



Australian Government
Civil Aviation Safety Authority



BE HEARD, BE SEEN, BE SAFE

RADIO PROCEDURES IN
NON-CONTROLLED AIRSPACE

Australia's non-controlled (or 'Class G') airspace is different to most parts of the world.

Primarily, this is because non-controlled aerodromes in Australia can experience a high volume of traffic and host a huge diversity of aircraft types. At any time, this mix might include larger passenger aircraft, general aviation aircraft and light sport aircraft. This variation can present many challenges to pilots who operate into, or in the vicinity of, these aerodromes.

While the focus of this booklet is on radio procedures in non-controlled airspace, radio must always be used in conjunction with safe 'see-and-avoid' procedures. First and foremost, this means scanning with your eyes, including above you and below you, to look out for aircraft. You must also understand how to operate safely around other aircraft types through safe separation distances and collision avoidance techniques.

Good pilot-to-pilot communication, or 'alerted see-and-avoid', then completes the picture of what is happening around you. To get this right, you must be on the correct frequency, and know when to make radio calls and what to say, to help keep you, and those around you, safe in the sky.

CARRYING A RADIO IN NON-CONTROLLED AIRSPACE AIP GEN 1.5

In Australia, VFR aircraft must carry a radio when you are:

- » at or above 5,000 feet in Class G airspace
- » 'in the vicinity' of aerodromes that are certified, registered or military
- » below 3,000 feet AMSL or 1,000 feet AGL (whichever is higher) in reduced VMC (visibility 5 km and clear of cloud and in sight of ground or water).

Remember, 'in the vicinity' is within 10 nm, and at a height where your operations could be in the way of other traffic.

RADIO FREQUENCIES FOR NON-CONTROLLED AIRSPACE

- » When operating in the vicinity of an aerodrome published on aeronautical charts, use the CTAF (MULTICOM 126.7MHz or the discrete frequency) as published.
- » Anywhere within a Broadcast Area, use the dedicated Broadcast Area CTAF.
- » Otherwise, it is recommended pilots use the Area VHF. This frequency may provide the best means of gaining assistance from ATC or other pilots in the event of an emergency.

In the vicinity of uncharted aerodromes, pilots have discretion to use the most appropriate frequency that ensures safe operation. This may be MULTICOM 126.7MHz. However, pilots should be aware that transiting aircraft will be monitoring Area VHF. To ensure mutual traffic awareness, it is recommended that pilots using an alternative frequency also monitor Area VHF.

MAKE YOUR BROADCASTS COUNT

When it comes to ensuring your radio call is effective, attention to detail is essential. Following this list will help make sure all your broadcasts are clear and can be understood by other pilots.

- 1** Listen before you broadcast
- 2** Check the volume, squelch and frequency are correct
- 3** Pause at the beginning and end of a transmission to avoid 'clipping' transmissions
- 4** Use standard phraseology and speak slowly and clearly. However, plain language is better than jargon or incorrect phraseology
- 5** Avoid clutter: make only appropriate calls. There is usually no need for 'downwind', 'base' and 'finals' unless other aircraft are affecting your flight and you need to alert them to your position.

STANDARD FORMAT AND PHRASEOLOGY

When making a broadcast, it's important to use the standard format and phraseology to ensure your intentions are clear and to help keep radio congestion to a minimum.

The standard broadcast format you should follow for all radio calls is:

[Location Traffic] (e.g. 'Parkes Traffic').

[Aircraft type] (e.g. 'Cessna 172').

[Call sign] (e.g. 'Zulu Tango Quebec').

[Position/level/intentions]
(e.g. 'One-zero miles north inbound, 4,500 feet on descent']

[Location] (e.g. Parkes).

