Australian Government
Civil Aviation Safety Authority

Be heard
Be seen
Be safe

Radio procedures for non-controlled aerodromes and operations

Your safety is in your hands.

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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 at, 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 '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.

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Carrying a radio in non-controlled airspace

CASR 91.400, 91.810, PART 91 MOS SECT 26.18 and 21.04(1)(a)

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

- above 5,000 ft AMSL in Class G airspace
- 'in the vicinity' of aerodromes that are certified or military
- at or below 3,000 ft AMSL or 1,000 ft AGL (whichever is higher) in reduced VMC (visibility 5 km and clear of cloud and in sight of ground or water)
- intending to enter or are operating in a Mandatory Broadcast Area (MBA) (ENR 1.1).

Remember

'In the vicinity' is within 10 nm, and at a height where your operations could conflict with other traffic based on aircraft performance and activities.

Radio frequencies for non-controlled airspace

ENR 1.1 PARA 9

Selecting the right radio frequency is critical for maintaining situational awareness. Consider the following:

- When operating in the vicinity of an aerodrome published on aeronautical charts, use the CTAF (126.7MHz or the discrete frequency) as published.
- Anywhere within a Mandatory Broadcast Area, use the dedicated MBA frequency.
- 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 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 and broadcast on 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 'final' unless other aircraft or aerodrome works are affecting your flight and you need to alert them to your position.

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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 on descent through 4,200, estimating circuit at three six').
- **[Location]** (e.g. Parkes).

When you **must** make a broadcast

(CASR 91.630)

You must make a broadcast when any of the following situations exist:

- in the **vicinity of a non-controlled aerodrome** – the pilot in command considers it necessary to broadcast to avoid the risk of a collision with another aircraft (91 MOS 21.04(1), or
- in **Class E or G airspace** – requiring clearance into controlled airspace (91 MOS 21.07 Table Item 1), or
- in accordance with **SAR reporting schedules** if arranged – before, and on completion of, over-water stage (91 MOS 21.07 Table Item 2).

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 pages 8 and 9.

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 RNP approach' or waypoints.

INCORRECT: 'Parkes Traffic, C172, Zulu Tango Quebec, IFR, joining RNP approach zero four via Whiskey Golf'.

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

VFR aircraft should avoid local terminology where IFR aircraft may be overflying

DO: Use official names or significant geographical landmarks or bearing and distance from airfield, for example, '20 miles to the east of Parkes 4,500 ft'.

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, including aerodrome works, that may be happening at non-controlled aerodromes and how this should influence your radio calls and operations.

Just because you didn't hear a radio call, does not mean there may not be other aircraft or persons operating on or around the aerodrome.

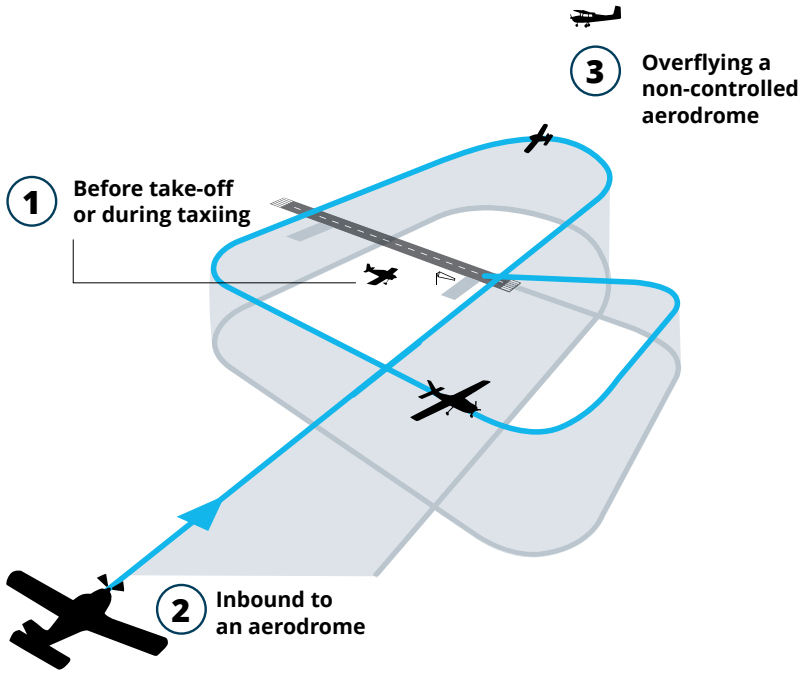
Active listening

Communication isn't one way – it's a loop. Listen carefully to what other aircraft are saying, it may not be what you are expecting. If in doubt, ask.

This helps everyone gain a clearer understanding of each other's positions and whether a potential conflict is developing.

