



NTSB

SAFETY ALERT

National Transportation Safety Board

★ **See and Be Seen: Your Life Depends on It** ★

Maintaining Separation from Other Aircraft

The problem

- Accidents have occurred in which pilots operating near one another did not maintain adequate visual lookout and failed to see and avoid the other aircraft.
- While some accidents occurred in high-traffic areas (near airports), some accidents occurred in cruise flight; in the cases described below, the pilots were flying in daytime visual meteorological conditions.
- All pilots can be vulnerable to distractions in the cockpit, and the presence of technology has introduced challenges to the see-and-avoid concept. Aviation applications on portable electronic devices (PEDs) such as cell phones, tablets, and handheld GPS units, while useful, can lead to more head-down time, limiting a pilot's ability to see other aircraft.

Related accidents

- In January 2015, two Piper PA-18s collided near Wasilla, Alaska, while conducting cross-country flights. The commercial pilots of each airplane sustained serious injuries. A ground witness indicated that the airplanes were converging at a 90° right angle and that neither airplane changed altitude or direction as they approached one another. ([ANC15FA009](#))
- In September 2014, a Cessna 172 and an amateur-built Searey collided near Buffalo-Lancaster Regional Airport, Lancaster, New York, while participating in a fly-in event. The commercial pilot and passenger of the Cessna 172 died, and the private pilot and passenger of the Searey were not injured. Both airplanes were traveling westbound with the Cessna behind the Searey. The Cessna was traveling about 90 knots and was gradually descending, and the Searey was traveling about 70 knots and was gradually climbing when the Cessna overtook it. ([ERA14FA459](#))
- In March 2012, a Cessna 172 and a Cessna 180 collided near Longmont, Colorado, about 7,200 ft mean sea level. The private pilot and instructor in the Cessna 172 died, and the pilot of the Cessna 180 sustained minor injuries. The Cessna 172 was in level flight on a north-northeast course, and the Cessna 180 was in a gradual climb on a northerly course. The pilots were not in contact with air traffic control at the time of the accident, and neither pilot maintained adequate visual lookout for the other airplane. ([CEN12FA199](#))

- In July 2011, a Cessna 180 and a Cessna 206 collided about 900 ft above ground level near Talkeetna, Alaska. The airline transport-rated pilot of the Cessna 206 was not injured, and the private pilot and three passengers of the Cessna 180 died. The pilots were monitoring different radio frequencies and failed to see and avoid the other airplane as each was approaching Amber Lake on the left downwind. ([ANC11FA071](#))

What can *pilots* do?

- Be vigilant and use proper techniques to methodically scan for traffic throughout your flight, not only in high-volume traffic areas.
- Divide your attention inside and outside the aircraft and minimize distractions (including nonessential conversations, photography or sightseeing activities, and PED use) that may degrade your ability to maintain awareness of other aircraft.
- Make your aircraft as visible as possible to other aircraft by turning on available lights, including anticollision lights, and consider using high-intensity discharge or LED lighting.
- Clearly communicate your intentions and use standard phraseology, known distances, and obvious ground references to alert other pilots of your location.
- Recognize that some conditions make it harder to see other aircraft, such as operating in areas where aircraft could be masked by surrounding terrain or buildings and when sun glare is present.
- Encourage passengers to help look for traffic and, during instructional flights, ensure that one pilot is always responsible for scanning for traffic.
- Effectively use on-board traffic advisory systems, when available, to help visually acquire and avoid other aircraft and not as a substitute for an outside visual scan.

Need more information?

The following Federal Aviation Administration (FAA) advisory circulars (ACs) can be accessed from www.faa.gov:

- AC 90-48C, "[Pilots' Role in Collision Avoidance](#)"
- AC 90-66A, "[Recommended Standard Traffic Patterns for Aeronautical Operations at Airports without Operating Control Towers](#)"
- AC 90-42F, "[Traffic Advisory Practices at Airports without Operating Control Towers](#)"

The website www.seeandavoid.org, which is funded by the FAA and the Air National Guard, provides pilots with information and education on airspace, visual identification, aircraft performance, and mutual hazards to safe flight to help eliminate midair collisions.

The FAA Aviation Safety Program publication "[How to Avoid a Mid Air Collision](#)" (P-8740-51), which describes pilot scanning techniques and offers a useful collision avoidance checklist, can be accessed from the FAA Safety Team's web page at www.faasafety.gov.

This National Transportation Safety Board (NTSB) safety alert and others can be accessed from the NTSB's Safety Alerts web page at www.nts.gov/safety/safety-alerts/Pages/default.aspx or searched from the NTSB home page at www.nts.gov.