Warnings, Cautions & Notes

**WARNING:** Navigation and terrain separation must NOT be predicated upon the use of the terrain function. The G950 Terrain Proximity feature is NOT intended to be used as a primary reference for terrain avoidance and does not relieve the pilot from the responsibility of being aware of surroundings during flight. The Terrain Proximity feature is only to be used as an aid for terrain avoidance and is not certified for use in applications requiring a certified terrain awareness system. Terrain data is obtained from third party sources. Garmin is not able to independently verify the accuracy of the terrain data.

**WARNING:** The displayed minimum safe altitudes (MSAs) are only advisory in nature and should not be relied upon as the sole source of obstacle and terrain avoidance information. Always refer to current aeronautical charts for appropriate minimum clearance altitudes.

**WARNING:** The altitude calculated by G950 GPS receivers is geometric height above Mean Sea Level and could vary significantly from the altitude displayed by pressure altimeters, such as the GDC 74A Air Data Computer, or other altimeters in the aircraft. GPS altitude should never be used for vertical navigation. Always use pressure altitude displayed by the G950 PFD or other pressure altimeters in aircraft.

**WARNING:** Do not use outdated database information. Databases used in the G950 system must be updated regularly in order to ensure that the information remains current. Pilots using any outdated database do so entirely at their own risk.

**WARNING:** Do not use basemap (land and water data) information for primary navigation. Basemap data is intended only to supplement other approved navigation data sources and should be considered as an aid to enhance situational awareness.

**WARNING:** Traffic information shown on the G950 Multi Function Display is provided as an aid in visually acquiring traffic. Pilots must maneuver the aircraft based only upon ATC guidance or positive visual acquisition of conflicting traffic.
WARNING: The Garmin G950 has a very high degree of functional integrity. However, the pilot must recognize that providing monitoring and/or self-test capability for all conceivable system failures is not practical. Although unlikely, it may be possible for erroneous operation to occur without a fault indication shown by the G950. It is thus the responsibility of the pilot to detect such an occurrence by means of cross-checking with all redundant or correlated information available in the cockpit.

WARNING: For safety reasons, G950 operational procedures must be learned on the ground.

WARNING: The United States government operates the Global Positioning System and is solely responsible for its accuracy and maintenance. The GPS system is subject to changes which could affect the accuracy and performance of all GPS equipment. Portions of the Garmin G950 utilize GPS as a precision electronic NAVigation AID (NAVAID). Therefore, as with all NAVAIDs, information presented by the G950 can be misused or misinterpreted and, therefore, become unsafe.

WARNING: To reduce the risk of unsafe operation, carefully review and understand all aspects of the G950 Pilot’s Guide documentation. Thoroughly practice basic operation prior to actual use. During flight operations, carefully compare indications from the G950 to all available navigation sources, including the information from other NAVAIDs, visual sightings, charts, etc. For safety purposes, always resolve any discrepancies before continuing navigation.

WARNING: The illustrations in this guide are only examples. Never use the G950 to attempt to penetrate a thunderstorm. Both the FAA Advisory Circular, Subject: Thunderstorms, and the Aeronautical Information Manual (AIM) recommend avoiding “by at least 20 miles any thunderstorm identified as severe or giving an intense radar echo.”

WARNING: Lamp(s) inside this product may contain mercury (HG) and must be recycled or disposed of according to local, state, or federal laws. For more information, refer to our website at www.garmin.com/aboutGarmin/environment/disposal.jsp.
**WARNING:** Because of variation in the earth’s magnetic field, operating the system within the following areas could result in loss of reliable attitude and heading indications. North of 72° North latitude at all longitudes. South of 70° South latitude at all longitudes. North of 65° North latitude between longitude 75° W and 120° W. (Northern Canada). North of 70° North latitude between longitude 70° W and 128° W. (Northern Canada). North of 70° North latitude between longitude 85° E and 114° E. (Northern Russia). South of 55° South latitude between longitude 120° E and 165° E. (Region south of Australia and New Zealand).

**WARNING:** Do not use GPS to navigate to any active waypoint identified as a ‘NON WGS84 WPT’ by a system message. ‘NON WGS84 WPT’ waypoints are derived from an unknown map reference datum that may be incompatible with the map reference datum used by GPS (known as WGS84) and may be positioned in error as displayed.

**CAUTION:** The PFD and MFD displays use a lens coated with a special anti-reflective coating that is very sensitive to skin oils, waxes, and abrasive cleaners. CLEANERS CONTAINING AMMONIA WILL HARM THE ANTI-REFLECTIVE COATING. It is very important to clean the lens using a clean, lint-free cloth and an eyeglass lens cleaner that is specified as safe for anti-reflective coatings.

**CAUTION:** The Garmin G950 does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and the pilot’s authority to operate this device under FAA/FCC regulations.

**NOTE:** All visual depictions contained within this document, including screen images of the G950 panel and displays, are subject to change and may not reflect the most current G950 system and aviation databases. Depictions of equipment may differ slightly from the actual equipment.

**NOTE:** This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
**NOTE:** The data contained in the terrain and obstacle databases comes from government agencies. Garmin accurately processes and cross-validates the data, but cannot guarantee the accuracy and completeness of the data.

**NOTE:** This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This notice is being provided in accordance with California’s Proposition 65. If you have any questions or would like additional information, please refer to our web site at www.garmin.com/prop65.

**NOTE:** Interference from GPS repeaters operating inside nearby hangars can cause an intermittent loss of attitude and heading displays while the aircraft is on the ground. Moving the aircraft more than 100 yards away from the source of the interference should alleviate the condition.

**NOTE:** Use of polarized eyewear may cause the flight displays to appear dim or blank.

**NOTE:** The purpose of this Cockpit Reference Guide is to provide the pilot a resource with which to find operating instructions on the major features of the G950 system more easily. It is not intended to be a comprehensive operating guide. Complete operating procedures for the system are found in the G950 Pilot’s Guide for this aircraft.
## Record of Revisions

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<tr>
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<th>Change Summary</th>
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<td>190-01147-00</td>
<td>Initial release.</td>
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<td>A</td>
<td>February, 2010</td>
<td>All</td>
<td>Production release</td>
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Blank Page
FLIGHT INSTRUMENTS

SELECTING THE ALTIMETER BAROMETRIC PRESSURE SETTING

Turn the BARO Knob to select the desired setting.

SELECTING STANDARD BAROMETRIC PRESSURE (29.92 IN HG)

1) Press the PFD Softkey.
2) Press the STD BARO Softkey to set standard barometric pressure.

CHANGE ALTIMETER BAROMETRIC PRESSURE SETTING UNITS

1) Press the PFD Softkey to display the second-level softkeys.
2) Press the ALT UNIT Softkey.
3) Press the IN Softkey to display the barometric pressure setting in inches of mercury (in Hg).
   Or:
   Press the HPA Softkey to display the barometric pressure setting in hectopascals.
4) Press the BACK Softkey to return to the top-level softkeys.

