



# CTAF PROCEDURES GUIDE

First Edition

*Updated on 02 December 2010 to correct minor errors.*

Information contained within this document is intended for simulation use only and should not be applied to real life.

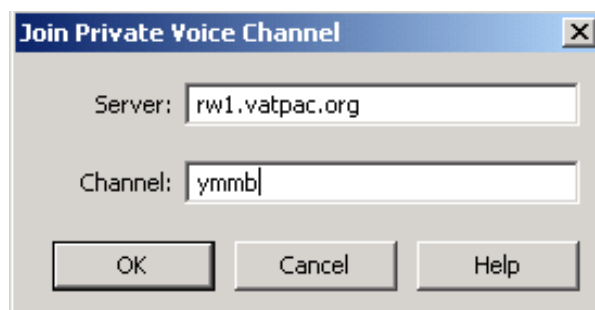
## What is CTAF?

CTAF stands for “Common Traffic Advisory Frequency”. These frequencies allow pilots to communicate their position and intentions to each other while flying in uncontrolled airspace such as in the vicinity of aerodromes, ALAs, or busy areas. This greatly aids pilot situational awareness and helps facilitate safer operations in uncontrolled airspace. All aircraft on VATSIM are assumed to be radio equipped and broadcasting on the CTAF is strongly recommended. When towers are closed at airports, surrounding airspace is often reclassified as class G airspace and CTAF procedures are used.

All CTAFs operate on either an individual frequency (as shown on the airport diagram chart and on other maps) or on the generic CTAF frequency, 126.7MHz. When operating at a major aerodrome that is normally towered H24, you should use 122.80MHz, as this is internationally standardised to ensure that you are using the same frequency as international pilots. This frequency should be selected in your COMM radio.

FSInn: If you have installed Steve Cotterill’s FSInn voice channel files, then selecting the appropriate frequency while in range of the corresponding airport will automatically put you into the correct voice channel. These files can be found at <http://vatpac.org/forums/showthread.php?t=10012>

SquawkBox: The CTAF voice channel can be joined by choosing Private Voice from the SquawkBox menu. Normally, `rw1.vatpac.org` is used as the server and the four letter ICAO identifier for the airport should be used as the channel. For major aerodromes that are normally towered H24, you should use the voice channel, “unicom-au”. A key for the private voice channel needs to be set in the SquawkBox settings. See also, <http://vatpac.org/forums/showthread.php?t=4588>



## When to use a CTAF

You should use a CTAF when operating in the vicinity of an uncontrolled aerodrome, whether this is arriving, departing or overflying. “In the vicinity” is typically within 10NM and 5000ft, but you should use greater distances for higher performance aircraft.

If you have a requirement to remain on an air traffic control frequency (e.g. IFR flight), you must obtain permission to change frequencies before leaving the ATC frequency and switching to the CTAF. Prior to changing frequency, you should advise ATC that you are “SWITCHING TO (location) CTAF (frequency).”

## Standard Broadcasts

<p><b>Broadcast Format</b></p> <ul style="list-style-type: none"> <li>- Location Traffic</li> <li>- Aircraft Type</li> <li>- Call sign</li> <li>- Position / Intentions</li> <li>- Location</li> </ul>	<p><b>Ground Operations</b></p> <ul style="list-style-type: none"> <li>- Taxi</li> <li>- Entering runway</li> </ul>	<p><b>Inbound / Overflying</b></p> <ul style="list-style-type: none"> <li>- Inbound</li> <li>- Entering circuit</li> <li>- Straight-in (3NM)</li> <li>- Base join (prior to base)</li> </ul>
<p><b>In Circuit</b></p> <ul style="list-style-type: none"> <li>- Downwind (w/ intentions)</li> <li>- Base</li> <li>- Finals</li> </ul>	<p><b>Instrument APCH</b></p> <ul style="list-style-type: none"> <li>- Final approach fix</li> <li>- Established on finals</li> <li>- Conclusion of approach</li> <li>- Missed approach</li> </ul>	<p><b>Other</b></p> <ul style="list-style-type: none"> <li>- Overflying</li> </ul>

An example of a taxi call would be:

[TUS] Moorabbin Traffic, Cessna 172, Tango Uniform Sierra, taxiing runway 35R for circuits, Moorabbin.

