

Additional Material

Emission modes (Schedule 1 of the LCD)

The International Telecommunication Union uses an agreed system for classifying radio frequency signals. Each type of radio emission is classified according to its bandwidth, method of modulation, nature of the modulating signal, and type of information transmitted on the carrier signal. It is based on characteristics of the signal, not on the transmitter used.

The emission mode of a transmission, made by an amateur station, is set out in a sequence of numbers and letters representing the following components.

- (a) the necessary bandwidth of the transmission.
- (b) the modulation of the main carrier of the transmission.
- (c) the nature of the signal or signals modulating the main carrier of the transmission.
- (d) the kind of information to be transmitted using the station.

Example An emission mode of 10K0R1F comprises the following components:

- (a) a necessary bandwidth of 10 kHz (represented by the "10K0").
- (b) the main carrier of the transmission is amplitude modulated and uses a single-sideband, reduced or variable-level carrier (represented by the "R").
- (c) the signal modulating the main carrier is a single channel containing quantized or digital information without the use of a modulating subcarrier (represented by the "1"); and
- (d) the station may transmit television (video) (represented by the "F").

Distress and Urgency Messages

Distress

Mayday is an internationally recognised radio word (telephony) to signal **distress** primarily used by aircraft and boats. A 'mayday' call indicates an aircraft or ship is in grave and imminent danger and requires immediate assistance. A seamen and pilots are told to repeat the word three times, "Mayday, mayday, mayday." The repetition helps radio operators distinguish the transmission from other transmissions.

SOS is the internationally recognised morse code signal (telegraphy) for Mayday.

If you hear a distress call and no one responds to the call, you are authorised to respond to that call no matter what the frequency.

Urgency

The term "pan pan", is used in radiotelephony communications to signify that there is an urgency on board a boat, ship, aircraft or other vehicle. Pan Pan is referred to when there is a state of urgency but not when there is an immediate danger to a person's life or to the vessel itself. Pan-Pan is derived from the French word "panne", which means failure or breakdown. Pan-Pan most often refers to a mechanical failure or breakdown.

Australian Amateur Radio Regulations Assessment

State	Telegraphy	Telephony
Distress	SOS SOS SOS	Mayday Mayday Mayday
Urgency	XXX XXX XXX	Pan-pan Pan-pan Pan-pan

If an operator hears a mayday call, listen to see if anyone responds. If no response is heard, record all details and pass on to a safety authority for a professional response.

If you hear a call and the operator does not know the correct procedure and the operator is describing the situation as grave, treat this as a mayday call.

If you hear a mayday and the message is being addressed by the authorities, do not transmit near that frequency.

On Air Procedures

Know the procedures [HERE](#)

Q Codes

Know the Q Codes listed [HERE](#)

Phonetic Alphabet

Know the Phonetic alphabet listed [HERE](#)

Signal Report

Know the parts of a Signal Report [HERE](#)

Repeater Operations

Know how to setup and operate a radio through a repeater with CTCSS and or DTMF [HERE](#)