CHANGE NAVIGATION SOURCES

1) Press the CDI Softkey to change from GPS to VOR1 or LOC1. This places the light blue tuning box over the NAV1 standby frequency in the upper left corner of the PFD.
2) Press the CDI Softkey again to change from VOR1 or LOC1 to VOR2 or LOC2. This places the light blue tuning box over the NAV2 standby frequency.
3) Press the CDI Softkey a third time to return to GPS.
ENABLE/DISABLE OBS MODE WHILE NAVIGATING WITH GPS

1) Press the OBS Softkey to select OBS Mode.
2) Turn a CRS Knob to select the desired course to/from the waypoint. Press a CRS Knob to synchronize the Selected Course with the bearing to the next waypoint.
3) Press the OBS Softkey again to disable OBS Mode.

GENERIC TIMER

1) Press the TMR/REF Softkey, then turn the large FMS Knob to select the time field (hh/mm/ss). Turn the FMS Knobs to set the desired time, then press the ENT Key. The UP/DOWN field is now highlighted.
2) Turn the small FMS Knob to display the UP/DOWN window. Turn the FMS Knob to select ‘UP’ or ‘DOWN’, then press the ENT Key. ‘START?’ is now highlighted.
3) Press the ENT Key to START, STOP, or RESET the timer (if the timer is counting DOWN, it starts counting UP after reaching zero). Press the CLR Key or the TMR/REF Softkey to remove the window.

CONFIGURE VSPED BUGS

1) Press the TMR/REF Softkey.
2) Turn the large FMS Knob to highlight the desired Vspeed.
3) Use the small FMS Knob to change the Vspeed in 1-kt increments (when a speed has been changed from a default value, an asterisk appears next to the speed).
4) Press the ENT Key or turn the large FMS Knob to highlight the ON/OFF field
5) Turn the small FMS Knob clockwise to ON or counterclockwise to OFF.
6) To remove the window, press the CLR Key or the TMR/REF Softkey.
SET BAROMETRIC MINIMUM DESCENT ALTITUDE

1) Press the TMR/REF Softkey.
2) Turn the large FMS Knob to highlight the OFF/BARO field to the right of ‘MINIMUMS’.
3) Turn the small FMS Knob clockwise to BARO.
4) Press the ENT Key.
5) Use the small FMS Knob to enter the desired altitude.
6) Press the ENT Key.
7) To remove the window, press the CLR Key or the TMR/REF Softkey.

DISPLAYING WIND DATA

1) Press the PFD Softkey.
2) Press the WIND Softkey to display wind data to the left of the HSI.
3) Press one of the OPTN softkeys to change how wind data is displayed.
4) To remove the Wind Data Window, press the OFF Softkey.

CHANGING HSI FORMAT

1) Press the PFD Softkey.
2) Press the HSI FRMT Softkey.
3) Press the 360 HSI Softkey to display the full size HSI.
   Or:
   Press the ARC HSI Softkey to display the arc style HSI.
NOTE: The G950 Engine Indication System (EIS) is not available in the Tecnam P2006T. Refer to the Pilot’s Operating Handbook (POH) for engine display information and operating limitations.
ADF TUNING (OPTIONAL)

Tune the ADF using the remote ADF control head.

DME TUNING (OPTIONAL)

1) Press the DME Softkey.
2) Turn the large FMS to select the DME source field.
3) Turn the small FMS Knob to select the desired Nav radio.
4) Press the ENT Key to complete the selection.

ENTER A TRANSPONDER CODE

1) Press the XPDR Softkey to display the transponder mode selection softkeys.
2) Press the CODE Softkey to display the transponder code selection softkeys, for digit entry.
3) Press the digit softkeys to enter the code in the code field. When entering the code, the next key in sequence must be pressed within 10 seconds, or the entry is cancelled and restored to the previous code. Five seconds after the fourth digit has been entered, the transponder code becomes active.

SELECTING A COM RADIO

Transmit/Receive

Press the COM1 MIC, COM2 MIC, or COM3 MIC Key (optional COM, if installed) on the audio panel.

Receive Only

Press the COM1, COM2, or COM3 Key (optional COM, if installed) on the audio panel.
SELECTING A NAV RADIO

1) To begin navigating using a navigation radio, press the CDI Softkey on the PFD to select VOR1/LOC1 (NAV1) or VOR2/LOC2 (NAV2).

2) Press the NAV1, NAV2, DME, or ADF Key on the audio panel to select or deselect the navigation radio audio source. All radio keys can be selected individually or together.

NAV/COM TUNING

1) Press the small tuning knob to select the desired radio for tuning. A light blue box highlights the radio frequency to be tuned.

2) Turn the respective tuning knobs to enter the desired frequency into the standby frequency field. The large knob enters MHz and the small knob enters kHz.

3) Press the Frequency Transfer Key to place the frequency into the active frequency field.

DIGITAL CLEARANCE RECORDER AND PLAYER

**NOTE: Only the audio for the selected COM MIC Key is recorded. Audio is not recorded for COM3 MIC.**

- Pressing the PLAY Key once plays the latest recorded memory block, then returns to normal operation.
- Pressing the MKR/MUTE Key while playing a memory block stops play.
- Pressing the PLAY Key during play begins playing the previously recorded memory block. Each subsequent press of the PLAY Key begins playing the next previously recorded block.
INTERCOM SYSTEM (ICS) ISOLATION

Press the **PILOT** and/or **COPLT** Key on the audio panel to select those isolated from hearing the Nav/Com radios and music.

<table>
<thead>
<tr>
<th>PILOT KEY Annunciator</th>
<th>COPLT KEY Annunciator</th>
<th>Pilot Hears</th>
<th>Copilot Hears</th>
<th>Passenger Hears</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>Selected radios, aural alerts, pilot, copilot, passengers, music</td>
<td>Selected radios, aural alerts, pilot, copilot, passengers, music</td>
<td>Selected radios, aural alerts, pilot, copilot, passengers, music</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>Selected radios, aural alerts, pilot</td>
<td>Copilot, passengers, music</td>
<td>Copilot, passengers, music</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>Selected radios, aural alerts, pilot; passengers, music</td>
<td>Copilot</td>
<td>Selected radios, aural alerts, pilot, copilot, passengers, music</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>Selected radios, aural alerts, pilot, copilot</td>
<td>Selected radios, aural alerts, pilot, copilot</td>
<td>Passengers, music</td>
</tr>
</tbody>
</table>

ICS Isolation Modes
Blank Page
NOTE: Refer to the Aircraft Flight Manual (AFM) for the installed autopilot.

S-TEC FIFTY FIVE X AUTOPILOT

NOTE: This section covers only the additional ‘FD’ status annunciations that may appear in the G950 AFCS Status Box. These status annunciations are not analogous to both the G950 and the S-TEC Fifty Five X. Refer to the approved S-TEC Fifty Five X Pilot’s Operating Handbook (POH) for comprehensive list of annunciations and operating instructions.

