



Parallel Track Search - MO

Objective: To practice parallel track search techniques.

Duration: 2.0 hours

SCENARIO

The widespread poor weather in the previous days apparently did not prevent a local farmer from flying. AFRCC has opened a search for the blue-on-white Navion, N1119Q. On board was Horace A. Farmer and his wife Lucille. No flight plan was filed, nor did the PIC receive a weather briefing from flight service. The pilot is well known at his home airport; the couple makes the trip about once a month. After topping off his aircraft on Friday evening, Mr. Farmer presumably departed for home. His daughter Mabel reported being unable to contact Mr. Farmer to the County Sheriff who in turn contacted AFRCC.

ASSIGNMENT

1. Plan flight to assigned grid using pilotage only.
2. Plan a parallel track search in your assigned grid _____, with 1NM track spacing.

PRE-FLIGHT PLANNING

1. Discuss the purpose of the flight.
2. Plan to navigate to the assigned grid via pilotage.
3. Using the details below, complete the pre-flight planning using the appropriate sections of the flight guide.
4. Discuss the crew duties. Review individual responsibilities and who manages what equipment (for example, how the airband radios will be used and by whom).
5. Do all normal pre-flight activities (mentor calls for a weather briefing and prepares weight and balance, etc.)
6. Trainee prepares a CAPF-104 a. and b.

PRIOR TO DEPARTURE

1. Review as necessary the operation of the following:
 - a. Nav/Comms
 - b. DME
 - c. GPS
 - d. VHF-FM (CAP) radio
 - e. Audio panel
 - f. Intercom
 - g. Push-to-talk buttons and mike
 - h. Have the trainee identify emergency exits and egress procedures
2. The trainee should assist with set up the CAP radio, DF, and FAA radios. Enter the first destination in the GPS. The mentor should review the setup of the audio panel. The MO candidate should verbalize what she/he is doing. The MO candidate should call the base with Engine Start time.

FLIGHT

1. Enroute (use pilotage only to the assigned grid)
 - a. Fly at the briefed altitude.



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- b. Discuss what to look for during a visual search. Whenever possible, have the trainee point out objects on the ground which resemble search visual clues, such as:
 - i. Light colored or shiny objects
 - ii. Smoke and fire
 - iii. Blackened areas
 - iv. Local discoloration of foliage
 - v. Fresh bare earth
 - vi. Breaks in cultivated field patterns
 - vii. Water and snow
 - viii. Tracks and signals
 - ix. Birds and animals
2. The MO candidate should call the base with In-Grid and Ops Normal Calls.
3. Parallel Track Search
 - a. Perform the four-corners flight at 2000 feet AGL. During this time, the MO trainee and MP should discuss physical features, lighting, and other information pertinent to conducting a successful visual search.
 - b. Conduct a normal grid search at 1000 feet AGL and at 90KIAS.
4. Point Based Search
 - a. Cross over the LKP at the proper heading, altitude, and airspeed.
 - b. Conduct a normal expanding square search at 1000 feet AGL and at 90 to 100KIAS.
5. Return to Base
 - a. Have the trainee report out of the area, RTB, and wheels down.
 - b. Discuss anticipated taxi instructions, and with assistance as necessary let the MO trainee handle communications with ground control.

DEBRIEFING

1. Review the flight and answer any questions.
2. Complete the CAPF 104 and 104a.
3. Ensure that the required specialty qualification training record (SQTR) tasks below are completed and sign the trainee's SQTR.

REQUIRED SQTR TASKS

1. Complete Task O-2003 - Demonstrate Operation of the Aircraft Radios
 - a. Set up and use the aircraft communications radio:
 - i. Power, volume and squelch controls.
 - ii. 50 and 25 kilocycles frequency adjustments.
 - iii. Set in primary and standby frequencies, and switch between them (flip-flop).
 - iv. Discuss proper use of CAP call signs, including when to use "rescue".
 - v. Discuss stuck mike indications and strategies.
 - b. Set up and use the CAP VHF FM radio:
 - i. Power, volume and squelch controls.
 - ii. Select assigned frequencies (main and guard channels).
 - iii. Keypad controls (scroll and scan).
 - iv. Give required mission FM radio reports.
2. Complete Task O-2012 - Operate the Global Positioning System
 - a. Using the operator's manual, discuss the operation of the GPS.
 - b. Using the operator's manual, display information provided by the GPS:



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- i. Altitude.
 - ii. Ground speed.
 - iii. Heading to waypoint and current heading.
 - iv. Track over ground (ground track).
 - v. Estimated time to the waypoint (ETE).
 - c. Using the operator's manual, determine current position using:
 - i. Bearing and distance to waypoints.
 - ii. Present position (lat/long coordinates).
 - iii. Moving map display (if applicable).
 - d. Using the operator's manual, enter a destination waypoint:
 - i. Airport.
 - ii. VOR.
 - iii. User-defined (lat/long coordinates).
 - e. Using the operator's manual, display "nearest airport" and "nearest VOR."
3. Complete Task O-2110 - Assist in Planning and Performing a Parallel Track Search
 - a. Sign into the mission.
 - b. Receive a sortie briefing, asking questions as necessary.
 - c. Assist in planning a one-quarter grid search. Include:
 - i. Estimated time enroute, time in the search area, and fuel requirements.
 - ii. Position coordinates for the entry and exit points (lat/long & VOR radials/cross-radials).
 - iii. Position coordinates for the legs (lat/long and VOR radials/cross-radials).
 - iv. Altitude restrictions, obstacles and other hazards (e.g., MTRs and SUAs).
 - v. Discuss observer/scanner assignments for all possible combinations.
 - d. Assist in filling out the flight plan and preliminary mission data on the CAPF 104.
 - e. Receive pilot safety and mission briefings, asking questions as necessary.
 - f. Demonstrate and discuss safety during each critical phase of the flight. In particular,
 - g. demonstrate collision avoidance and enforce sterile cockpit rules.
 - h. Demonstrate proper ATC communications.
 - i. Setup the CAP FM radio and perform all required radio reports (may be simulated).
 - j. Perform the grid search. Demonstrate:
 - i. Proper use of nav aids (GPS as primary; VOR as backup).
 - ii. Proper use of radios (ATC as required, and CAP FM radio reports).
 - iii. Proper scanner assignment (may be simulated).
 - iv. Ability to spot the search target (if applicable).
 - k. Demonstrate proper attention to fuel management.
 - l. Ensure the aircraft is secured at the end of the sortie (ready for next sortie).
 - m. Assist in filling out the remainder of the CAPF 104 and debrief the sortie.