

Amateur radio operating procedures

Taken from the ACMA web site. [GO HERE](#)

Interpretation

An **assigned licence** – the ACMA allocates the frequencies for use.

A **non-assigned licence** – the operator shares frequencies with other users.

What amateur stations can be used for

Amateur stations are used for:

- self-training in and technical investigations of radiocommunications
- communicating with other amateurs
- transmitting news and information about the operation of amateur radio stations.

Amateurs must not:

- use a station for financial gain or reward
- transmit advertising or any form of entertainment.

Control and identification of amateur stations

Identifying your station using call signs

You should use your call sign:

- every time you start a transmission
- every time you finish a transmission
- at least once every 10 minutes during a transmission that lasts for more than 10 minutes.

Once communications have been established with another station, it is not necessary to use call signs every 'over' – call signs must be used every 10 minutes.

You can identify by voice (using the English language), by visual image or by an internationally recognised code (for example, Morse).

Emergency services operations or training exercises

If you operate your station for emergency services operations or training exercises, you must transmit your call sign:

- every time you start a transmission
- every time you finish a transmission
- at least once every 30 minutes during a transmission or series of transmissions that lasts for more than 30 minutes.

If you are participating in an emergency services exercise (for example, Wireless Institute Civil Emergency Network), operational call signs, like mobile 1, base 2, are often used.

Operating portable

When operating your amateur radio station portable, you may add the numeral of the state or territory you are operating to the end of your call sign.

For example: VK6HR portable 8.

If you operate your station in a vehicle, a boat/ship or an aircraft, you normally add the following suffixes after your call sign, respectively:

- mobile
- maritime mobile
- aeronautical mobile.

Encryption/scrambling

Transmissions from an amateur station must not be encrypted or scrambled, except for signals used to control a satellite, signals used to control a remote amateur station or by stations participating in emergency services operations or exercises.

Re-transmission

If you re-transmit another station's transmission, you must have the other station's permission and indicate it is a retransmission.

Passing messages on behalf of a non-amateur (third-party traffic)

You must not transmit a message on behalf of a non-amateur (third-party traffic) unless the message relates to a disaster.

For example, you can pass a message on behalf of a member of the public if there is a bushfire, a flood, a cyclone or similar disaster. Messages from survivors to their friends/relatives can be sent via a different amateur station.

These messages can be from overseas amateur stations.

Amateur radio operators are not normally allowed to transmit on non-amateur frequencies (for example, fire, police, marine), even in a disaster.

Club call signs

Amateur radio clubs or groups can apply for club call signs. Club call signs are associated with an advanced qualification. A club call sign may also be used by an amateur with a standard or foundation qualification, provided they operate in accordance with their respective licence conditions (including frequencies and power levels).

Stations connected to the internet

If you connect your station (including a repeater station) to the internet (including via an Amateur Internet Linking System), you must have measures in place to ensure that it cannot be operated by unlicensed persons.

Keep your contact details current

Amateur call sign holders should keep their contact details up to date with the ACMA. This allows us to contact you when your call sign needs to be reconfirmed or you need to have your call sign reassigned.

If your details are incorrect and we can't contact you, your call sign may be cancelled.

Operating from different locations – when you need to give updated details

Amateur operators with assigned or non-assigned licences who want to operate an amateur station from a location different to the one on their licence must provide an updated address to the ACMA if they intend to operate for a continuous period of more than:

- for an amateur beacon or an amateur repeater station – 7 days
- for a non-assigned station – 4 months.

Spectrum for amateur use

The radio spectrum is divided between primary and secondary users.

- Primary users are the principal users of that segment of the radio spectrum.
- Secondary users share the spectrum segment with primary users, but they must not cause harmful interference to primary users and cannot claim protection from harmful interference caused by primary users.

Harmful interference is defined in the International Telecommunications Union (ITU) Radio Regulations as interference that:

- endangers the functioning of a radionavigation service or other safety services that are operating in accordance with the Radio Regulations; or
- obstructs, repeatedly interrupts or seriously degrades a communications service operating in accordance with the Radio Regulations.

Amateurs have primary use status in most HF bands, the 52–54 and 144–148 MHz bands and some SHF and EHF bands. Amateurs should check the [Australian Radiofrequency Spectrum Plan](#) for full details.

Emission modes and emissions

Emission limits

Emission designator codes are used mainly by assigned frequency amateur stations such as repeater stations and beacon stations.

The ITU has developed a system of letters and numbers to identify different radio transmission types. They provide an internationally recognised standard by which to specify, accurately and concisely, the significant characteristics of a transmission.

Examples of commonly used amateur transmissions and the corresponding emission classifications are listed below.