In addition to the redundant status/mode annunciations and/or visual representations that are simultaneously displayed on both the G950 (AFCS Status Box and/or PFD) and the S-TEC Fifty Five X (Autopilot Display and/or Remote Annunciator Display), the G950 displays the additional status/mode annunciation of ‘FD’ when the Flight Director Mode is engaged.
GPS NAVIGATION

DIRECT-TO NAVIGATION

Direct-to Navigation from the MFD

1) Press the Direct-to (D) Key.
2) Enter the waypoint identifier.
3) Press the ENT Key to confirm the identifier. The ‘Activate?’ field is highlighted.
4) If no altitude constraint or course is desired, press the ENT Key to activate. To enter an altitude constraint, proceed to step 5.
5) Turn the large FMS Knob to place the cursor over the ‘VNV’ altitude field.
6) Enter the desired altitude.
7) Press the ENT Key. If the waypoint entered is an airport, the option to select MSL or AGL is now displayed. If the waypoint is not an airport, proceed to step 9.
8) Turn the small FMS Knob to select ‘MSL’ or ‘AGL’.
9) Press the ENT Key. The cursor is now flashing in the VNV offset distance field.
10) Enter the desired offset distance before (-) the waypoint.
11) Press the ENT Key. The ‘Activate?’ field is highlighted.
12) Press the ENT Key to activate.

Direct-to Navigation from the PFD

1) Press the Direct-to Key (D).
2) Turn the large FMS Knob to place the cursor in the desired selection field.
3) Turn the small FMS Knob to begin selecting the desired identifier, location, etc.
4) Press the ENT Key.
5) The cursor is now flashing on ‘ACTIVATE?’. If no altitude constraint or course is desired, press the ENT Key to activate. To enter an altitude constraint, proceed to step 6.
6) Turn the large FMS Knob to place the cursor over the ‘ALT’ altitude field.
7) Turn the small **FMS** Knob to enter the desired altitude.

8) Press the **ENT** Key. If the waypoint entered is an airport, the option to select MSL or AGL is now displayed. If the waypoint is not an airport, proceed to step 10.

9) Turn the small **FMS** Knob to select ‘MSL’ or ‘AGL’.

10) Press the **ENT** Key. The cursor is placed in the OFFSET distance field.

11) Turn the small **FMS** Knob to enter the desired target altitude offset from the selected Direct-to.

12) Press the **ENT** Key to highlight ‘Activate?’ or turn the large **FMS** Knob to highlight the ‘CRS’ field.

13) Turn the small **FMS** Knob to enter the desired course to the waypoint.

14) Press the **ENT** Key to highlight ‘ACTIVATE?’.

15) Press the **ENT** again to activate the Direct-to.

### ACTIVATE A STORED FLIGHT PLAN

1) Press the **FPL** Key on the MFD and turn the small **FMS** Knob to display the Flight Plan Catalog Page.

2) Press the **FMS** Knob to activate the cursor.

3) Turn the large **FMS** Knob to highlight the desired flight plan

4) Press the **ACTIVE** Softkey. The confirmation window is now displayed.

5) With ‘OK’ highlighted, press the **ENT** Key to activate the flight plan. To cancel the flight plan activation, turn the large **FMS** Knob to highlight ‘CANCEL’ and press the **ENT** Key.

### ACTIVATE A FLIGHT PLAN LEG

1) From the Active Flight Plan Page, press the **FMS** Knob to activate the cursor and turn the large **FMS** Knob to highlight the desired waypoint.

2) Press the **ACT LEG** Softkey on the MFD.

OR

3) Press the **MENU** Key, select the ‘Activate Leg’ option from the page menu and press the **ENT** Key. This step must be used when activating a leg from the PFD.

4) With ‘Activate’ highlighted, press the **ENT** Key.
STOP NAVIGATING A FLIGHT PLAN

1) Press the **FPL** Key to display the Active Flight Plan Page.

2) Press the **MENU** Key to display the Page Menu Window.

3) Turn the large **FMS** Knob to highlight ‘Delete Flight Plan’ and press the **ENT** Key. With ‘OK’ highlighted, press the **ENT** Key to deactivate the flight plan. This does not delete the stored flight plan, only the active flight plan.

VERTICAL NAVIGATION (VNAV)

The navigation database only contains altitudes for procedures that call for “Cross at” altitudes. If the procedure states “Expect to cross at,” the altitude is not in the database. In this case the altitude may be entered manually.

<table>
<thead>
<tr>
<th>ACTIVE FLIGHT PLAN</th>
<th>KIXD / KDFW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DTK</strong></td>
<td><strong>DIS</strong></td>
</tr>
<tr>
<td>KARLA</td>
<td>221°</td>
</tr>
<tr>
<td>COVIE</td>
<td>221°</td>
</tr>
<tr>
<td>LEMYN</td>
<td>220°</td>
</tr>
<tr>
<td>Approach - KDFW-RNAV 17L GPS LPV</td>
<td></td>
</tr>
<tr>
<td>RIVET iaf</td>
<td>259°</td>
</tr>
<tr>
<td>DRAAK</td>
<td>176°</td>
</tr>
<tr>
<td>INMOD</td>
<td>176°</td>
</tr>
<tr>
<td>MENOL faf</td>
<td>176°</td>
</tr>
<tr>
<td>RH17L map</td>
<td>176°</td>
</tr>
<tr>
<td>990FT</td>
<td>174°</td>
</tr>
</tbody>
</table>

- **Cross AT or ABOVE 5,000 ft**
- **Cross AT 2,300 ft**
- **Cross AT or BELOW 3,000 ft**
Altitudes associated with approach procedures are “auto-designated”. This means the system automatically uses the altitudes loaded with the approach for giving vertical flight path guidance outside the FAF. Note these altitudes are displayed as small light blue text.

Altitudes associated with arrival procedures are “manually-designated”. This means the system does not use the altitudes loaded with the arrival for giving vertical flight path guidance until designated to do so by the pilot. Note that these altitudes are initially displayed as white text. These altitudes may be “designated” by placing the cursor over the desired altitude and pressing the ENT Key. After designation, the text changes to light blue.

Altitudes that have been designated for use in vertical navigation may also be made “non-designated” by placing the cursor over the desired altitude and pressing the CLR Key. The altitude is now displayed only as a reference. It is not used to give vertical flight path guidance. Other displayed altitudes may change due to re-calculations or rendered invalid as a result of manually changing an altitude to a non-designated altitude.