WHEN YOU MUST MAKE A BROADCAST

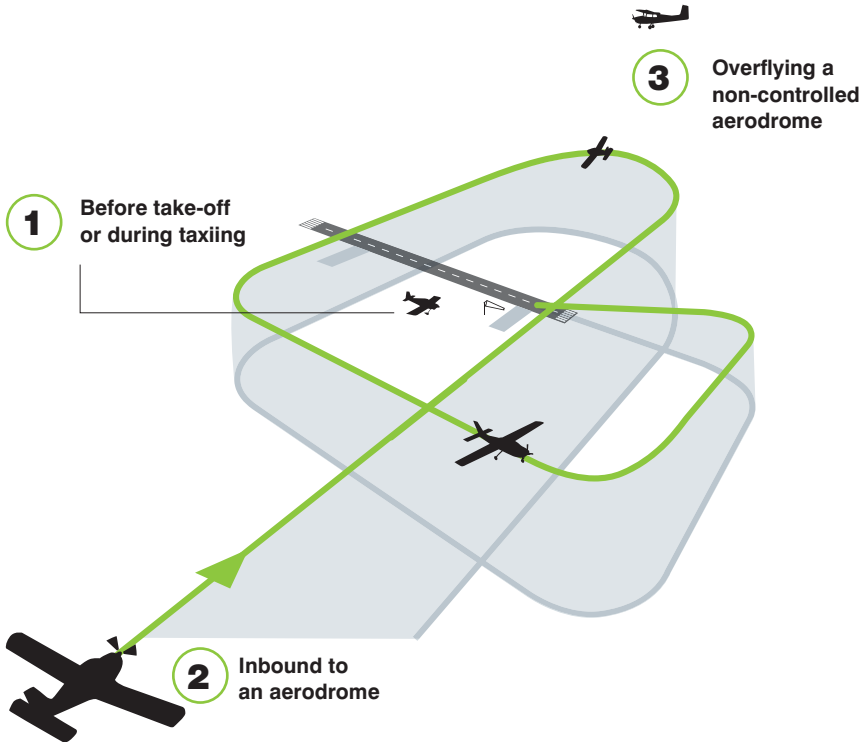
The one time you must make a broadcast is in a situation where you recognise a potential conflict between your aircraft and another in the vicinity of a non-controlled aerodrome. In this case, it is your responsibility to acknowledge the situation by transmitting your callsign and, as appropriate, your aircraft type, position, level and intentions.

WHEN YOU SHOULD MAKE A BROADCAST

In any non-controlled airspace, when departing, arriving or overflying an aerodrome or switching frequency, you should always let other traffic know you are there by making the recommended calls on the next page.

CALLS RECOMMENDED **ALL** THE TIME

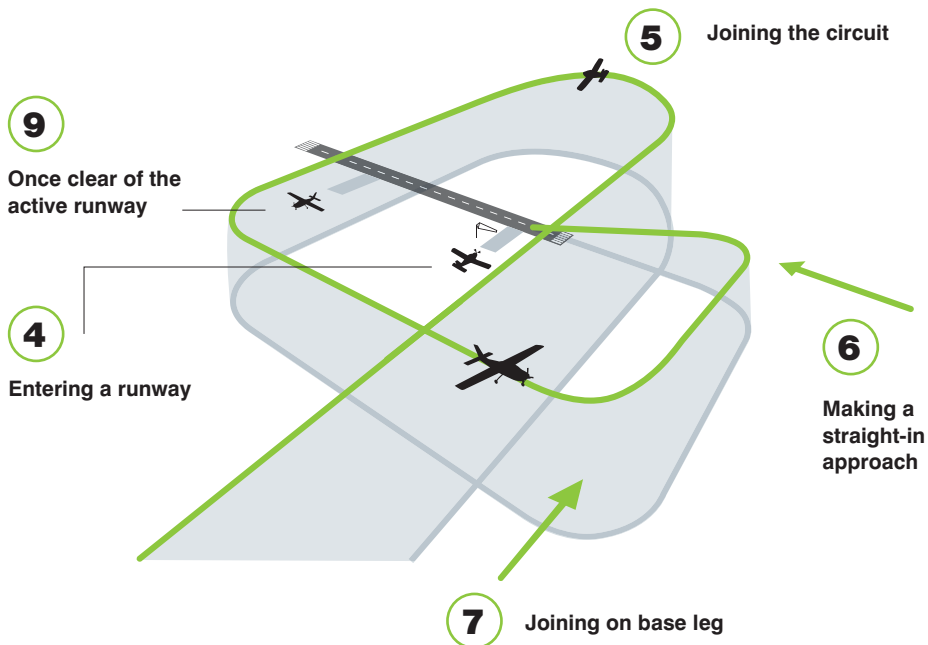
Situation	Example broadcast
1 Before take-off or during taxiing	Parkes traffic, C172, ZTQ taxiing runway 30 for circuits, Parkes
2 Inbound to an aerodrome, at least 10 nm from the aerodrome, or further for high performance aircraft, or busy aerodromes	Parkes traffic, C172, ZTQ one zero miles to the south east, 4,500 feet, inbound ETA 26, Parkes
3 Overflying or in the vicinity of a non-controlled aerodrome, but not landing at, or further for high performance aircraft	Parkes traffic, C172, ZTQ one zero miles to the south east, 4,500 feet, overflying, estimate overhead 26, Parkes