Purpose of transmission Emission mode symbols for a transmitter modulation

	AM	SSB	FM	PM
Morse	A1A A1B	J2A J2B	F1B	G1B
Speech	A3E	J3E	F3E	G3E
Data (packet)	A2D A1D	J2D	FID F2D	G1D G2D
RTTY	A2D	J2D	F2D	G2D
Facsimile	A2C	J2C	F2C	G2F
FSTV	C3F A3F	J3F	F3F	G3F
SSTV	A2F	J2F J3F	F2F F3F	G2F G3F

AM = amplitude modulated

SSB = amplitude modulated and uses a single-sideband, suppressed carrier

FM = angle modulated and uses frequency modulation and

PM = angle modulated and uses phase modulation.

Use examples are:

Single sideband (SSB) suppressed carrier is represented by: 2K80J3E

The first 4 letters/numbers represent the necessary bandwidth of the signal, '2K80' means two thousand, eight hundred Hz, or 2800 Hz. The final 3 letters/numbers represent the modulation used, 'J' means the carrier is amplitude modulated, '3' means single channel analogue and 'E' means telephony (speech).

FM is represented by: 16K0F3E

'16K0' means 16 kHz bandwidth, 'F' means Frequency modulation, '3' means single channel analogue and 'E' means telephony.

A full description of the ITU system can be found at Appendix 1 of the ITU Radio Regulations—Classification of emissions and necessary bandwidths, available on the ITU's website.

Permitted frequency emission modes are outlined in the Schedule 2, 3 and 3A in the Amateur LCD, and Schedule 2 in the class licence.

Spurious emission limits

Spurious emissions from an amateur station can cause interference to other stations and services.

You must operate within the maximum permitted spurious emission power levels specified in Section 7A of the Amateur LCD, and [Section 15 of the class licence](#).

Distress and safety procedures

Distress signal

A distress signal indicates that a person is threatened by grave and imminent danger and requires immediate assistance.

The distress signal is the word 'mayday'.

Distress call and message

The distress call consists of:

- the distress signal 'mayday' sent 3 times
- the words 'this is'
- the call sign or other identification of the station in distress sent 3 times.

The distress message consists of, in addition to the above:

- the position of the station in distress
- the nature of the distress and the kind of assistance required
- any other information which might be of assistance.

Obligation to accept distress traffic

A distress call or message has priority over all other transmissions and may be heard on any frequency.

When a distress call is heard, you must:

- immediately cease all transmissions
- continue to listen on the frequency
- record full details of the distress message.

If a distress message is received, wait for a short while to see if the message is received by a station better placed to help.

If the distress message is not acknowledged within a reasonable time, the amateur operator is obliged to respond.

Notifying the appropriate authority

After acknowledging or attempting to acknowledge receipt of the distress message, you must immediately forward details of the distress situation to:

- for land-based distress situations – the police via 000
- for air or sea-based distress situations – the Rescue Co-ordination Centre, Canberra, ACT, for:
 - aviation rescue services telephone 1800 815 257
 - maritime rescue services telephone 1800 641 792.

You should resume listening and keep the respective authority informed of any developments.

Assistance should be given until cessation of distress traffic is announced (with the phrase 'seelonce feenee'), or until you are advised that assistance is no longer required

Urgency signals

In cases where the use of the distress signal is not fully justified, the urgency signal may be used.

The urgency signal is 'pan pan'.

The urgency signal is repeated 3 times before the call.

The urgency signal has priority over all other transmissions except distress. All stations hearing an urgency signal must:

- ensure that they do not cause interference to the transmission of the message that follows
- be prepared to assist if required.

Authority contact details are the same as for distress messages.

International use of radiocommunications in the event of natural disasters

In natural disasters, normal communications systems may be overloaded, damaged, or completely disrupted, and the rapid establishment of communication to facilitate world-wide relief actions is essential.

Amateur bands are well adapted for short-term use in emergency situations. The amateur service, with its widespread distribution and demonstrated capacity to assist, may assist in communications until normal communications are restored.

Amateur involvement is limited to the duration of the emergency and to the specific geographical area of the emergency, as defined by the responsible authority of the affected country.

Any communications shall be carried out only with the consent of the administration of the country in which the disaster has occurred.

Sécurité (pronounced sea-cur-i-tay)

If you hear the term "Sécurité" announced three times, this is procedure word used in the maritime radio service that warns the crew that the following message is important safety information. Sécurité is the least urgent.

Voice operating procedures

This guidance may vary depending on the mode and frequency of operation employed.

Listen first

Always listen before transmitting to ensure that the frequency is not already in use.

Calling another station

Repeat the call sign of the station being called a maximum of 3 times, then the words 'this is', followed by your call sign repeated a maximum of 3 times, ending with 'over'.

