix 16 of the Radio Regulations, Geneva, 1959, reproduced below should be used when the letters of the call sign are transmitted phonetically.

A. Alfa	J. Juliett	S. Sierra
B. Bravo	K. Kilo	T. Tango
C. Charlie	L. Lima	U. Uniform
D. Delta	M. Mike	V. Victor
E. Echo	N. November	W. Whiskey
F. Foxtrot	O. Oscar	X. X-Ray
G. Golf	P. Papa	Y. Yankee
H. Hotel	Q. Quebec	Z. Zulu
I. India	R. Romeo	

(q) With reference to Clause 16(2) of the Licence section 19(5) of the Wireless Telegraphy Act, 1949, reads as follows:- "In considering for any of the purposes of this Act, whether in any particular case, any interference with any wireless telegraphy caused or likely to be caused by the use of any apparatus, is or is not undue interference, regard shall be had to all the known circumstances of the case and the interference shall not be regarded as undue interference if so to regard it would unreasonably cause hardship to the person using or desiring to use the apparatus".

## Frequency-checking equipment in Amateur Station - P.O. requirements

The Post Office receives many enquiries seeking amplification of the clause in Amateur licences which requires a licensee to have in his station "Equipment for frequency measurement - - - capable of verifying that the sending apparatus comprised in the station is operating with emissions within the authorized bands." Although the Post Office must continue to assess the suitability of the frequency-measuring equipment offered by individuals in licence applications, the following notes may be helpful as a guide to P.O. requirements.

1. A licensee is required:-
  - (a) to be able to verify that his transmissions are within the authorized frequency band, (i.e. that no appreciable energy is radiated outside the band.)
  - (b) to use a satisfactory method of frequency control.
  - (c) to ensure that his transmissions do not contain unwanted frequencies (i.e. harmonics and spurious frequencies.)
2. When his station is inspected by P.O. staff, the licensee will be expected to demonstrate that he can conform with the requirements (a) to (c) above.
3. The P.O. considers that, as a general rule, a station requires a crystal reference source to comply with 1 (a) and (b) above so that;-
  - (a) with a crystal-controlled transmitter an absorption device of suitable frequency range and accuracy is necessary to check that the desired harmonic of the crystal frequency is selected.
  - (b) with a transmitter that is not crystal-controlled a wavemeter based on a crystal oscillator is necessary.

Within these outline requirements the licensee is free to decide how he will meet the licence regulations. The Post Office cannot of course, endorse or recommend particular makes or types of equipment, and assesses the suitability of what the licensee proposes to use from the details he gives in his licence application.

4. The following comments may provide useful guidance:
  - (a) Frequency measuring equipment should be of sufficient accuracy to verify that emissions are within the authorized frequency bands. For example, operation in the centre of the 21.0 - 21.45 Mc/s band would require frequency measurement to an accuracy of  $\pm 1.0\%$  to ensure that emissions were within band, whereas operation within, say, 10 kc/s of band edge would require measurement to an accuracy of  $\pm 0.05\%$ . When determining the proximity of an emission to band-edge, the bandspread due to modulation, on the appropriate side of the carrier, needs to be added to the frequency tolerance of the carrier.
  - (b) Heterodyne wavemeters and crystal calibrators. When used in conjunction with a general coverage receiver, a 100 kc/s crystal is usually adequate for checking frequencies up to 4 Mc/s. For higher frequencies the spacing between 100 kc/s marker points is too small for accuracy, and a crystal of 500 kc/s, or preferably 1 Mc/s, should be used in addition. If the receiver covers only the Amateur frequency bands the bandspread scale will usually allow a 100 kc/s crystal to be used with sufficient accuracy throughout the h.f. bands.
  - (c) Absorption wavemeters and similar devices. The scale length and accuracy should be suitable for measurements of the required accuracy to be made, and the frequency coverage should extend up to the second,

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and preferably the third, harmonic of the radiated frequency so that the presence of unwanted frequencies may be detected. For v.h.f and u.h.f transmitters, probably the best technique is to measure the frequency of the fundamental oscillator as accurately as possible and to use an absorption device to confirm that the wanted harmonic has been selected. When a v.h.f or u.h.f converter is used in conjunction with an h.f receiver and the calibration of the main receiver can be checked with sufficient accuracy, this will provide a means of frequency measurement but it is also advisable to use an absorption wavemeter to check the measurement and to confirm that no unwanted radiations are present.