CALLS WHEN THERE IS OTHER TRAFFIC

Other radio calls may be useful at a non-controlled aerodrome, if there is traffic in the area that would benefit from this additional communication.

Situation	Example broadcast
4 Entering a runway	Parkes traffic, C172, ZTQ lining up runway 30, Parkes
5 Joining the circuit	Parkes traffic, C172, ZTQ joining crosswind, runway 30, Parkes
6 Making a straight-in approach, not less than 3 nm from the threshold*	Parkes traffic, C172, ZTQ, joining 3 nm finals, for straight in approach, runway 30, Parkes
7 Joining on base leg	Parkes traffic, C172, ZTQ, joining base, runway 30, Parkes
8 During an Instrument Approach, either when established at the final approach fix or when commencing the missed approach	Parkes traffic, C172, ZTQ, conducting a missed approach, tracking to the west, climbing to 3,900 feet, runway 30, Parkes
9 Once clear of the active runway(s)	Parkes traffic, C172, ZTQ, clear of runway 30, Parkes



* Pilots should be aware that a GNSS indication of 3 nm from an aerodrome may not be 3 nm to the runway threshold.

8 During an instrument approach

IFR AIRCRAFT SHOULD USE TERMS THAT WILL BE UNDERSTOOD BY VFR PILOTS.

DO be clear on your intentions using standard phraseology DON'T use terms such as 'on the RNAV approach' or waypoints.

INCORRECT: 'Parkes Traffic C172 Zulu Tango Quebec IFR joining GNSS approach zero-four'

CORRECT: 'Parkes Traffic C172, Zulu Tango Quebec, IFR, 10 miles north inbound, on descent through 4,200 for an instrument approach runway 04, estimating the circuit at three-six'

VFR AIRCRAFT SHOULD AVOID LOCAL TERMINOLOGY WHERE IFR AIRCRAFT MAY BE OVERFLYING.

Local traffic:

DO use official names or significant geographical landmarks or bearing and distance from airfield, for example '20 nm to the east of Parkes 4,500 feet'

DON'T use local names, for example 'over Delroy Park'

BE AWARE WHO ELSE IS THERE

It's important to be aware of the different aircraft and operations that may be happening at non-controlled aerodromes and how this should influence your radio calls and operations.





Pilots of large aircraft flown when nose up in climb or slowing on descent may find it difficult to see other, smaller aircraft below their flight path, particularly on approach. These aircraft will broadcast their intentions, but it is essential that pilots of smaller aircraft also make and respond to broadcasts and not simply assume that the larger aircraft is aware of their position.



Helicopter, weight-shift trikes and gyroplane operations can be varied and flexible and may not follow the same circuit as fixed-wing aircraft at an aerodrome. Pilots need to ensure that they monitor and advise other aircraft of their position and intentions by radio where applicable.



Pilots flying parachuting operations should broadcast on all relevant frequencies. For example, if the jump commences in Class G airspace and will land at a non-controlled aerodrome, the pilot should make advisory calls on both the area frequency and the CTAF. Parachutists in free-fall are almost impossible to see, so pilots are advised to avoid overflying an aerodrome with an active drop zone. Communication with the parachuting aircraft is essential to avoid flying into a drop zone area.



Gliders and balloons may not be carrying radios in non-controlled airspace, or may only be able to monitor one frequency. See and avoid is essential where these aircraft are operating.

REFERENCES

Information about radio operations can be found in the following regulatory material:

- » Civil Aviation Advisory Publication CAAP 166-01, casa.gov.au
- » Aeronautical Information Publication, airservicesaustralia.com



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