<table>
<thead>
<tr>
<th>White Text</th>
<th>Light Blue Text</th>
<th>Light Blue Subdued Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large Text</strong></td>
<td>Altitude calculated by the system estimating the altitude of the aircraft as it passes over the navigation point. This altitude is provided as a reference and is not designated to be used in determining vertical flight path guidance.</td>
<td>The system cannot use this altitude in determining vertical flight path guidance.</td>
</tr>
<tr>
<td><strong>Small Text</strong></td>
<td>Altitude is not designated to be used in determining vertical flight path guidance. Altitude has been retrieved from the navigation database and is provided as a reference.</td>
<td></td>
</tr>
<tr>
<td>Altitude has been entered by the pilot. Altitude is designated for use in giving vertical flight path guidance. Altitude does not match the published altitude in navigation database or no published altitude exists.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The system cannot use this altitude in determining vertical flight path guidance.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TRIP PLANNING

1) Turn the large FMS Knob to select the ‘AUX’ page group.
2) If necessary, turn the small FMS Knob to select the Trip Planning Page.
3) The current page mode is displayed at the top of the page: ‘AUTOMATIC’ or ‘MANUAL’. To change the PAGE MODE, press the AUTO or MANUAL Softkey.
4) For Direct-to planning:
   a) Press the WPTS Softkey and verify that the starting waypoint field indicates ‘P.POS’ (present position).
   b) If necessary, press the MENU Key and select ‘Set WPT to Present Position’ to display ‘P.POS’.
   c) Press the ENT Key and the flashing cursor moves to the ending waypoint field.
   d) Enter the identifier of the ending waypoint and press the ENT Key to accept the waypoint.

   Or:

   For point-to-point planning:
   a) Enter the identifier of the starting waypoint.
   b) Once the waypoint’s identifier is entered, press the ENT Key to accept the waypoint. The flashing cursor moves to the ending waypoint.
   c) Again, enter the identifier of the ending waypoint.
   d) Press the ENT Key to accept the waypoint.

   Or:

   For flight plan leg planning:
   a) Press the FPL Softkey (at the bottom of the display).
   b) Turn the small FMS Knob to select the desired flight plan (already stored in memory), by number.
   c) Turn the large FMS Knob to highlight the ‘LEG’ field.
   d) Turn the small FMS Knob to select the desired leg of the flight plan, or select ‘CUM’ to apply trip planning calculations to the entire flight plan.
Selecting ‘FPL 00’ displays the active flight plan. If an active flight plan is selected, ‘REM’ is an available option to display planning data for the remainder of the flight plan.

**NOTE:** The page mode must be set to ‘MANUAL’ to perform the following steps.

5) Turn the large FMS Knob to highlight the departure time (DEP TIME) field.

**NOTE:** The departure time on the Trip Planning Page is used for preflight planning. Refer to the Utility Page for the actual flight departure time.

6) Enter the departure time. Press the **ENT** Key when finished. Departure time may be entered in local or UTC time, depending upon system settings.

7) The flashing cursor moves to the ground speed (GS) field. Enter the ground speed. Press the **ENT** Key when finished. Note that in ‘automatic’ page mode, ground speed is provided by the system.

8) The flashing cursor moves to the fuel flow field. Enter the fuel flow. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, fuel flow is provided by the system.

9) The flashing cursor moves to the fuel onboard field. Enter the fuel onboard. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, fuel onboard is provided by the fuel totalizer.

10) The flashing cursor moves to the calibrated airspeed (CALIBRATED AS) field. Enter the calibrated airspeed. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, calibrated airspeed is provided by the system.

11) The flashing cursor moves to the altitude (IND ALTITUDE) field. Enter the altitude. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, altitude is provided by the system.

12) The flashing cursor moves to the barometric setting (PRESSURE) field. Enter the desired baro setting. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, the baro setting is provided by the setting entered on the PFD.

13) The flashing cursor moves to the air temperature (TOTAL AIR TEMP) field. Enter the desired air temperature. Press the **ENT** Key when finished. Note that in ‘AUTOMATIC’ page mode, air temperature is provided by the system outside air temperature.
CREATE A NEW USER WAYPOINT DEFINED BY LATITUDE & LONGITUDE

1) Turn the large FMS Knob on the MFD to select the ‘WPT’ page group.
2) Turn the small FMS Knob to select the User WPT Information Page.
3) Press the NEW Softkey. A waypoint is created at the current aircraft position.
4) Enter the desired waypoint name.
5) Press the ENT Key.
6) The cursor is now in the ‘WAYPOINT TYPE’ field. If desired, the waypoint can be made temporary (deleted automatically when the system is turned off). If the waypoint is to remain in the system, proceed to step 7.
   a) Turn the large FMS Knob one click to the left to highlight ‘TEMPORARY’.
   b) Press the ENT Key to place a check-mark in the box.
7) The cursor is now in the ‘WAYPOINT TYPE’ field. Turn the small FMS Knob to display a list of waypoint types.
8) Turn the small FMS Knob to select LAT/LON (latitude and longitude).
9) Press the ENT Key.

CREATE A NEW USER WAYPOINT DEFINED BY RADIALS FROM OTHER WAYPOINTS

1) Turn the large FMS Knob on the MFD to select the ‘WPT’ page group.
2) Turn the small FMS Knob to select the User WPT Information Page.
3) Press the NEW Softkey. A waypoint is created at the current aircraft position.
4) Enter the desired waypoint name.
5) Press the ENT Key.
6) The cursor is now in the ‘WAYPOINT TYPE’ field. If desired, the waypoint can be made temporary (deleted automatically when the system is turned off). If the waypoint is to remain in the system, proceed to step 7.
   a) Turn the large FMS Knob one click to the left to highlight ‘TEMPORARY’.
   b) Press the ENT Key to place a check-mark in the box.
7) The cursor is now in the ‘WAYPOINT TYPE’ field. Turn the small FMS Knob to display a list of waypoint types.

8) Turn the small FMS Knob to select RAD/RAD (radial/radial).

9) Press the ENT Key.

10) The cursor moves to the ‘REFERENCE WAYPOINTS’ field. With the first waypoint name highlighted, use the FMS Knobs to enter the desired waypoint name. Waypoints may also be selected as follows:

   a) When a flight plan is active, turning the small FMS Knob to the left will display a list of the flight plan waypoints.

   b) Turn the large FMS Knob to select the desired waypoint.

   c) Press the ENT Key.

   Or:

   a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

   b) Turn the small FMS Knob to the right to display the ‘NRST’ airports to the aircraft’s current position.

   c) Turn the large FMS Knob to select the desired waypoint.

   d) Press the ENT Key.

   Or:

   a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

   b) Turn the small FMS Knob to the right to display the ‘RECENT’ waypoints.

   c) Turn the large FMS Knob to select the desired waypoint.

   d) Press the ENT Key.

   Or:

   a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

   b) Turn the small FMS Knob to the right to display the ‘USER’ waypoints.

   c) Turn the large FMS Knob to select the desired waypoint.

   d) Press the ENT Key.

11) Press the ENT Key. The cursor is displayed in the ‘RAD’ (radial) field. Enter the desired radial from the reference waypoint.
12) Press the **ENT** Key.

