



It's a jungle out there...

How close do you reckon you need to be to cause an Airprox, 100ft, 500ft, half-a-mile...surely not as much as a mile or two? Well, it really depends on your point of view – and the other pilot's

We all have different comfort zones for risk, and while some might think little of admiring another aircraft's interior cockpit trim from a few feet away, for others such as airline pilots for example it's a whole different matter.

Over the years there have been many Airprox reports where one pilot has described what he or she has believed to be an encounter that was much too close for comfort, while the other pilot hadn't thought anything of it at all.

Take this incident: After levelling off after climbing out, the crew received a TAS alert indicating traffic in the same position 500ft below. A few moments later the alert was repeated and the traffic appeared to be climbing. The pilot correctly took immediate avoiding action and assessed the risk of collision as 'high'.

The second pilot, who had seen the first aircraft and observed its movements, did not consider a change of course or climb was necessary and assessed the risk as 'none'.

The Airprox was put down to the first pilot having perceived the second aircraft appearing too close on his traffic alert system and being concerned by the proximity of the other aircraft.

So what one pilot perceives as 'normal' or acceptable might not be the case for another who could be startled by your sudden appearance. And that's particularly true for less experienced pilots. It's important that you don't assume everyone has the same comfort level as you, so give them a wider berth not just out of consideration but because you don't know what they'll do next anyway!

Traffic warning systems are invaluable, particularly in larger aircraft and have been the cause of a number of Airprox reports because, while there might have been little risk in reality, the system had perceived an aircraft as a 'threat' – and some of these cases have occurred simply due to thoughtlessness or lack of knowledge.

It's all to do with closure rates, and some pilots don't realise that TCAS can perceive a



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transponder-equipped aircraft as a 'threat' many miles ahead, or within around a thousand feet vertically if pointing towards it, and if the system sounds a 'resolution advisory' the crew has to take action.

But it's not just electronics that should prompt early action, any potential conflict needs to be dealt with decisively even if you're in the right (or think you are; it might be best to argue that one on the ground...).

Most of us use 'defensive driving' skills out on the road, whether we recognise it or not,

because of the myriad threats around us and the same should be true in the air. 'Defensive flying' isn't just for military pilots, it means maximising safety margins by never assuming that other pilots or ATC (or even Mother Nature) are looking out for you.

Has the other person who should give way to you actually seen you? Maybe they aren't looking your way or they're concentrating on the ground, their chart, their tablet, the instruments or their passenger(s).



Inaction is a real problem. If you don't like the look of something, defensive flying says take action sooner (now) rather than waiting to see how the situation develops and using up valuable time, which in the case of an Airprox can be as little as 30 seconds or much less. Just think how many times you've said "it all happened so quickly".

If 'vigilance' means keeping careful watch for possible danger or difficulties, then it goes hand-in-hand with 'consideration' to add up to 'foresight', because a bit of thought for others means you're less likely to end up in a difficult situation yourself.

Take some other airspaces such as parachuting or gliding; every year pilots blithely fly through these zones and sites seemingly unaware of the risks even though they're clearly marked on the charts.

For example, have a look at [youtube.com/watch?v=SHA0zvFfH9U](https://www.youtube.com/watch?v=SHA0zvFfH9U) if you want to see what an Airprox looks like from underneath a parachute; an Airprox is still an Airprox whether it's two aircraft or an aircraft and a person, so give them a wide berth.

And as far as gliding sites go defensive flying means steer clear. In addition to the risk of steel cables that can go up to 3000ft (winch launch altitudes are on the chart for a reason...), if you fly over, or even nearby, expect to find a honeypot of traffic, both gliders and towplanes which can be some miles away from the site, even on days when you might think flying won't be taking place. A fatal collision between a powered aircraft and a glider occurred close to a gliding site as recently as December 2016.

There are a lot of threats out there that can lead to an Airprox so it really does pay to be vigilant – and considerate to others. ■

A question of priorities

It's far too easy for pilot priorities to be disrupted by distractions – and it takes a conscious effort to keep things in order

How often do you look inside the cockpit for a minute or so, perhaps trying to work out something on your tablet (okay, the chart for the less technologically inclined) or keeping an eye on the instruments (hmm, the cylinder head temperatures are creeping up, what's going on up front)?

Or you've had an enthusiastic passenger who loves chatting and takes your attention for a while, or perhaps one who's enjoying the flight rather less and you're hunting for the sickbag, or maybe you're an instructor who's having to work a little harder to get your student through a particular exercise?

What's missing in all of these scenarios is prioritisation. You might think that navigation, the sickbag or the instruction has top priority at the time, but all of these have actually led to Airprox because the pilot's priority task list was turned upside down and lookout went straight from the top to the bottom.

Lookout should always remain the top priority, dealing with distractions or other tasks quickly and properly needs to be a close second, but always remember that other aircraft can quickly come into proximity at any stage so you need to concentrate on actively maintaining a robust scan, even in emergency situations.

Take passengers, for example; it's natural that they want to chat, but rather than letting them be a distraction and discussing the wonderful views of the world outside, much better to involve them in the flight and use them as another pair of eyes to look out – and they're likely to enjoy the flight more by feeling that they are playing a part in it.

But when it comes to prioritisation, what's most concerning is pilots spending too much time with their eyes inside the cockpit. The trouble is it's so easy to do nowadays, especially with some GA cockpits (and not just high-end ones) being fitted with enough tech to resemble



the flight deck of an A380. Who'd have thought not so many years ago that we'd be taking tablets and phones packed with flying software in the cockpit?

The problem is that while using them for navigation can be quick and easy (quicker than the chart and stopwatch!) they can be complex too, especially if you have to start scrolling through various pages to find what you want.

And even simple cockpit tasks such as resetting radio frequencies, checking airfield plates etc can easily take far more than the recommended maximum of three seconds eyes inside – and that's particularly true when the workload increases perhaps due to weather, airspace or around the circuit. It really does require a conscious effort to avoid lookout becoming overtaken by in-cockpit tasks and dropping down the priority order.

Perversely, becoming task-focused to the detriment of lookout also happens even when you're looking outside. Suppose you're checking for a landmark to make a turn, or the destination airfield (notoriously tricky to locate occasionally...), how much time do you think you spend observing the ground rather than looking out for traffic which might be heading there too? Good question, eh?

Diverting your priority to concentrate on the immediate task is a natural human trait, but the truth is you can't afford to upset the priority list, it exists for a reason and at the top of it is lookout (eyes outside 80 percent of the time and no more than three seconds looking inside in any one go) – whatever else is trying to distract you. ■