



Citizens' Band (CB) radio spectrum use – information and operation

Of 364

Information
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Contents

Section		Page
1	Regulatory and equipment information	1
2	CB operating practice	5

Section 1

Regulatory and equipment information

What is CB radio?

- 1.1 CB radio operates in the 27 MHz band and is a short range radio service for both hobby and business use. It is designed to be used without the need to have any technical qualifications and not to cause interference to other radio users. Hence, only radios meeting certain specific requirements may be used. These are detailed later in this document.

Why has Ofcom de-regulated the use of CB radio equipment?

- 1.2 One of Ofcom's priorities is to reduce regulation wherever possible.
- 1.3 The deregulation of CB radio equipment will reduce the regulatory burden for both CB radio users and Ofcom. For CB radio users it will no longer be necessary to contact Ofcom in order to apply for and to subsequently maintain a CB radio licence and it will no longer be necessary to pay for a new licence each year.

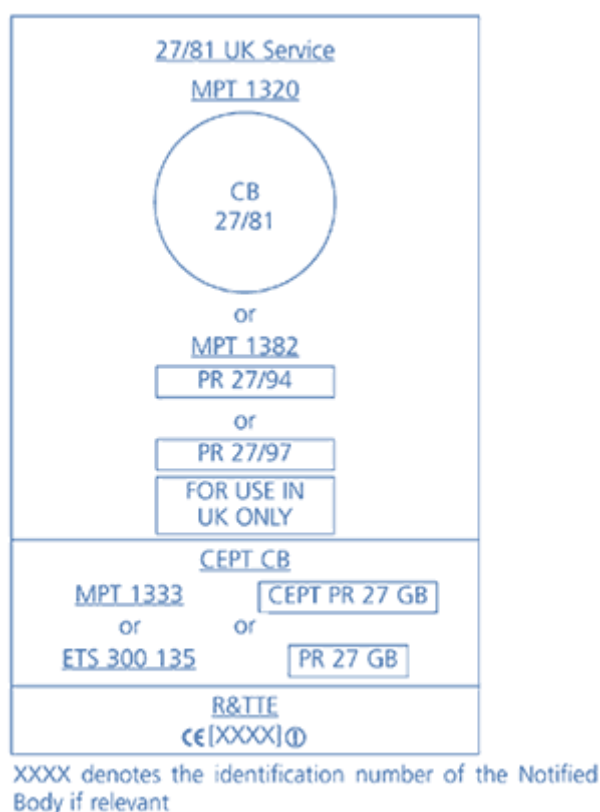
Wireless Telegraphy (WT) Act licence exemption and regulatory issues

- 1.4 From 8 December 2006, it will no longer be necessary to hold a WT Act licence in order to operate CB radio equipment providing that such use is consistent with the requirements of the WT (Exemption) (Amendment) Regulations 2006, which come into force on that day. These Regulations, on which Ofcom consulted in June 2006, exempt CB radio equipment users from the need to hold a WT Act licence. The use of CB radio equipment which is not consistent with these Regulations will be an offence.
- 1.5 CB users share spectrum which is in a frequency band managed by the Ministry of Defence (MOD). This use is secondary to that of the MOD (the primary spectrum user) and it should be noted that CB users must be prepared to accept incoming interference caused by continuing use of this spectrum by the MOD.
- 1.6 Please note: users must understand that CB radio equipment shall be operated on a 'non-interference, non-protected' basis; that is, it shall not cause harmful interference to, and shall not claim protection from, other radio services.
- 1.7 The WT (Content of Transmission) Regulations 1988 make it an offence to use any station for wireless telegraphy or any wireless telegraphy apparatus to send a message, communication or other matter in whatever form that is grossly offensive or of an indecent, obscene or menacing character.

Equipment requirements that must be met

- 1.8 Radio equipment being used must be compliant with the UK Interface Requirement IR 2027 and conform with the essential requirements of the Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive. Equipment will have appropriate markings such as the "CE" mark. For radio equipment placed on the market under the type approval regime prior to 8 April 2001, the equipment must have previously been type approved. (No type approval certificates have been issued from that date).

- 1.9 UK Interface Requirements provide a high level description of spectrum use (frequency range, channel spacing, output power, where appropriate a technology to be used, licensing regime, etc). UK Interface Requirements are available at http://www.ofcom.org.uk/radiocomms/ifi/tech/interface_req/
- 1.10 CB users must ensure that they use only type approved equipment or equipment conforming with the essential requirements of the R&TTE Directive and in compliance with IR 2027.
- 1.11 In summary, CB radio equipment that has formerly been type approved, and will necessarily comply with the minimum requirements of the relevant UK Interface Requirement (IR 2027), may continue to be used. Such equipment will have been type approved to MPT 1320, MPT 1333, MPT 1382 or ETS 300 135. Please note that specifications MPT 1320 (27/81 equipment) and MPT 1333 have been withdrawn but equipment type approved to these specifications may continue to be used for the lifetime of the equipment.
- 1.12 Typical marking of radio equipment that conforms with regulatory requirements is shown below:



