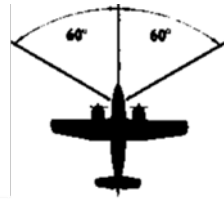
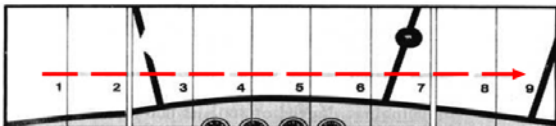


Basic Avoidance Technique

1. Plan, scan, see and avoid!
2. Listen for our “Pitt ___” or “Steel ___” call signs on ATC frequencies.
3. For wake turbulence avoidance in flight, make sure you stay at least 1,000 feet below (or well above) and at least 5 miles behind any large aircraft.
4. If you see one of us, look for others. Military aircraft often fly in formation.
5. A large amount of C-17 flying is accomplished VFR below 3000’ AGL. We fly low-level routes at 300 – 500’ AGL.
6. Effective scanning is accomplished with a series of short, regularly spaced eye movements that bring successive areas of the sky into the central visual field. Each movement should not exceed 10 degrees, and each area should be observed for at least 1 second to enable detection.
7. Peripheral vision can be most useful in spotting collision threats from other aircraft.
8. It is essential to remember, however, that if another aircraft appears to have no relative motion, it is likely to be on a collision course with you. If the other aircraft shows no lateral or vertical motion, but is increasing in size, take immediate evasive action.
9. Visual search at night depends almost entirely on peripheral vision. This is due in part to the night blind spot that involves an area between 5 and 10 degrees wide in the center of the visual field. By looking approximately 10 degrees below, above, or to either side of an object, “off center” viewing can compensate for this night blind spot.
10. Equip your aircraft for safety – high intensity strobe lights, transponders and traffic alerting systems are just some examples of ways to make yourself more visible to other aircraft.
11. Ensuring your cockpit is free of clutter, with charts neatly folded and minimizing ‘heads-down’ time, keeps your eyes out scanning for traffic.

Reference: FAA AC-190-48D (Pilots’ Role in Collision Avoidance)



Profile of a Mid-Air Collision

Studies of mid-air collisions reveal some common themes. It may be surprising to note that nearly all mid-air collisions occur during daylight hours and in visual meteorological conditions (VMC). The majority happen within 5 miles of an airport, in the areas of greatest traffic concentrations.

STATISTICS OF NEAR MID-AIR COLLISIONS (NMAC)

- 75% of NMAC involve General Aviation
- Nearly 70% occur near airports and
- 85% occur below 3000’ AGL
- Over 50% involve pilots not using “See and Avoid” techniques

STATISTICS OF ACTUAL MID-AIR COLLISIONS

- Less than 10% occur when both aircraft are in radar contact
- 67% occur with visibility greater than 10 miles
- 40% occur during cruise flight
- 20% involve flight instruction

171st Air Refueling Wing Safety

300 Tanker Road
Coraopolis, PA 15108
Public Affairs 412-776-8010

911th Airlift Wing Safety

2475 Defense Ave
Coraopolis, PA 15108
Public Affairs 412-474-8511

Mid-Air Collision Avoidance (MACA) Program

171st Air Refueling Wing

PA Air National Guard

911th Airlift Wing
Air Force Reserves

The 171st Air Refueling Wing and 911th Airlift Wing, both based at Pittsburgh International Airport (KPTT) are committed to safely sharing airspace with civilian aviation. On your next flight, look for us. We are looking for you!

Flying at Pittsburgh International Airport

The Allegheny County Airport Authority (ACAA) operates and manages Pittsburgh International Airport (ICAO: KPIT). Classified as Class B airspace, encompassing over 10,000 acres and 4 runways, KPIT is an active airport with 24/7 operations. Extra vigilance is required due to heavy radio operations, precision flight paths and higher arrival speeds.

DEPARTURES

On IFR departures, aircraft can be expected to climb quickly to 5000' MSL (turbojet) before climbing to an intermediate enroute altitude.

Tactical VFR departures by both KC-135 and C-17 aircraft may be accomplished in any direction, with an immediate climb to 10,000' MSL. C-17s may also perform short field takeoff procedures, with a steep angle of climb to VFR traffic pattern altitude (2700' MSL).

ARRIVALS

During normal west flow operations, the airport will utilize simultaneous ILS/visual approaches to runways 28L/R and 32. During east flow operations, ATC will vector traffic to 10 R/L dependent on arrival fix.

KC-135 and C-17 aircraft perform a multitude of tactical VFR approaches to landing. Aircraft will normally accomplish an 'overhead' approach, flying along the extended centerline before commencing a 360-degree elliptical descent to landing, but be aware that tactical arrivals can take many shapes and forms not 'typical' of civilian aircraft!

Nearby Airports Affected

- Allegheny County (KAGC)
- Beaver County (KBVI)
- Butler Regional (KBTP)
- Carroll County-Tolson (KTSO)
- Elmira/Corning Regional (KELM)
- Greenbrier Valley (KLWB)
- Grove City (29D)
- Harrisburg International (KMDT)**
- John Murtha Johnstown-Cambria (KJST)*,**
- New Castle Municipal (KUCP)
- Rickenbacker International (KLCK)**
- Rostraver (KFWQ)
- Tri-State Airport/Milton J. Ferguson Field (KHTS)
- University Park (KUNV)
- Washington County (KAFJ)
- Wheeling-Ohio County (KHLG)
- Wilkes-Barre/Scranton International (KAVP)
- Williamsport Regional (KIPT)
- Yeager (KCRW)
- Youngstown-Warren Regional (KYNG)*,**
- Zeligople Municipal (KPJC)

*Denotes airports where C-17s frequent

**Denotes airports where KC-135s frequent

171ARW – KC-135

The 171ARW flies the KC-135 Stratotanker, which performs long-range aerial refueling and provides strategic airlift of cargo and passengers. KC-135s are equipped with TCAS traffic alerting, and typically have significant wake turbulence characteristics.



911AW – C-17

The 911AW flies the C-17 Globemaster, which performs tactical and strategic airlift, transporting passengers and equipment around the world, while also performing medical evacuations and airdrop support.



WHERE WE FLY

The majority of our low altitude VFR training is concentrated on the East Coast. We cross major highways and rivers several times during our training routes. Some of our training will end with an airdrop at our drop zone near the First Niagara Pavilion (Star Lake Amphitheater) in Pennsylvania or at a drop zone near Cadiz, Ohio, just off the Harrison County airport property.

HOW WE FLY

Flights along our IFR and VFR routes are normally flown at 300-500' AGL, both day and night. Additionally, during night operations, we are normally using night-vision goggles (NVGs), which requires the use of only dim positional lighting – visible to other aircraft only in close proximity.

LOW LEVEL CONSIDERATIONS

During this phase of the training mission, C-17 crews are using time control techniques to arrive on time at predetermined points on the ground. Upon reaching an initial point prior to our simulated landing zone, C-17 aircrews are very busy – we are slowing the aircraft to approach airspeed, accomplishing internal checklists, and visually acquiring the simulated landing zone. At this point, you are probably much more maneuverable than us!