13) Repeat step 10 to enter the next waypoint name.

14) Press the **ENT** Key. The cursor is displayed in the ‘RAD’ (radial) field for the second waypoint. Enter the desired radial from the reference waypoint.

15) Press the **ENT** Key.

16) Press the **FMS** Knob to remove the flashing cursor.

CREATE A NEW USER WAYPOINT DEFINED BY A RADIAL & DISTANCE FROM ANOTHER WAYPOINT

1) Turn the large **FMS** Knob on the MFD to select the ‘WPT’ page group.

2) Turn the small **FMS** Knob to select the User WPT Information Page.

3) Press the **NEW** Softkey. A waypoint is created at the current aircraft position.

4) Enter the desired waypoint name.

5) Press the **ENT** Key.

6) The cursor is now in the ‘WAYPOINT TYPE’ field. If desired, the waypoint can be made temporary (deleted automatically when the system is turned off). If the waypoint is to remain in the system, proceed to step 7.

   a) Turn the large **FMS** Knob one click to the left to highlight ‘TEMPORARY’.

   b) Press the **ENT** Key to place a check-mark in the box.

7) The cursor is now in the ‘WAYPOINT TYPE’ field. Turn the small **FMS** Knob to display a list of waypoint types.

8) Turn the small **FMS** Knob to select RAD/DIS (radial/distance).

9) Press the **ENT** Key.

10) The cursor moves to the ‘REFERENCE WAYPOINTS’ field. With the first waypoint name highlighted, use the **FMS** Knobs to enter the desired waypoint name. Waypoints may also be selected as follows:

   a) When a flight plan is active, turning the small **FMS** Knob to the left will display a list of the flight plan waypoints.

   b) Turn the large **FMS** Knob to select the desired waypoint.

   c) Press the **ENT** Key.

Or:
Flight Planning

a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

b) Turn the small FMS Knob to the right to display the ‘NRST’ airports to the aircraft’s current position.

c) Turn the large FMS Knob to select the desired waypoint.

d) Press the ENT Key.

Or:

a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

b) Turn the small FMS Knob to the right to display the ‘RECENT’ waypoints.

c) Turn the large FMS Knob to select the desired waypoint.

d) Press the ENT Key.

Or:

a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.

b) Turn the small FMS Knob to the right to display the ‘USER’ waypoints.

c) Turn the large FMS Knob to select the desired waypoint.

d) Press the ENT Key.

11) Press the ENT Key. The cursor is displayed in the ‘RAD’ (radial) field. Enter the desired radial from the reference waypoint.

12) Press the ENT Key.

13) The cursor is now displayed in the ‘DIS’ (distance) field. Enter the desired distance from the reference waypoint.

14) Press the ENT Key.

15) Press the FMS Knob to remove the flashing cursor.

DELETE A USER WAYPOINT

1) Turn the large FMS Knob to select the ‘WPT’ page group.

2) Turn the small FMS Knob to select the User WPT Information Page.

3) Press the FMS Knob to activate the cursor.

4) Turn the large FMS Knob to the place the cursor in the ‘USER WAYPOINT LIST’ field.
5) Turn the small FMS Knob to highlight the desired waypoint.
6) Press the DELETE Softkey.
7) The message ‘Would you like to delete the user waypoint?’ is displayed. With ‘YES’ highlighted, press the ENT Key.

CREATE A NEW FLIGHT PLAN

**NOTE:** When creating a new flight plan in the Active Flight Plan Window, the first leg is activated automatically after it is created.

Using the MFD

1) Press the FPL Key.
2) Turn the small FMS Knob to display the Flight Plan Catalog Page.
3) Press the NEW Softkey to display a blank flight plan for the first empty storage location.
4) Turn the small FMS Knob to display the Waypoint Information Window.
5) Enter the identifier of the departure waypoint.
6) Press the ENT Key.
7) Repeat step number 4, 5, and 6 to enter the identifier for each additional flight plan waypoint.
8) When all waypoints have been entered, press the FMS Knob to return to the Flight Plan Catalog Page. The new flight plan is now in the list.

Using the PFD

**NOTE:** If a flight plan is active, an additional flight plan cannot be entered using the PFD.

1) Press the FPL Key.
2) Press the FMS Knob to activate the cursor.
3) Turn the small FMS Knob to enter the first letter of the destination waypoint identifier.
4) Turn the large FMS Knob to the right to move the cursor to the next character position.
5) Repeat step 3 and 4 to spell out the rest of the waypoint identifier.
6) Press the **ENT** Key and the cursor is now ready for entering of the next flight plan waypoint.

7) Repeat steps 3 through 6 to enter the identifier for each additional flight plan waypoint.

8) Once all waypoints have been entered, press the **FMS** Knob to remove the cursor. The new flight plan is now active.

**IMPORT A FLIGHT PLAN FROM AN SD CARD**

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**NOTE:** See the Annunciations & Alerts section for flight plan import message descriptions.

1) Insert the SD card containing the flight plan in the top card slot on the MFD.

2) Press the **FPL** Key on the MFD to display the Active Flight Plan Page.

3) Turn the small **FMS** Knob to select the Flight Plan Catalog Page.

4) Press the **FMS** Knob to activate the cursor.

5) Turn either **FMS** Knob to highlight an empty or existing flight plan.

6) Press the **IMPORT** Softkey.

   If an empty flight plan is selected, a list of the available flight plans on the SD card will be displayed.

   **Or:**

   If an existing flight plan is selected, an ‘Overwrite existing flight plan? OK or CANCEL’ prompt is displayed. Press the **ENT** Key to choose to overwrite the selected flight plan and see a list of the available flight plans on the SD card. If overwriting the existing flight plan is not desired, select ‘CANCEL’ using the **FMS** Knob, press the **ENT** Key, select another existing or empty flight plan, and again press the **IMPORT** Softkey.

7) Turn the small **FMS** Knob to highlight the desired flight plan for importing.

8) Press the **ENT** Key.

**INSERT A WAYPOINT IN THE ACTIVE FLIGHT PLAN**

1) Press the **FPL** Key to display the active flight plan.

2) If required, press the **FMS** Knob to activate the cursor.
3) Turn the large FMS Knob to highlight the desired flight plan waypoint. The new waypoint is inserted before the highlighted waypoint.

4) Turn the small FMS Knob. The Waypoint Information Window is now displayed.

5) Enter the new flight plan waypoint by one of the following:
   a) Enter the user waypoint identifier, facility, or city.
   b) Press the ENT Key.
      Or:
   a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.
   b) Turn the small FMS Knob to the right to display the ‘NRST’ airport waypoints to the aircraft’s current position.
   c) Turn the large FMS Knob to select the desired waypoint.
   d) Press the ENT Key.
      Or:
   a) Turn the small FMS Knob to the left. Initially, a flight plan waypoint list is displayed.
   b) Turn the small FMS Knob to the right to display the ‘RECENT’ waypoints.
   c) Turn the large FMS Knob to select the desired waypoint.
   d) Press the ENT Key.
   e) Press the ENT Key again to accept the waypoint.