IFR operations also require “IFR” to be prepended to the aircraft type. For example, [TAP] Bathurst Traffic and Melbourne Centre, IFR SAAB 340, Tango Alpha Papa, taxiing runway 35 for Sydney, Bathurst.

You should avoid making pilot-to-pilot communications where possible and rely on broadcasts and your visual scan to create a mental image of the area. Pilot-to-pilot communication uses airtime which could be used by another pilot for broadcasting.

### **Inbound Call**

The inbound call should be made approximately 10 minutes from the aerodrome, but no later than 10NM. This is typically 30NM for a jet aircraft and 15NM for a turboprop aircraft. At this time, you should announce your intentions around the aerodrome.

## Circuit Height

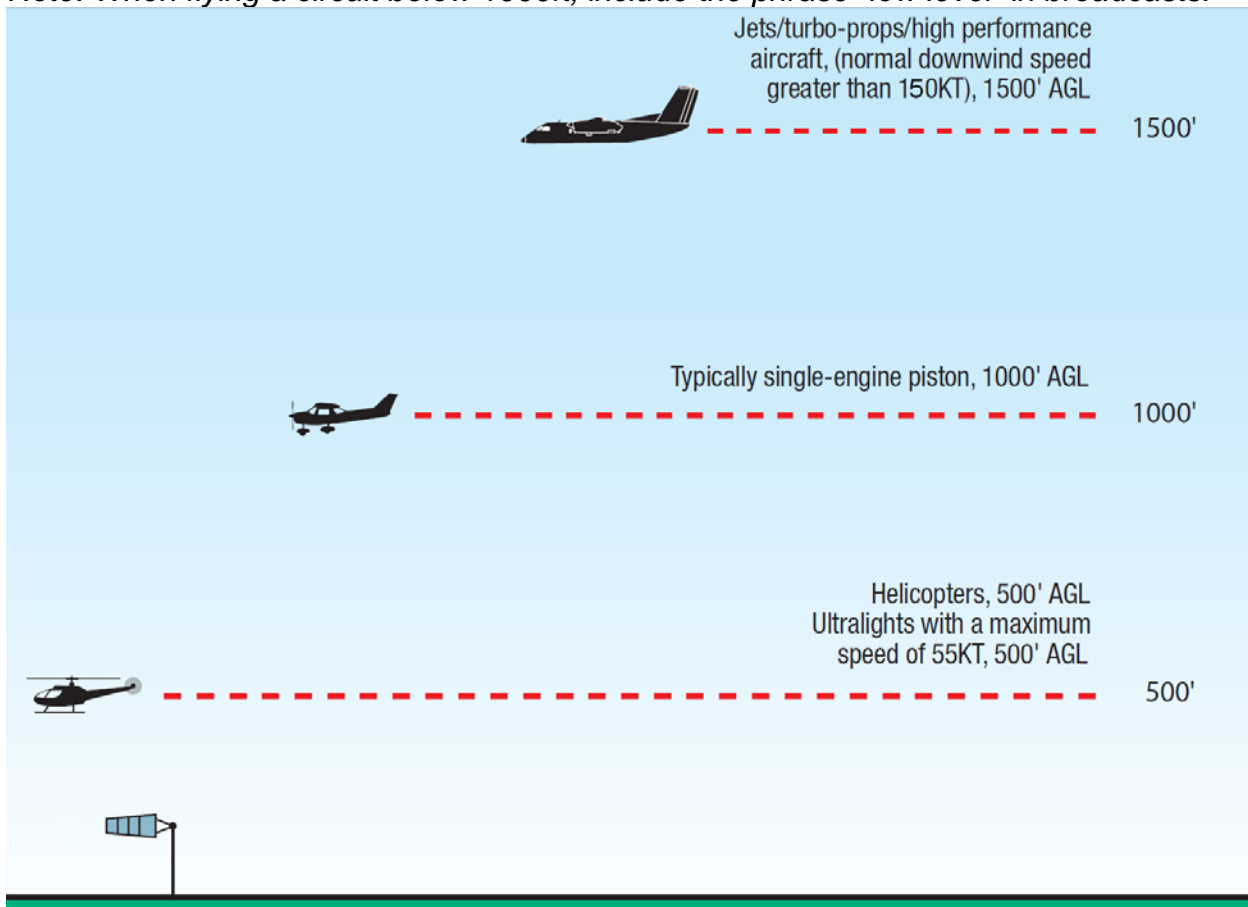
Different circuit heights are used to separate aircraft with different performance. This reduces the possibility of circuit overtaking which has caused many accidents in the past. While in the circuit, all aircraft should follow the preceding aircraft to maintain situational awareness and to ensure that the circuit is orderly.