For example: VK6ZZ VK6ZZ VK6ZZ, this is VK2KO VK2KO VK2KO, over

This call may be modified as conditions permit. For example, if you are using an FM repeater, it is not necessary to repeat the call signs 3 times, and 'this is' and 'over' can be dropped.

For example: VK6ZZ (brief pause) VK2KO

General 'CQ' call

A general call to any other amateur station (that is, you are looking for a contact with any other station) may be made by substituting the signal 'CQ' in place of the called station's call sign.

For example: CQ CQ CQ, this is VK9YZ VK9YZ VK9YZ, over

CQ calls are not normally made on repeaters – just announce that you are listening.

For example: VK7AB listening

Replying

Again, use the other station's call sign, followed by 'this is' (if required) and then your call sign followed by 'go ahead' and 'over'.

For example: VK2KO, this is VK6ZZ, go ahead, over

Breaking into an existing QSO (contact)

If you wish to break into an existing contact between 2 stations, wait for a pause and announce your call sign only. Do not talk over the top of the stations.

Other modes

Calling procedures using other transmission modes are typically tailored to the mode in use.

For example, an amateur operator using a text-based digital transmission mode should (at a minimum) indicate the amateur station that is being called and the call sign of the amateur operator's station.

Test transmissions

Test transmissions should be made using an artificial antenna (also known as a 'dummy load').

If it is necessary to radiate test transmissions to air, minimum power should be used, and the frequency must be monitored to ensure you will not cause interference.

Test transmissions must be identified using your call sign and should indicate that they are for testing purposes.

Phonetic alphabet

The phonetic alphabet is used to spell words when radio conditions are poor and signals are weak.

Australian Amateur Radio Regulations Assessment Procedures

Letter	Word	Spoken As
A	ALFA	AL FAH
B	BRAVO	BRAH VOH
C	CHARLIE	CHAR LEE
D	DELTA	DELL TAH
E	ECHO	ECH OH
F	FOXTROT	FOKS TROT
G	GOLF	GOLF
H	HOTEL	HOH TELL
I	INDIA	IN DEE AH
J	JULIET	JEW LEE ETT
K	KILO	KEY LOH
L	LIMA	LEE MAH
M	MIKE	MIKE
N	NOVEMBER	NO VEM BER
O	OSCAR	OSS CAH
P	PAPA	PAH PAH
Q	QUEBEC	KEH BECK
R	ROMEO	ROW ME OH
S	SIERRA	SEE AIR RAH
T	TANGO	TANG GO
U	UNIFORM	YOU NEE FORM
V	VICTOR	VICK TAH
W	WHISKY	WISS KEY
X	X-RAY	ECKS RAY
Y	YANKEE	YANG KEY

Using the phonetic alphabet

Use the phonetic alphabet to spell your call sign and name.

For example, if your call sign is VK2KO and your name is Colin:

Victor Kilo 2 Kilo Oscar, and my name is Colin, I spell Charlie Oscar Lima India November.

Note that you use the phonetic alphabet to spell your call sign completely. Do not use a mixture of plain language and the phonetic alphabet, as that will lead to confusion.

The phonetic alphabet is normally used on HF when conditions are poor. It is not normally necessary on repeater.

Q codes

Q codes are 3 letter codes sent using Morse Code to abbreviate standard questions and answers. They may be sent as a question, with a question mark, or as an answer to a question.

For example:

QTH? – What is your location?

QTH Sydney – My location is Sydney.

Some amateurs use these codes during telephony contacts.

Australian Amateur Radio Regulations Assessment Procedures

Q code/s	Question/response
QRK1-5	The intelligibility of your signals is: 1 Bad, 2 Poor, 3 Fair, 4 Good, 5 Excellent
QRM1-5	I am being interfered with: 1 Nil, 2 Slightly, 3 Moderately, 4 Severely, 5 Extremely
QRN1-5	I am troubled by static: 1 Nil, 2 Slightly, 3 Moderately, 4 Severely, 5 Extremely
QRO	Increase power
QRP	Decrease power
QRT	Stop sending
QRX?	When will you call me again?
QRX	I will call you again at ... hours (on ... kHz or MHz)
QRZ	Who is calling me?
QSA1-5	The strength of your signals (or those of ...) is: 1 Scarcely perceptible, 2 Weak, 3 Fairly good, 4 Good, 5 Very Good
QSB	Your signals are fading
QSL?	Can you acknowledge receipt?
QSL	I am acknowledging receipt
QSO	I can communicate with ... direct (or by relay through ...)
QSP?	Will you relay to ...?
QSP	I will relay to ...
QSY	Change to transmission on another frequency (or on ... kHz or MHz)
QTH?	What is your location?
QTH	My location is ...

