

Profile Of A Mid Air Collision

PROFILE OF A MID AIR

During a three-year study of midair collisions involving civilian aircraft, the National Traffic Safety Board (NTSB) determined that:

- (1) The occupants of most midair's were on a pleasure flight with no flight plan filed.**
- (2) Nearly all midair collisions occurred in VFR conditions during weekend daylight hours.**
- (3) The majority of midair's were the result of a faster aircraft overtaking and hitting a slower aircraft.**
- (4) No pilot is immune. Experience levels in the study ranged from initial solo to the 15,000 hour veteran.**
- (5) The vast majority of midair's occurred at uncontrolled airports below 3,000 feet.**
- (6) Enroute midair's occurred below 8,000 feet and within 25 miles of the airport.**
- (7) Flight instructors were onboard one of the aircraft in 37 percent of the midair's.**

MIDAIR COLLISION AVOIDANCE AND YOU

Have you ever landed and got out of your plane with your hands sweaty and body shaking because someone nearly took your wing off? If so, you are not alone. As aviation activity increases throughout America, the possibility of being party to a near midair or an actual collision increases. The FAA has instituted several policies to alleviate the midair collision potential, but the ultimate responsibility lies with you, the pilot. Here are seven simple rules of engagement you can follow to make flying safer, and hopefully reduce your chance of being the victim of a midair collision.

- (1) PLAN AHEAD - thoroughly review your intended route of flight before walking out to your airplane. Plan to avoid alert areas, restricted areas, MTRs and MOAs if possible. Check NOTAMs and identify possible conflict areas.**
- (2) SEE AND AVOID - Scan the airspace ahead of you and to the side using proper scanning techniques. Periodically check behind you since the majority of midair's occur with one aircraft overtaking another:**
- (3) CLEAR - Before executing a climb, turn, descent or any other maneuver, ensure the area is clear using appropriate clearing procedures.**
- (4) COMMUNICATE - When flying into or out of uncontrolled airports, broadcast positions and intentions. Make frequent position reports along your route. If radio contact with Center, Approach or Tower is not required, monitor an appropriate facility frequency. Finally, request and use available radar services. Remember, you are ultimately responsible for seeing and avoiding other traffic and should not relax your visual scanning vigilance.**

(5) SQUAWK - If your aircraft is transponder equipped turn it on and adjust it to reply on both Mode 3/A and Mode C. You are reminded that Mode 3/A and Mode C operations are required: (1) at or above 10,000' MSL over the 48 contiguous states, excluding the airspace below 2,500' AGL; (2) within 30 miles of Class B Airspace primary airport below 10,000' MSL; (3) within and above all Class C Airspace.

(6) BE SEEN - In order to enhance the see and the see-and-avoid concept, you are encouraged to turn on your anti-collision lights or other appropriate lights whenever your engines are running. You are further encouraged to turn on your landing lights when operating below 10,000' MSL, day or night, especially within 10 miles of an airport, or in areas of reduced visibility. While use of landing lights is appreciated, please observe aircraft manufacturer's recommendations for landing light(s) operations.

(7) ABOVE ALL, AVOID BECOMING COMPLACENT!!!!

LOOK OUTSIDE !!

Collision avoidance involves much more than proper eyeball techniques. You can be the most conscientious scanner in the world and still have an in-flight collision if you neglect other important factors in the overall see-and-avoid picture. It might be helpful to use a collision avoidance checklist as religiously as you do the takeoff and landing checklists. Such a checklist might include the following items:

CHECK YOURSELF: Start with a check of your own condition. Your safety depends on your mental and physical condition.

PLAN AHEAD: Plan your flight ahead of time. Have charts folded in proper sequence and within handy reach. Keep your cockpit free of clutter. Be familiar with headings, frequencies, distances, etc. ahead of time so you spend minimum time with your head down in the charts. Some pilots even jot these things down on a flight log before takeoff. Check your maps and the special, general, and area notices in the AIM in advance for restricted areas, jet training areas, military training routes, and other high density areas.

CLEAN WINDOWS: During the walk around, make sure your windshield is clean. If possible, keep all windows clear of obstructions. Even little bug spots can block your view of an approaching aircraft in your flight path.

ADHERE TO S.O.P.'s: Stick to standard operating procedures and observe the regulations of flight, such as correct altitudes and proper pattern practices. In most in-flight collisions, at least one of the pilots involved was not where he or she was supposed to be.

AVOID CROWDS: Avoid congested airspace enroute. You can navigate on VFR days just as accurately by passing slightly to the right of VOR stations rather than directly overhead. Pass over airports at a safe altitude, being particularly careful within a 25 mile radius of busy military or civilian fields.

COMPENSATE FOR DESIGN: Compensate for your aircraft's design limitations. All planes have blind spots -- know yours! A mid-air potential is a fast low-wing plane overtaking a slow high-wing plane on final approach.

EQUIP FOR SAFETY: Your airplane can, in fact, help avoid collisions. Certain equipment once priced out of the market for light aircraft owners, now is available at a reasonable cost. High intensity strobe lights and transponders are just two examples of equipment that can increase your safety margin. And make sure you have the transponder on and "squawking" your altitude.

TALK AND LISTEN: Use your radios as well as your eyes. When approaching an airport, whether or not your going to land, call on the appropriate frequency at least 15 miles out and relay your position, altitude, and intentions. Since detecting a small aircraft at a distance is not easy, make use of any hints you get over the radio.

A pilot reporting his or her position to a tower is also reporting to you! Once you have that particular traffic in sight, don't forget the rest of the sky. If your traffic is moving in your windscreen, you're probably not on a collision course so continue your scan and watch that traffic from time to time. However, if that traffic appears to be stationary in your windscreen, you're probably on a collision course with it. Be prepared to take evasive action.

SCAN! SCAN! SCAN!: The most important part of your checklist, of course, is to keep looking where you're going and to watch for traffic. Scan continuously!!

Basically, if you use sound airmanship, keep yourself and your plane in good shape, and develop an effective scanning technique, you'll have no trouble avoiding in-flight collisions. Remember, aviation in itself is not inherently dangerous but to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity, or neglect so KEEP YOUR EYES OUT SIDE!!!

NOTE: "Profile of a Mid Air", "Midair Collision Avoidance and You" was borrowed from Vance AFB MACA Page. "Look Outside" was borrowed from McGuire AFB MACA page.