1500 ft AGL High-performance aircraft with circuit speed above 150KT.

1000ft AGL Typical general aviation aircraft, between 55KT – 150KT.

500ft AGL Helicopters and Ultralights, less than 55KT.

*Note: When flying a circuit below 1000ft, include the phrase “low level” in broadcasts.*



## Circuit Entry

Entering the circuit is the most dangerous stage of the arrival into an airport, therefore strict rules are applied.

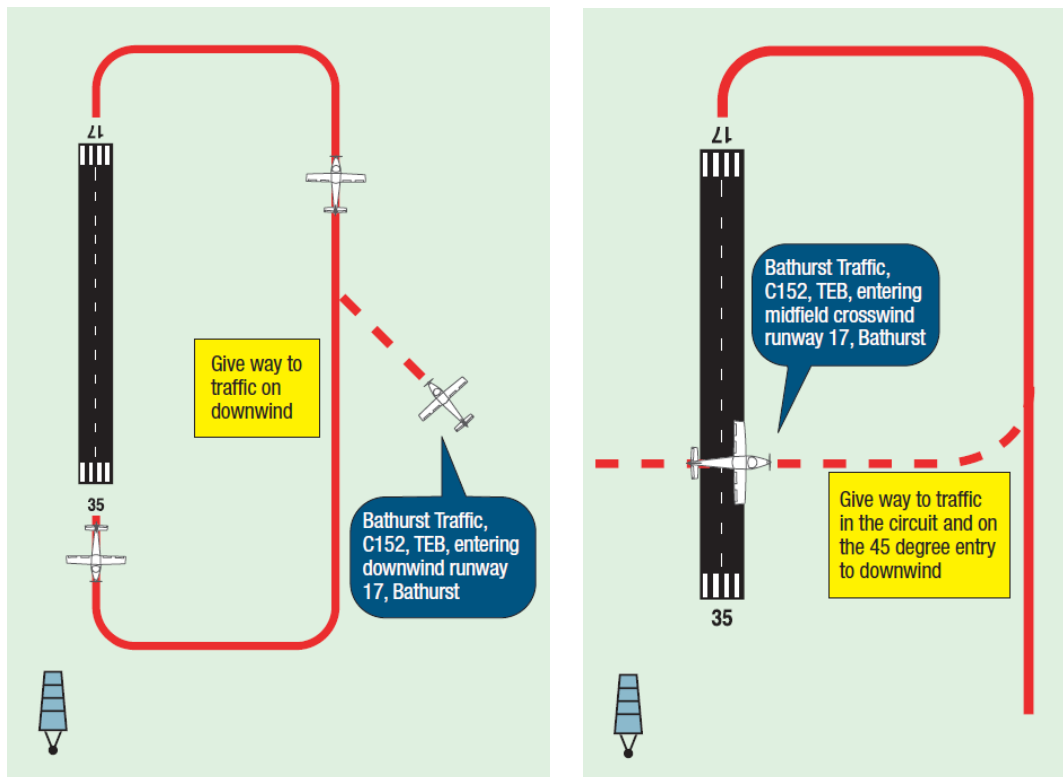
**Speed** – must not exceed 200KT. This is to ensure that you do not interfere with other aircraft operating in the circuit which are at a lower speed.

**Altitude** – should be at circuit height. This is to ensure that you do not descend onto another aircraft, especially in the case of low wing aircraft.

