Mission Observer Training Syllabus
C182T – NAV III

Panel Overview

Electrical Bus
Audio Panels
FM/UHF Selector
Seat selector
CAP radio
Becker DF
G1000 Features

Electrical Bus (F.1, F.3)

What does it control?
When do you power on/off?

Audio Panels (F.2)

Which panel works with which crew member?
What do you select to use the CAP radio?
How do you listen to the audio from the Becker DF?
Explain pilot/copilot isolation and when it is useful.

FM/UHF Selector (F.3)

Seat TXMIT Selector

Seat numbers (F.4)
Rear seat PTT (A.1)

CAP Radio – TDFM-136 (F.6)

How do you change channels?
What are guard channels? (F.6)
What frequencies are programmed for GD1, GD2? (A.2)
How do you transmit on GD1? GD2? (A.2)
How do you take advantage of the guard channels? (A.2)

Becker DF (F.5)

Discuss the differences between Becker units in GAWG.
How do you determine the mode of operation (training vs. emergency)?
How do you change modes? (A.3)
How do you change frequencies within a mode? (A.4)
How do you read the ball/ring display for proximity to the beacon? (A.5)
How does the squelch control help you? (F.5)

G1000 Features

*** NOTE: This syllabus assumes that the Observer trainee has attended the classroom training for the Multi-Function Display of the Garmin G1000 panel.

Map Overlays

- Topo
- Terrain
- Traffic
- NEXRAD
- Stormscope
- DCLTR key
- Range adjustment, dotted ring around aircraft icon

Waypoints

- Airports
- Intersections
- NDBs
- VORs
- User-defined waypoints

Nearest

Auxiliary

- Real-time present position (A.10)
- Map orientation
- Clock (local/UTC)
- GPS signal strength and functionality

User-defined waypoints (A.6)

- Lat/Long
- VOR/DME
- Map pointer

Flight plans

- Entering (A.7)
- Editing (A.9)
  - Add a waypoint to an active flight plan
  - Skip a programmed waypoint
- Direct To
- SAR (A.8)
  - Identify available search patterns
  - How would you program a grid search?
  - How would you program a creeping line search?
  - How would you program a sector search?
  - Do all GAWG G1000 aircraft have this functionality?
  - How would you execute these search patterns without the SAR functions in the G1000?

Scenarios

- Divert to nearest airport for crew discomfort
- Mark location of search target
- Incorporate new tasking into existing sortie (flight plans)

G1000 Observer Training Record			
Name	Type	CAPID	Date Issued
Task	Date	Trainer ID	Mission #
Prerequisites			
Complete official Mission Observer prerequisites			
Receive Commander Approval for MO prerequisites			
Complete G1000 MFD classroom training			
Familiarization and Preparatory Training			
(F.1) Demonstrate an understanding of the mission electrical bus.			
(F.2) Demonstrate an understanding of the audio panel.			
(F.3) Identify all of the CAP equipment.			
(F.4) Identify the seat number for each position in the aircraft.			
(F.5) Explain the general purpose and operation of the Becker DF			
(F.6) Demonstrate the basic operation of the TDFM-136			
Advanced Training			
(A.1) Demonstrate the ability to give TXMIT capability to the scanner.			
(A.2) Use the TDFM-136 to monitor and transmit on 2 different frequencies			
(A.3) Demonstrate the ability to select/change mode of operation of the Becker DF.			
(A.4) Demonstrate the ability to change the frequency on the Becker DF.			
(A.5) Use the Becker DF to direct the pilot to an ELT.			
(A.6) Demonstrate the ability to create user-defined waypoints in the G1000 database.			
(A.7) Demonstrate the ability to create a flight plan using the G1000 panel.			
(A.8) Demonstrate the ability to create flight plans that include at least 2 different SAR search patterns			
(A.9) Demonstrate the ability to edit an active flight plan while en route.			
(A.10) Demonstrate how to determine the present position of the aircraft.			
(A.11) Demonstrate the ability to mark the location of a search target.			
Mission Participation			
Exercise participation # 1			
Exercise participation # 2			

Observer Checklist – C182T Nav III

Prior to boarding the airplane

- Compile written list of user waypoint information for entry into G1000 database
- Prepare written details of flight plan

After engine start

- Verify currency of GPS data
- Verify that GPS1 and GPS2 are functional
- Verify North Up/Track Up selection
- Activate desired MFD overlays
- Mission Master switch ON - - check breakers
- Set FM channel per Comm briefing
- Verify Seat TXMIT selector
- Verify FM/UHF selector
- Observer Comm check – FM Radio
- Scanner Comm check – FM Radio
- Seat TXMIT selector – set to Seat 2
- Set DF frequency or mode (Emergency/Training)
- Enter first and last waypoint of flight plan and save (Additional waypoints can be entered if time allows. Otherwise, they can be added while enroute to initial point.)

Pre-takeoff

- Check breakers – mission electrical bus
- Verify that preferred overlays are active on MFD
- Verify that flight plan is active and initial waypoint is correct
- Ready to note/report wheels-up time