ENTER AN AIRWAY IN A FLIGHT PLAN

1) Press the FPL Key.
2) Press the FMS Knob to activate the cursor (not required on the PFD).
3) Turn the large FMS Knob to highlight the waypoint after the desired airway entry point. If this waypoint is not a valid airway entry point, a valid entry point should be entered at this time.
4) Turn the small FMS Knob one click clockwise and press the LD AIRWY Softkey, or press the MENU Key and select “Load Airway”. The Select Airway Page is displayed. The LD AIRWY Softkey or the “Load Airway” menu item is available only when an acceptable airway entry waypoint has been chosen (the waypoint ahead of the cursor position).
5) Turn the FMS Knob to select the desired airway from the list, and press the ENT Key. Low altitude airways are shown first in the list, followed by “all” altitude airways, and then high altitude airways.

6) Turn the FMS Knob to select the desired airway exit point from the list, and press the ENT Key. ‘LOAD?’ is highlighted.

7) Press the ENT Key. The system returns to editing the flight plan with the new airway inserted.

**INVERT AN ACTIVE FLIGHT PLAN**

1) Press the FPL Key to display the active flight plan.
2) Press the MENU Key to display the Page Menu.
3) Turn the large FMS Knob to highlight ‘Invert Flight Plan’.
4) Press the ENT Key. The original flight plan remains intact in its flight plan catalog storage location.
5) With ‘OK’ highlighted, press the ENT Key to invert the flight plan.

**REMOVE A DEPARTURE, ARRIVAL, APPROACH, OR AIRWAY FROM A FLIGHT PLAN**

1) Press the FPL Key to display the active flight plan. Press the FMS Knob to activate the cursor.

Or, for a stored flight plan:

a) Press the FPL Key on the MFD.

b) Turn the small FMS Knob to select the Flight Plan Catalog Page.

c) Press the FMS Knob to activate the cursor.

d) Turn the large FMS Knob to highlight the desired flight plan.

e) Press the EDIT Softkey.

2) Turn the large FMS Knob to highlight the title for the approach, departure, arrival, or airway to be deleted. Titles appear in white directly above the procedure’s waypoints.

3) Press the CLR Key to display a confirmation window.

4) With ‘OK’ highlighted, press the ENT Key to remove the selected procedure or airway.
STORE A FLIGHT PLAN

1) After creating a flight plan on either the PFD or MFD, it may be saved by pressing the MENU Key.
2) Turn the large FMS Knob to highlight ‘Store Flight Plan’ and press the ENT Key.
3) With ‘OK’ highlighted, press the ENT Key to store the flight plan.

EDIT A STORED FLIGHT PLAN

1) Press the FPL Key on the MFD, then turn the small FMS Knob to display the Flight Plan Catalog Page.
2) Press the FMS Knob to activate the cursor.
3) Turn the large FMS Knob to highlight the desired flight plan.
4) Press the EDIT Softkey.
5) Turn the large FMS Knob to place the cursor in the desired location.
6) Enter the changes, then press the ENT Key.
7) Press the FMS Knob to return to the Flight Plan Catalog Page.

DELETE A WAYPOINT FROM THE FLIGHT PLAN

1) Press the FPL Key to display the active flight plan. Press the FMS Knob to activate the cursor.

Or, for a stored flight plan:

a) Press the FPL Key on the MFD.
b) Turn the small FMS Knob to select the Flight Plan Catalog Page.
c) Press the FMS Knob to activate the cursor.
d) Turn the large FMS Knob to highlight the desired flight plan.
e) Press the EDIT Softkey.

2) Turn the large FMS Knob to highlight the waypoint to be deleted.
3) Press the CLR Key to display a ‘REMOVE (Wpt Name)?’ confirmation window.
4) With ‘OK’ highlighted, press the ENT Key to remove the waypoint. To cancel the delete request, turn the large FMS Knob to highlight ‘CANCEL’ and press the ENT Key.
5) Once all changes have been made, press the FMS Knob to remove the cursor.
INVERT AND ACTIVATE A STORED FLIGHT PLAN

1) Press the FPL Key on the MFD.
2) Turn the small FMS Knob to select the Flight Plan Catalog Page.
3) Press the FMS Knob to activate the cursor.
4) Turn the large FMS Knob to highlight the desired flight plan.
5) Press the INVERT Softkey. ‘Invert and activate stored flight plan?’ is displayed.
6) With ‘OK’ highlighted, press the ENT Key. The selected flight plan is now inverted and activated. The original flight plan remains intact in its flight plan catalog storage location.

COPY A FLIGHT PLAN

1) Press the FPL Key on the MFD.
2) Turn the small FMS Knob to select the Flight Plan Catalog Page.
3) Press the FMS Knob to activate the cursor.
4) Turn the large FMS Knob to highlight the flight plan to be copied.
5) Press the COPY Softkey. A ‘Copy to flight plan #?’ confirmation window is displayed.
6) With ‘OK’ highlighted, press the ENT Key to copy the flight plan. To cancel, turn the large FMS Knob to highlight ‘CANCEL’ and press the ENT Key.

DELETE A FLIGHT PLAN

1) Press the FPL Key on the MFD.
2) Turn the small FMS Knob to select the Flight Plan Catalog Page.
3) Press the FMS Knob to activate the cursor.
4) Turn the large FMS Knob to highlight the flight plan to be deleted.
5) Press the DELETE Softkey. A ‘Delete flight plan #?’ confirmation window is displayed.
6) With ‘OK’ highlighted, press the ENT Key to delete the flight plan. To cancel, turn the large FMS Knob to highlight ‘CANCEL’ and press the ENT Key.
GRAPHICAL FLIGHT PLAN CREATION

1) Press the FPL Key on the MFD to display the Active Flight Plan Page.
2) Press the Joystick to activate the map pointer. Use the Joystick to move the pointer to the desired point on the map to be inserted as a waypoint in the flight plan.
3) The default insertion point is at the end of the flight plan. If the selected waypoint is to be placed anywhere other than the end of the flight plan, press the FMS Knob to activate the cursor. Waypoints are inserted ABOVE the cursor. Turn the large FMS Knob to select the desired insertion point.
4) Press the LD WPT Softkey. The selected waypoint is inserted at the selected point. The default user waypoint naming is USR000, USR001, USR002, and so on.
5) To change the user waypoint name, follow the procedure for modifying a user waypoint.