**Right of way** – aircraft already in the circuit have right of way and you should give way to ALL aircraft in the circuit unless you have coordinated with the aircraft by radio.

**Entering 45 degrees to downwind** – the preferred method of joining the circuit is to join 45 degrees to downwind and join midfield downwind, giving way to aircraft on downwind.

**Entering midfield crosswind** – aircraft entering from the dead side of the circuit should join crosswind between midfield and departure end of runway at circuit height, to join midfield downwind, giving way to aircraft on downwind.

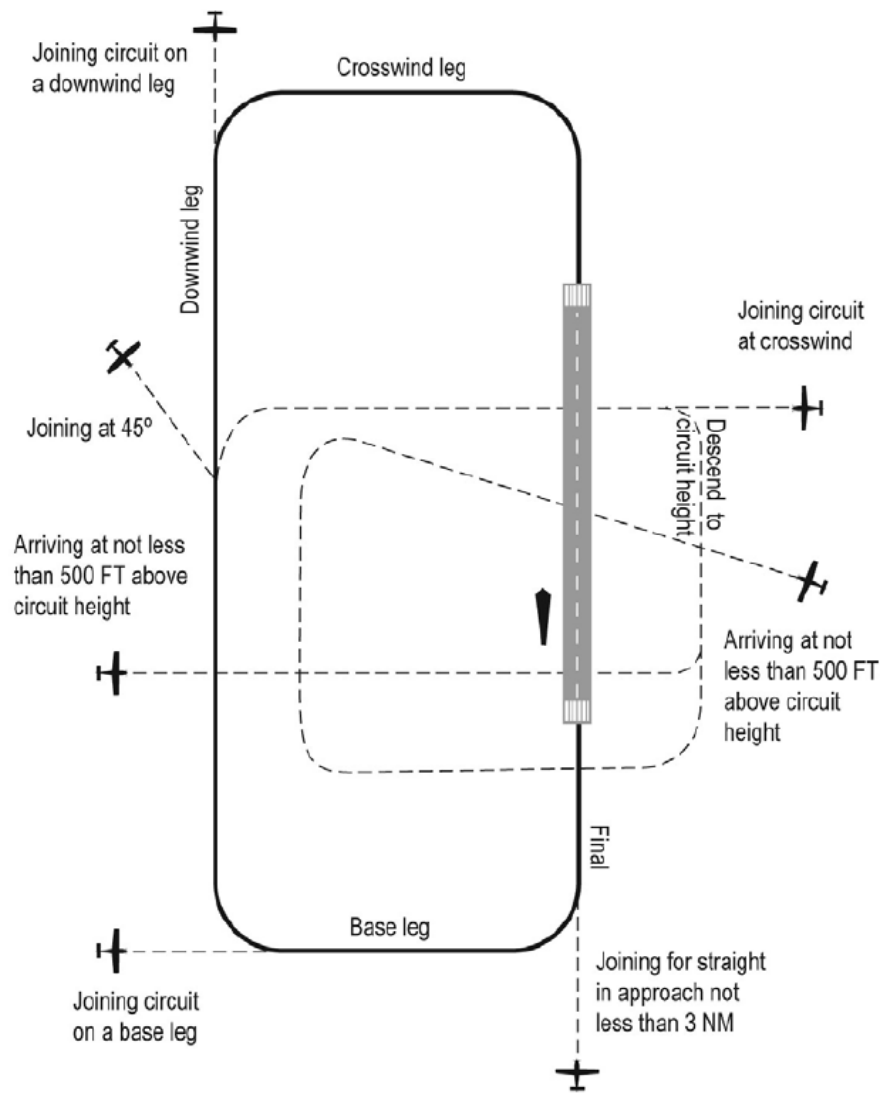


## Non-standard Circuit Entry

Non-standard circuit entries are not recommended, but may be used. The two types of non-standard entry are from base leg and straight-in. Aircraft using non-standard entries must give way to other aircraft. To conduct these procedures, you must determine the wind direction, speed and runway in use and broadcast your intentions.

