

## Now see hear

**Carrying a radio and using it is a pilot's responsibility – as is knowing which frequency to use. It really is that simple.**

There was a time when Flight Service used to advise VFR pilots when they needed to change frequencies, but those days are gone. Today's VFR pilots are expected to know when to change frequency and are required to use judgment, professionalism and common sense in managing frequency changes. It's called airmanship.

Recent incidents around Australia and particularly in the vicinity of Lake Eyre and other hotspots suggest **some pilots are not up to scratch in this area of airmanship**. A series of separation and other scares has reinforced the need for pilots to obtain and use up-to-date en-route charts. Pilots should always follow correct radio procedures and prepare thoroughly for all flights by checking *ERSA* and NOTAMs for frequency updates and other vital information.

It is true that pilots have to deal with a communication system that can be difficult to understand. This may be especially true if the pilot only flies occasionally or takes a trip into unfamiliar territory. The letters page in this issue of *Flight Safety Australia* has a range of responses to the previous issue's story on Lake Eyre frequency management. Many make the reasonable point that NOTAMs are far from reader-friendly documents. They are full of abbreviations and potentially misleading acronyms that date from the days when NOTAMs were transmitted in Morse code. But the NOTAM format is set by ICAO standards and is not likely to change soon.

CASA aviation safety advisor for South Australia, Mal Wardrop, outlines how the issue arose: 'In 2009, the local operators at William Creek and Marree voiced concerns to CASA about frequency congestion over Lake Eyre on 126.7.

'We raised these concerns at the Regional Airspace and Procedures Advisory Committee (RAPAC), and as a result CASA issued a legislative instrument establishing a special broadcast area on 127.8 for an area of approximately 120 nautical miles square, centred on Lake Eyre and including the aerodromes of William Creek and Marree. This allowed Airservices to issue a NOTAM to advise pilots visiting the Lake Eyre region.

The status of the William Creek and Marree aerodromes complicated the picture, Wardrop says. 'This NOTAM had to be issued as an flight information region (FIR) NOTAM rather than one attached to William Creek and/or Marree, as these are uncertified aerodromes and as such do not have an AVFAX code in *ERSA*.

'Pilots jump on to the NAIPS web site and request 'location' NOTAMs but neglect to select 'FIR NOTAMs' and therefore are not aware of the special broadcast area 127.8. They make all their radio broadcasts on the *ERSA* frequency of 126.7,

resulting in traffic conflicts between aircraft on the correct frequency and those on the incorrect frequency. I experienced this problem at William Creek in May this year when we were filming up there.'

Without radio, pilots must rely on unalerted-see-and-avoid. But this is fundamentally difficult because it is at the limits of human visual performance, even for the sharpest-eyed of pilots.

In all cases, an aircraft on a collision course appears as a stationary target to the pilot and may not even be easily visible until a few seconds before impact. Even if an approaching aircraft has been seen, there is no guarantee that evasive action will be successful.

Recognising and responding to a collision threat does not happen instantly; and the wrong evasive manoeuvre may increase the chance of a collision.

### **Watch and listen**

Cockpit workload and other factors can reduce the time pilots spend in traffic scans.

The view from most cockpits is frequently compromised by obstructions such as window pillars, and the physical limitations of the human eye mean that even regular and thorough visual scanning will not guarantee that other aircraft will be seen.

Reassuringly, information from air-ground radio services, your transponder and broadcasts on the CTAF has been shown to increase your chance of detecting other aircraft in your vicinity by a factor of eight.

However, whether you fly into non-towered or towered aerodromes, maintaining a vigilant lookout at all times is important—you cannot rely solely on your radio.

A modern gadget that can make missing a frequency change less dangerous than it would otherwise be is a dual-monitoring radio that can listen in to channels other than the one it is broadcasting on. Some modern radios offer this feature. There is good reason to take the advice of a certain Stetson-wearing television personality and 'do yourself a favour' by upgrading your old radio.

Australian Transport Safety Bureau (ATSB) reports say that the most common airspace use and operational-related occurrence types at non-towered aerodromes are related to communication breakdowns, radio failures, relying on the radio as a substitute for effective visual lookout, misunderstandings, or insufficient communication between pilots (388 of 709 occurrences between 2003 and 2008, and 148 of 222 between September 2010 and August 2011). Many of these led to reduced situational awareness of the pilot, with consequent separation issues or actual conflicts between aircraft.

Communication issues accounted for 38 per cent of all information errors and 31 per cent of all action errors in these situations. In almost a third of them it was known (or likely) that the pilot was operating within the vicinity (10nm) of a non-towered aerodrome (a towered aerodrome becomes a non-towered aerodrome after ATC hours) but not monitoring the CTAF effectively. In 146 occurrences the pilots did not even have their radio tuned to the correct CTAF.

Airspace use and operations problems are most common in the vicinity of the busiest non-towered aerodromes where radio carriage is required – Newcastle, Avalon, Geraldton, Broome, Port Macquarie, Dubbo, Mildura and Wagga Wagga – but are fairly evenly distributed across other aerodromes and aircraft landing areas of various sizes, locations and activity levels.

There is really no reason to fly without a radio, even in the unpopulated areas where it is still allowed. Even the smallest owner-built aircraft can have an aircraft band hand-held radio with a headset. (Paragliders use just such a radio set-up.) Without a radio, see-and-avoid – that could more accurately be called ‘maybe-see-and-with-any-luck-avoid’ – is a pilot’s only defence against a close encounter of the most unpleasant kind.

#### Broadcast your intentions:



before or during taxiing



immediately before entering a runway



inbound 10nm or earlier from an aerodrome



immediately before joining the circuit



on a straight-in approach, on final, by 3nm from the threshold



on a base-join approach, before joining on base



on entering the aerodrome vicinity of a non-towered aerodrome, where you intend to fly through the vicinity, but not land. Minimise non-essential chat.



It is a false economy to try to avoid landing fees by sneaking quietly into an aerodrome. It will cost much more to clean up the mess if you crash.



Always check ERSA, NOTAMs, route charts and the weather before you fly.