EXPORT A FLIGHT PLAN TO AN SD CARD

**NOTE:** See the Annunciations & Alerts section for flight plan export message descriptions.

1) Insert the SD card into the top card slot on the MFD.
2) Press the FPL Key to display the Active Flight Plan Page on the MFD.
3) Turn the small FMS Knob to select the Flight Plan Catalog Page.
4) Press the FMS Knob to activate the cursor.
5) Turn the large FMS Knob to highlight the flight plan to be exported.
6) Press the EXPORT Softkey.
7) Press the ENT Key to confirm the export.
PROCEDURES

LOAD AND ACTIVATE A DEPARTURE PROCEDURE

1) Press the PROC Key.
2) Turn the large FMS Knob to highlight ‘SELECT DEPARTURE’.
3) Press the ENT Key. The cursor is displayed in the ‘DEPARTURE’ field with a list of available departures.
4) Turn the large FMS Knob to highlight the desired departure.
5) Press the ENT Key. A list of runways may be displayed for the departure. If so, turn either FMS Knob to select the desired runway.
6) Press the ENT Key. The cursor is displayed in the ‘TRANSITION’ field with a list of available transitions.
7) Turn the large FMS Knob to highlight the desired transition.
8) Press the ENT Key.
9) With ‘LOAD?’ highlighted, press the ENT Key. The departure is active when the flight plan is active.

ACTIVATE A DEPARTURE LEG

1) Press the FPL Key on the MFD to display the active flight plan.
2) Press the FMS Knob to activate the cursor.
3) Turn the large FMS Knob to highlight the desired waypoint within the departure.
4) Press the ACT LEG Softkey. A confirmation window showing the selected leg is displayed.
5) With ‘ACTIVATE’ highlighted, press the ENT Key.

LOAD AN ARRIVAL PROCEDURE

1) Press the PROC Key.
2) Turn the large FMS Knob to highlight ‘SELECT ARRIVAL’.
3) Press the ENT Key. The cursor is displayed in the ‘ARRIVAL’ field with a list of available arrivals.
4) Turn the large FMS Knob to highlight the desired arrival.
5) Press the ENT Key. A list of transitions is displayed for the selected arrival.
6) Turn either FMS Knob to select the desired transition.
7) Press the ENT Key. A list of runways may be displayed for the selected arrival.
8) Turn the large FMS Knob to highlight the desired runway.
9) Press the ENT Key.
10) With ‘LOAD?’ highlighted, press the ENT Key.
11) The arrival becomes part of the active flight plan.
12) If an altitude associated with a waypoint in an arrival procedure is to be used to calculate vertical guidance perform the following steps:
   a) Press the FMS Knob to activate the cursor.
   b) Turn the large FMS Knob to highlight the desired waypoint altitude.
   c) Press the ENT Key to designate the altitude for use in giving vertical guidance.

ACTIVATE AN ARRIVAL LEG
1) Press the FPL Key on the MFD to display the active flight plan.
2) Press the FMS Knob to activate the cursor.
3) Turn the large FMS Knob to highlight the desired waypoint within the arrival.
4) Press the ACT LEG Softkey. A confirmation window showing the selected leg is displayed.
5) With ‘ACTIVATE’ highlighted, press the ENT Key.

LOAD AND/OR ACTIVATE AN APPROACH PROCEDURE

NOTE: If certain GPS parameters (WAAS, RAIM, etc.) are not available, some published approach procedures for the desired airport may not be displayed in the list of available approaches.

1) Press the PROC Key.
2) Turn the large FMS Knob to highlight ‘SELECT APPROACH’.
3) Press the ENT Key. A list of available approaches for the destination airport is displayed.

4) Turn either FMS Knob to highlight the desired approach.

5) Press the ENT Key. A list of available transitions for the selected approach procedure is now displayed.

6) Turn either FMS Knob to select the desired transition. The “Vectors” option assumes vectors will be received to the final course segment of the approach and will provide navigation guidance relative to the final approach course.

7) Press the ENT Key. The cursor moves to the MINIMUMS field.

8) If desired, the DA/MDA for the selected approach procedure may be entered and displayed on the PFD. Turn the small FMS Knob in the direction of the green arrow to change the display from OFF to BARO.

9) Press the ENT Key. The cursor moves to the altitude field. Turn the small FMS Knob to enter the published DA/MDA for the selected approach procedure.

10) Press the ENT Key. ‘LOAD? or ACTIVATE?’ is now displayed with ‘LOAD?’ highlighted.

11) Turn the large FMS Knob to select either ‘LOAD?’ or ‘ACTIVATE?’.

Selecting ‘LOAD?’ enters the selected approach procedure into the active flight plan, but is not currently active. Selecting ‘ACTIVATE?’ enters the selected approach procedure into the active flight plan and activates the first leg of the approach.

12) Press the ENT Key.

**ACTIVATE AN APPROACH IN THE ACTIVE FLIGHT PLAN**

1) Press the PROC Key.

2) Turn the large FMS Knob to highlight ‘ACTIVATE APPROACH’.

3) Press the ENT Key.
ACTIVATE A VECTOR TO FINAL APPROACH FIX

1) Press the PROC Key.
2) Turn the large FMS Knob to highlight ‘ACTIVATE VECTOR-TO-FINAL’.
3) Press the ENT Key.
4) The final approach course becomes the active leg.

ACTIVATE A MISSED APPROACH IN THE ACTIVE FLIGHT PLAN

1) Press the PROC Key.
2) Turn the large FMS Knob to highlight ‘ACTIVATE MISSED APPROACH’.
3) Press the ENT Key. A confirmation window is displayed.
4) With ‘ACTIVATE’ highlighted, press the ENT Key.
   Or:
   Press the Go-around Button.
HAZARD AVOIDANCE

CUSTOMIZING THE HAZARD DISPLAYS ON THE NAVIGATION MAP

1) With the Navigation Map Page displayed, press the MENU Key to display the Navigation Map Page Menu. The cursor flashes on the ‘Map Setup’ option.

2) Press the ENT Key. The Map Setup Menu is displayed. Turn the small FMS Knob to select ‘Traffic’ to customize the display of traffic.

3) Press the small FMS Knob to return to the Navigation Map Page.

TRAFFIC INFORMATION SERVICE

<table>
<thead>
<tr>
<th>Traffic Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Threat Traffic</td>
</tr>
<tr>
<td></td>
<td>(intruder is beyond 5 nm and greater than 1200’ vertical separation)</td>
</tr>
<tr>
<td></td>
<td>Traffic Advisory (TA)</td>
</tr>
<tr>
<td></td>
<td>(closing rate, distance, and vertical separation meet TA criteria)</td>
</tr>
<tr>
<td></td>
<td>Traffic Advisory Off Scale</td>
</tr>
</tbody>
</table>

Traffic Symbol Description

NOTE: Traffic Information Service (TIS) is only available when the aircraft is within the service volume of a TIS capable terminal radar site.

Displaying Traffic on the Traffic Map Page

1) Turn the large FMS Knob to select the Map Page Group.

2) Turn the small FMS Knob to select the Traffic Map Page.

3) Press the OPERATE Softkey to begin displaying traffic. ‘OPERATING’ is displayed in the Traffic Mode field.

4) Press the STANDBY Softkey to place the system in the Standby Mode. ‘STANDBY’ is displayed in the Traffic Mode field.