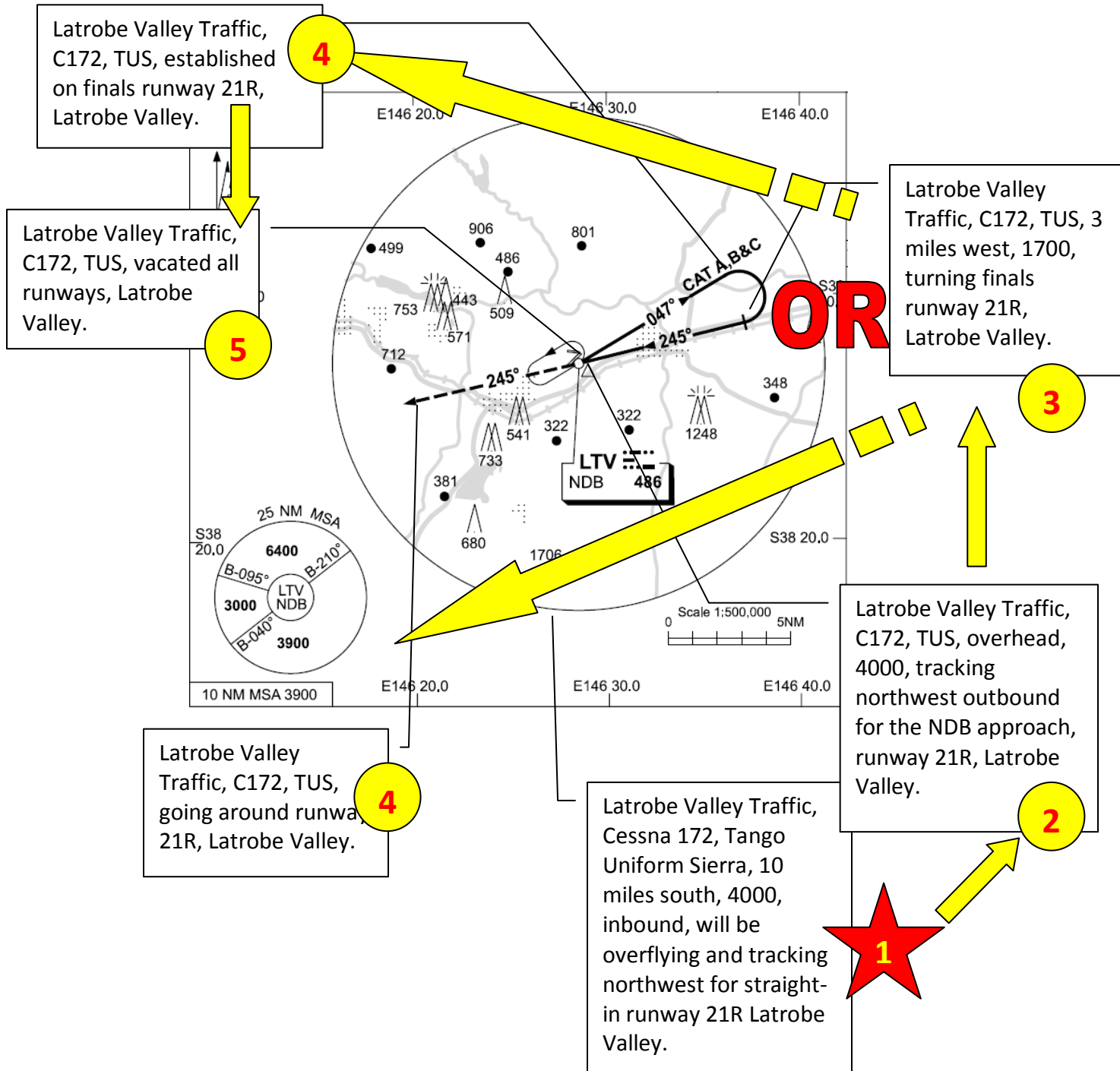
**Straight-in Approaches** - You must be established on finals not less than 3 miles from the runway threshold. Furthermore, you must broadcast at 3NM and give way to traffic already in the circuit.

**Base leg entries** – You must give way to other aircraft in the circuit and ensure that the aircraft can safely join base leg applicable to the circuit direction.