Calls recommended **all** the time

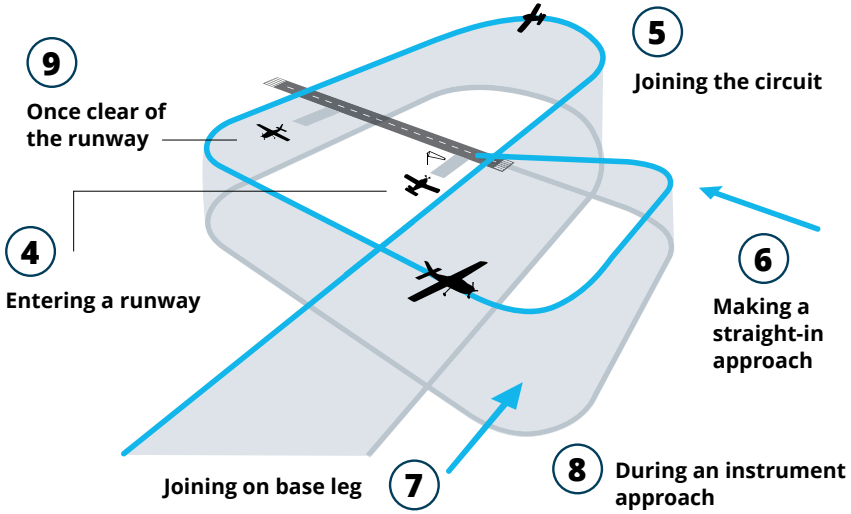
Situation	Example broadcast
1 Before take-off or during taxiing	Parkes traffic, C172, Zulu Tango Quebec, taxiing runway two two for circuits, Parkes
2 Inbound to an aerodrome, at least 10 nm from the aerodrome, or further for high performance aircraft, or busy aerodromes	Parkes traffic, C172, Zulu Tango Quebec, one zero miles north inbound on descent through 4,200, estimating circuit at three six, Parkes
3 Overflying or in the vicinity of a non-controlled aerodrome, but not landing at, call at least 10nm from the aerodrome or further for high performance aircraft	Parkes traffic, C172, Zulu Tango Quebec, one zero miles north 4,500, overflying, estimate overhead two six, 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, Zulu Tango Quebec, lining up runway two nine, Parkes
5 Joining the circuit	Parkes traffic, C172, Zulu Tango Quebec, joining crosswind, runway two nine, Parkes
6 Making a straight-in approach, not less than 3 nm from the threshold*	Parkes traffic, C172, Zulu Tango Quebec, joining 3 mile final, for straight in approach, runway two nine, Parkes
7 Joining on base leg	Parkes traffic, C172, Zulu Tango Quebec, joining base, runway two nine, Parkes
8 During an Instrument Approach, either when established at the final approach fix or when commencing the missed approach	Parkes traffic, C172, Zulu Tango Quebec, conducting a missed approach, runway two two, tracking to the east, climbing to 3,900 ft, Parkes
9 Once clear of the runway(s)	Parkes traffic, C172, Zulu Tango Quebec, runway two nine vacated, Parkes



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

* Avoid joining via midfield crosswind or overflying aerodromes with gliding operations using winch launch. These are identified on charts by a 'W' above the gliding symbol. Winch cables can extend over 2,000 ft AGL while a launch is in progress.

Staying safe around different aircraft 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. If an IFR aircraft broadcasts their positions using an IFR waypoint and you are unsure of their position, ask for them to provide a bearing and distance with an estimate for the airfield.

Larger aircraft often have lower maneuverability than smaller aircraft, but higher climb performance speeds. When these aircraft are conducting instrument approaches to an airfield, it is important to understand that a broadcast of a 'missed approach' means that they will follow specified procedures. This can create additional conflict points in the circuit, such as upwind and crosswind. Think about these areas when maintaining separation from arriving IFR aircraft.

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.

At locations where winch launch gliding operations take place, techniques such as avoiding joining the circuit via midfield crosswind or overflying the aerodrome can assist with deconflicting with these operations. These are identified on charts by a 'W' above the gliding symbol.

Winch cables can extend over 2,000 ft AGL while a launch is in progress. Preflight planning and understanding the operations at the airfields you are transiting or flying to will help ensure safe separation.

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References

Information about radio operations can be found in the following resources:

- Civil Aviation Safety Regulations 91.625 - 640, **casa.gov.au**
- 91 Manual of Standards, Chapter 21 and Section 26.18, **casa.gov.au**
- Aeronautical Information Publication, AIP GEN 1.5 paragraph 1, AIP GEN 3.4 paragraphs 4, 5 and 6, **airservicesaustralia.com**
- CASR Part 91 Plain English guide for general operating and flight rules, Chapter 8: Communication, **casa.gov.au**
- Advisory Circular AC91-10 Operations in the vicinity of non-controlled aerodromes, **casa.gov.au**

casa.gov.au