

DISCUSS MISSION PILOT RESPONSIBILITIES DURING A MISSION

CONDITIONS

You are a Mission Pilot trainee and must discuss the mission pilot's responsibilities during a mission.

OBJECTIVES

Discuss the mission pilot's responsibilities during a mission.

TRAINING AND EVALUATION

Training Outline

1. As a Mission Pilot trainee, knowing the mission pilot's responsibilities during the mission is essential.
2. *Mission Pilot and POD.* There are some factors affecting Probability of Detection (POD) that you can control:
 - a. Ask questions during briefings to ensure you *really* understand your assignment.
 - b. Take the time to plan the flight thoroughly and make sure you are prepared to fly it before leaving mission base. This knowledge enables you to concentrate on the mission and "stay ahead of the aircraft," thus increasing search effectiveness.
 - c. Maintain optimum altitude and airspeed. If you have to decrease power on a southbound leg and increase power when you turn northbound in order to maintain a constant 90 knots, then do it.
 - d. Accuracy of navigation: Use the GPS! However, you should be ready to complete the search using other navigational methods should the GPS fail.
 - e. Avoid turbulence whenever possible, avoid steep or abrupt turns, and ensure the mission commander is scheduling breaks and monitoring the scanners (and yourself) for fatigue or dehydration.
 - f. Give a thorough debriefing and be brutally honest about your effectiveness.
 - g. Stay proficient in your flying skills. Flying the aircraft and operating its equipment should be second nature, leaving you free to concentrate on accomplishing mission objectives safely.
3. *Flying the Mission.* Before missions are launched, the briefing officer provides you with information designating the routes to and from the search area, and the types of search patterns to be used upon entering the search area. Your planning should involve the observer, as they are familiar with each type of search pattern and can assist you in planning and navigation. While the observer should be scanning while you fly the pattern, they can assist you if things become confused (hey, it can happen).
4. *Number of Scanners.* Search planning, probability of detection, and search pattern effectiveness depends upon some underlying assumptions; the most important as far as the aircrew is concerned is the *assumption that there is one crewmember dedicated to scanning out the right side of the aircraft and another on the left side.*

Since the majority of CAP aircraft are Cessna 172s that only carry three crewmembers, we will assume that the crew consists of a pilot, an observer in the right front seat, and a single scanner in the rear seat. We assume that the observer will be scanning out the right side of the aircraft while the scanner covers the left side. If a larger aircraft is used there may be two scanners in the rear seat; this will allow the observer to spend more time assisting you without seriously decreasing search effectiveness.

Mission pilots must remember that they are *not* scanners. A mission pilot who tries to fly the aircraft and scan the search area at the same time is doing neither job effectively or safely. The mission pilot is responsible

for placing the scanners' eyes over the search area so they can do their job; your job is to fly the pattern precisely and effectively and for ensuring the safety of the aircraft.

Single scanner

- a. Planning and executing a search pattern with only one scanner on board is different from one where you have two scanners. You will only be able to search out one side (usually the right side) of the aircraft; this means that you must keep the right side of the aircraft towards the search area at all times. This can have a significant effect on search time and aircraft hours. For example, this would require careful planning and flying on a grid search since you will have to modify your leg entries/tracks to ensure the scanner scans the entire grid (no inverted flight, please).
 - b. Additionally, this cannot help but decrease search effectiveness due to fact that you lose the "double coverage" or overlap you get with two scanners looking out opposite sides of the aircraft. Scanner fatigue also becomes more of a factor, and search times need to be reduced to account for this.
 - c. For these reasons, performing parallel track or creeping line searches with a single scanner is not recommended. Likewise, searching any but open/flat terrain with a single scanner significantly reduces your chances of success.
5. *Flying a search pattern.* The mission pilot's contribution to a successful search is his ability to fly the search pattern precisely while maintaining altitude and airspeed. This must be done while performing the duties of a Pilot-in-Command; in the search area the most important of these duties is to "see and avoid" obstacles and other aircraft.

Another special consideration in flying search patterns is the possibility of engine trouble or failure at low altitude. The mission pilot must always be aware of where she is, the wind direction, the nature of the terrain, and where she will land if the engine fails *now*. This also underscores the importance of a thorough pre-flight inspection.

Like the rest of the aircrew, the mission pilot must continuously and honestly critique her performance during the sortie. If you're not set up properly when you enter the search area, exit and start again. If you are off by half a mile on a leg, fly the leg again. If winds and/or turbulence caused you to fly the legs erratically, emphasize this during the debriefing.

6. *Go or No-Go.* The Incident Commander has authorized your flight, you have obtained a proper briefing and flight release, you have filed your flight plan, you have completed a thorough pre-flight of the aircraft, and your crew is briefed and ready to go. *A Mission Pilot may accomplish all of this and still not be safe to fly the mission.*

How can this be? All of the regulations and safety precautions have been followed to the letter. You have been extensively trained and have demonstrated proficiency by successfully completing a Form 91 checkride. Your wing commander has appointed you as a CAP Mission Pilot!

It all comes down to the individual pilot and the circumstances. How long has it been since you've taken off in a 14-knot crosswind? Have you ever taken off or landed on an icy runway? When is the last time you've flown cross-country at night? You're signed off for instrument privileges on your Form 5, but how long has it been since you've flown in actual IMC?

Pilots, by their nature, are confident in their abilities. Sometimes over-confident. Mix in overconfidence, unusual circumstances, and the need to put all those hours of training to the test. Now add the desire to help others who are in immediate danger and you have all the ingredients for a dangerous situation.

The most effective way to break this potential accident chain is for Mission Pilots to be brutally honest about their abilities under the present conditions. Mission Pilots (as Pilot-in-Command) must have enough courage and integrity to decline a mission that they don't feel *comfortable* doing.

Additional Information

More detailed information on this topic is available in CAPR 60-1 and in Chapter 12 of the Mission Aircrew Reference Text (MART).

Evaluation Preparation

Setup: Provide the student with a current copy of CAPR 60-1 and the MART.

Brief Student: You are a Mission Pilot trainee asked your responsibilities during a mission.

Evaluation

<u>Performance measures</u>	<u>Results</u>
1. Discuss your responsibilities during a mission:	
a. How you can improve POD.	P F
b. Flying the mission.	P F
c. Number of scanners onboard.	P F
d. Flying a search pattern.	P F
e. Go or No-Go decisions.	P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.