## Instrument Approaches

Instrument approaches are a great opportunity for confusion, as many VFR pilots may be unaware of IFR terminology and/or the approaches themselves. Thus, all IFR aircraft should phrase transmissions in a way VFR pilots will be able to understand.



## Take a Flight

We will now take a flight in VH-TUS, a Cessna 172. It is Christmas Day and Moorabbin Tower is closed, so we must follow CTAF procedures. We are intending to fly some circuits on runway 35R.

[TUS] Moorabbin Traffic, Skyhawk, Tango Uniform Sierra, taxiing runway 35R for circuits, Moorabbin.

After our engine run-up and pre-takeoff checks, we check that the approach path is clear and enter the runway.

[TUS] Moorabbin Traffic, C172, TUS, entering runway 35R for circuits, Moorabbin.

We now turn downwind at 1000ft, and scan for traffic.

[TUS] Moorabbin Traffic, C172, TUS, turning downwind 35R, touch and go, Moorabbin.

While making our downwind checks, a VH- FLJ, a Piper Warrior begins taxiing.

[FLJ] Moorabbin Traffic, Warrior, Foxtrot Lima Juliet, taxiing runway 35R for north-western departure, Moorabbin.

For now we don't need to do anything, as long as we know that that aircraft will be joining us in the circuit soon. We scan for traffic on finals and turn base.

[TUS] Moorabbin Traffic, C172, TUS, turning base runway 35R, Moorabbin.

Now the Warrior knows that we are on base, and will hold short for us. VH-GTI, a King Air is inbound to Moorabbin at Carrum. Carrum is about 7 miles south of Moorabbin and it will take the King Air about two minutes to reach the airfield.



[GTI] Moorabbin Traffic, King Air, Golf Tango India, Carrum, 1500, inbound, Moorabbin.

Approach finals, we scan for traffic again.

[TUS] Moorabbin Traffic, C172, TUS, turning finals runway 35R, Moorabbin.

Once we are on upwind, the Warrior enters the runway for departure.

[FLJ] Moorabbin Traffic, PA28, FLJ, entering and departing runway 35R to the north-west, Moorabbin.



VH-KGQ, a King Island Airlines operated Embraer EMB-110 turbo-prop aircraft is 30 miles south for a straight in approach.

[KGQ] Moorabbin Traffic, Embraer 110, Kilo Golf Quebec, 30 miles south, tracking for a straight in approach, runway 35R, Moorabbin.

[GTI] Moorabbin Traffic, BE20, GTI, entering midfield downwind, runway 35R, Moorabbin.

Turning downwind, we notice that the King Air is on a high level circuit so there will be no conflict.

[TUS] Moorabbin Traffic, C172, TUS, turning downwind runway 35R, full stop, Moorabbin.

[GTI] Moorabbin Traffic, BE20, GTI, turning base, runway 35R, Moorabbin.

[GTI] Moorabbin Traffic, BE20, GTI, clear of runway, Moorabbin.

[KGQ] Moorabbin Traffic, E110, KGQ, 3 mile final runway 35R, Moorabbin.

We are a little intimidated by the Embraer and don't want to be run over by it, so although we have right-of-way, we decide to give way to the Embraer and make a non-standard call in simple language.

[TUS] Moorabbin Traffic, C172, TUS, extending downwind runway 35R, number two to the Embraer, Moorabbin.

[KGQ] Moorabbin Traffic, E110, KGQ, 1 mile final, runway 35R, Moorabbin.

[TUS] Moorabbin Traffic, C172, TUS, turning base runway 35R, Moorabbin.

[KGQ] Moorabbin Traffic, E110, KGQ, clear of the runway, Moorabbin.

[TUS] Moorabbin Traffic, C172, TUS, turning final runway 35R, Moorabbin.

[TUS] Moorabbin Traffic, C172, TUS, clear of the runway, Moorabbin.

## More Information

For more information on non-towered aerodromes, refer to Civil Aviation Advisory Publication 166-1(0) which can be found at

<http://www.casa.gov.au/wcmswr/assets/main/download/caaps/ops/166-1.pdf>