- 1.13 The following standard and frequencies are relevant in the UK:

- 1.13.1 **ETSI standard ETS 300 135**
 MPT 1333 (CEPT) – withdrawn
 (CEPT PR27GB) / (PR27GB)
 This is commonly known as the European "EU" Band
 26.965-27.405 MHz

- 1.13.2 **Specification MPT 1382 (27/94)/MPT 1320**
Specification MPT 1320 – withdrawn
27.60125-27.99125 MHz
(PR 27/94) / (27/81-UK) This is commonly known as the "UK" Band
- 1.13.3 **Specification MPT 1382 (December 1997)**
26.965-27.405 MHz (CEPT or "EU")
27.60125-27.99125 MHz
or "UK" (PR 27/97)
This equipment provides the option for any combination of channels from the "EU" or "UK" bands.
- 1.14 The Performance Specification MPT 1333 was withdrawn in January 1995 and no equipment type approved to that Specification is permitted to be manufactured or imported from that date. This specification has been superseded by ETS 300 135.
- 1.15 Users of equipment type approved to either MPT 1320 or MPT 1333 may continue to use their equipment for its foreseeable useful life.
- 1.16 MPT 1382 (December 1997) has been revised to permit any combination of the existing 40 UK channels (MPT 1382) and the 40 CEPT channels (ETS 300 135). This allows for up to a maximum of 80 channels within one set. Equipment based on this revised specification will be strictly for use in the UK only.

Can I use converted equipment?

- 1.17 No, you may not use equipment that has been altered in any way which may invalidate conformance with the UK Interface Requirement or type approval certification. This includes radios that have been fitted with proprietary conversion boards. Converted equipment may not meet the specification and can cause interference to other radio users.

Which modes of modulation may be used?

- 1.18 The use of either Frequency Modulation (FM) or Phase Modulation (PM) is permitted, but the use of Amplitude Modulation (AM) or Single Side-Band modulation (SSB) is not permitted because the use of these modulation schemes greatly increases the probability of causing interference to other radio users, to TV reception and can also result in "breakthrough" on Hi-Fi equipment.

What is the maximum power allowed?

- 1.19 The maximum transmitter RF carrier power output allowed is 4 Watts. The use of power amplifiers (often referred to as "burners" or "boosters") to boost output power above the 4 Watt limit is illegal.
- 1.20 For equipment with an integral antenna, the maximum effective radiated carrier power is limited to 4W.

CB channels used in the UK

- 1.21 There are two sets of frequency bands allocated to CB radio in the UK. These are detailed on the next page.

Table1: CB radio channel and frequencies

Channel	UK Channels (MHz)	CEPT/EU channels (MHz)
1	27.60125	26.965
2	27.61125	26.975
3	27.62125	26.985
4	27.63125	27.005
5	27.64125	27.015
6	27.65125	27.025
7	27.66125	27.035
8	27.67125	27.055
9	27.68125	27.065
10	27.69125	27.075
11	27.70125	27.085
12	27.71125	27.105
13	27.72125	27.115
14	27.73125	27.125
15	27.74125	27.135
16	27.75125	27.155
17	27.76125	27.165
18	27.77125	27.175
19	27.78125	27.185
20	27.79125	27.205
21	27.80125	27.215
22	27.81125	27.225
23	27.82125	27.255
24	27.83125	27.235
25	27.84125	27.245
26	27.85125	27.265
27	27.86125	27.275
28	27.87125	27.285
29	27.88125	27.295
30	27.89125	27.305
31	27.90125	27.315
32	27.91125	27.325
33	27.92125	27.335
34	27.93125	27.345
35	27.94125	27.355
36	27.95125	27.365
37	27.96125	27.375
38	27.97125	27.385
39	27.98125	27.395
40	27.99125	27.405

Is 934 MHz still available for CB use?

1.22 No. The Performance Specification MPT 1321 to which 934 MHz CB transceivers were manufactured was withdrawn in 1988. No new sets were manufactured from that date and no sets were imported. From 1 January 1999 the use of 934 MHz CB equipment has been prohibited.

What about the 27/81 UK service?

- 1.23 MPT 1320 was withdrawn in March 1995 and replaced by a new Specification MPT 1382. All equipment type-approved to MPT 1320 may continue to be used for its foreseeable useful life.

Section 2

CB operating practice

Operational and other information

- 2.1 It is sensible to keep to good operating practices built up over the years of CB operation.
- 2.2 No one has preferential rights at any time or place or on any channel and keeping to good operating practices should assist in mitigating potential interference amongst users. Priority should be given to calls for help, and in particular Channel 9 should be left clear for emergencies and assistance only. All operators are recommended to follow this advice and other points listed below:

Remember:

- i) Be legal

Ensure that CB radio equipment is operated in accordance with the Wireless Telegraphy (Exemption) (Amendment) Regulations 2006.

- ii) Don't cause interference

Remember that other radio services may be affected by your transmissions.

- iii) Be patient

Show patience and consideration towards other users.

- iv) Be safe

Don't risk your life or anyone else's.

Interference

- 2.3 Although the CB service has been designed specifically to minimise interference to other radio services, all radio transmissions can cause problems to other users. There are several things you can do to minimise this:

Remember:

- i) Only use legal CB equipment.

- ii) Don't tamper with your rig. Modifications to change the power output or the number of channels can cause interference.

- iii) Use the low power switch where possible.
- iv) Don't transmit close to radio masts, airfields or the emergency services; their radio could be saving a life. If your CB station is situated within 1 km of any aerodrome, the height of the antenna and any supporting mast or structure must not exceed 15m.
- v) Don't use your CB station on aircraft.
- vi) Don't use your CB station on ships without obtaining the authority of the master of the vessel.
- vii) Don't site your antenna near to TV reception aerials.
- viii) Using a low-pass filter between your rig and antenna may help to reduce interference.

Using CB radio

Remember:

- i) Be considerate to other users.
- ii) Respect operating conventions – leave Channel 9 clear for emergencies, Channel 14 for calling and Channel 19 for mobile use. Also respect any local conventions regarding the use of a channel for a specific purpose.
- iii) Always give priority to emergency calls on any channel. The next emergency call may concern you, your family or friends.
- iv) If you hear a call for help and if no-one else is providing assistance, give any help you can.
- v) CB is not a substitute for the 999 (or marine VHF Channel 16) service. There is no official organisation monitoring CB, and there may not always be a "local volunteer" monitor listening.
- vi) Before you transmit, listen with the "Squelch" control turned fully down (i.e. background noise at a maximum). Don't barge in on existing conversations.
- vii) Where possible, keep conversations short. Don't hog channels. Everyone has an equal right to use them.
- viii) Be patient towards newcomers; everyone has to learn. Help them with interference and other problems if you can.
- ix) Be sympathetic to neighbours suffering interference to their radio or television reception.
- x) CB can be an aid to business as well as an entertaining and useful hobby. Help others to enjoy it as much as you do.

Safety

Remember

- i) Never erect or remove an antenna near to or under electricity transmission lines. CB users have been killed doing so. If in doubt ask your local electricity supplier for advice.
- ii) Take care at railway level crossings when driving a vehicle fitted with a CB antenna. High antennas can touch low wires causing electrocution so do not fit long antennas to vehicles or use any type of long antenna for mobile operation.
- iii) Use common sense when transmitting. Do not let your use of CB interfere with your ability to drive. Do not transmit when there is risk of an explosion, such as when you are at a petrol station.
- iv) Do not transmit with the antenna less than 15cm (6 inches) from your face. Remember that concentrated radio energy can be dangerous.
- v) Emergency monitoring and Channel 9.
- vi) Use Channel 9 only for emergencies and assistance.

Is Channel 9 a "legal" emergency channel?

- 2.4 It is recommended that Channel 9 be left clear for emergencies but this does not constitute a legal requirement and is not a licence condition.

Why isn't Channel 9 protected by law from abuse?

- 2.5 Volunteers do valuable work by giving up their time to monitor Channel 9 for emergency calls and their frustration when the channel is misused is understandable. However, legal protection for the channel is not an easy remedy for channel abuse, because it would have to involve effective checking and enforcement action. The cost of providing resources on a large enough scale to do this would be disproportionate.

Do I have to register with Ofcom to become a monitor?

- 2.6 No, any group or individual licensee can monitor Channel 9 or, indeed, any other channel. No permission is needed and Ofcom does not maintain a register of monitors.

Should I register with the emergency services?

- 2.7 This is not necessary but you may like to contact the emergency services to let them know you are there (some like to keep a list of known CB monitors in their area) and to get any advice they may wish to give you about the passing of emergency calls.
- 2.8 It is also important to get in touch with the local police if you wish to help in incidents such as searches for lost children. Sometimes the emergency services can be hindered rather than helped when people turn up on the scene of an accident or search and it is therefore very important to make sure that your efforts are properly directed.

Do the emergency services monitor Channel 9?

- 2.9 Generally no. Some monitoring may be done locally by services such as police traffic controls but this is not usually on a regular basis. The emergency services certainly do not have sufficient resources to undertake monitoring on anything but a small and selective scale. CB is no alternative to the maritime emergency service, for example.

Can I use my CB radio abroad?

- 2.10 You will not be permitted to use CB equipment which incorporates the UK channels (27.60125-27.99125 MHz, i.e. UK Channels 1-40), abroad.
- 2.11 Use of CB equipment abroad, with EU channels only as denoted in and based on ETS 300 135, is likely to be permitted, but prior to travelling you must check with the administration of the country concerned whether it may be used and whether any conditions apply.
- 2.12 When operating abroad, you must comply with the conditions of authorisation of the country which you are visiting.
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