5) Rotate the Joystick clockwise to display a larger area or rotate counterclockwise to display a smaller area.

6) Press the TNA MUTE Softkey to mute the “Traffic Not Available” aural alert.
Displaying Traffic on the Navigation Map

1) Ensure TIS is operating. With the Navigation Map displayed, press the MAP Softkey.
2) Press the TRAFFIC Softkey. Traffic is now displayed on the map.

TERRAIN AND OBSTACLE PROXIMITY

NOTE: Terrain data is not displayed when the aircraft latitude is greater than 75 degrees north or 60 degrees south.

Displaying Terrain and Obstacles on the Terrain Proximity Page

1) Turn the large FMS Knob to select the Map Page Group.
2) Turn the small FMS Knob to select the last rectangular page icon.
3) If desired, press the VIEW Softkey to access the ARC and 360 Softkeys. When the ARC Softkey is pressed, a radar-like 120° view is displayed. Press the 360 Softkey to return to the 360° default display.
4) Rotate the Joystick clockwise to display a larger area or rotate counterclockwise to display a smaller area.

<table>
<thead>
<tr>
<th>Color</th>
<th>Terrain/Obstacle Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Terrain/Obstacle above or within 100’ below current aircraft altitude.</td>
</tr>
<tr>
<td>Yellow</td>
<td>Terrain/Obstacle between 100’ and 1000’ below current aircraft altitude.</td>
</tr>
<tr>
<td>Black</td>
<td>Terrain/Obstacle is more than 1000’ below aircraft altitude.</td>
</tr>
</tbody>
</table>

Displaying Terrain and Obstacles on the Navigation Map

1) With the Navigation Map displayed, press the MAP Softkey.
2) Press the TERRAIN Softkey. Terrain and obstacle proximity will now be displayed on the map.
SAFETAXI®

SafeTaxi® is an enhanced feature that gives greater map detail as the map range is adjusted in on the airport. The airport display on the map reveals runways with numbers, taxiways identifiers, and airport landmarks including ramps, buildings, control towers, and other prominent features. Resolution is greater at lower map ranges. The aircraft symbol provides situational awareness while taxiing.

Pressing the DCLTR Softkey (declutter) once removes the taxiway markings and airport identification labels. Pressing the DCLTR Softkey twice removes VOR station ID, the VOR symbol, and intersection names if within the airport plan view. Pressing the DCLTR Softkey a third time removes the airport runway layout, unless the airport in view is part of an active route structure. Pressing the DCLTR Softkey again cycles back to the original map detail.

The SafeTaxi database contains detailed airport diagrams for selected airports. These diagrams provide the pilot with situational awareness by displaying the aircraft position in relation to taxiways, ramps, runways, terminals, and services. This information should not be used by the pilot as the basis for maneuvering the aircraft on the ground. This database is updated on a 56-day cycle.

SCHEDULER

Scheduler messages appear in the Alerts Window on the PFD. When a scheduler message is waiting, the ALERTS Softkey label changes to ADVISORY. Pressing the ADVISORY Softkey opens the Alerts Window and acknowledges the scheduler message. The softkey label reverts to ALERTS when pressed, the Alerts Window is removed from the display, and the scheduler message is deleted from the message queue.

Message timers set to periodic alerting automatically reset to the original timer value once the message is displayed. When power is cycled, all messages are retained until deleted, and message timer countdown is resumed.

Enter a Scheduler Message

1) Select the AUX - Utility Page.
2) Press the FMS Knob momentarily to activate the flashing cursor.
3) Turn the large FMS Knob to highlight the first empty scheduler message naming field.
4) Use the FMS Knob to enter the message text to be displayed in the Alerts Window and press the ENT Key.
5) Press the ENT Key again or use the large FMS Knob to move the cursor to the field next to Type.
6) Turn the small FMS Knob to select the message alert type:
   - Event—Message issued at the specified date/time
   - One-time—Message issued when the message timer reaches zero (default setting)
   - Periodic—Message issued each time the message timer reaches zero
7) Press the ENT Key again or use the large FMS Knob to move the cursor to the next field.
8) For periodic and one-time message, use the FMS Knob to enter the timer value (HH:MM:SS) from which to countdown and press the ENT Key.
9) For event-based messages:
   a) Use the FMS Knob to enter the desired date (DD-MM-YY) and press the ENT Key.
   b) Press the ENT Key again or use the large FMS Knob to move the cursor to the next field.
   c) Use the FMS Knob to enter the desired time (HH:MM) and press the ENT Key.
10) Press the ENT Key again or use the large FMS Knob to move the cursor to enter the next message.

Delete a Scheduler Message

1) Select the AUX - Utility Page.
2) Press the FMS Knob momentarily to activate the flashing cursor.
3) Turn the large FMS Knob to highlight the name field of the scheduler message to be deleted.
4) Press the CLR Key to clear the message text. If the CLR Key is pressed again, the message is restored.
5) Press the ENT Key while the message line is cleared to clear the message time.
ABNORMAL OPERATION

REVERSIONARY MODE

Should a system detected failure occur in either display, the G950 automatically enters reversionary mode. In reversionary mode, critical flight instrumentation is combined with engine instrumentation on the remaining display.

Reversionary display mode can be manually activated by pressing the display backup button installed in the cockpit.

NOTE: The Pilot’s Operating Handbook (POH) and/or Airplane Flight Manual (AFM) always takes precedence over the information found in this section.

ABNORMAL COM OPERATION

When a COM tuning failure is detected by the system, the emergency frequency (121.500 MHz) is automatically loaded into the active frequency field of the COM radio for which the tuning failure was detected. In the event of a failure of both PFDs, the emergency frequency (121.500 MHz) automatically becomes the active frequency on both COM radios.

HAZARD DISPLAYS WITH LOSS OF GPS POSITION

If GPS position is lost, or becomes invalid, selected hazards being displayed on the Navigation Map Page are removed until GPS position is again established.

Loss of Hazard Functions with Loss of GPS Position
Abnormal Operation

UNUSUAL ATTITUDES

The PFD ‘declutters’ when the aircraft enters an unusual attitude. Only the primary functions are displayed in these situations.

The following information is removed from the PFD (and corresponding softkeys are disabled) when the aircraft experiences unusual attitudes:

- Traffic Annunciations
- AFCS Annunciations
- Flight director Command Bars
- Inset Map
- Temperatures
- DME Information Window
- Wind Data
- Selected Heading Box
- Selected Course Box
- Transponder Status Box
- System Time
- PFD Setup Menu
- Windows displayed in the lower right corner of the PFD:
  - Timer/References
  - Nearest Airports
  - Flight Plan
  - Messages
  - Procedures
  - DME Tuning
- Barometric Minimum Descent Altitude Box
- Glideslope, Glide-path, and Vertical Deviation Indicators
- Altimeter Barometric Setting
- Selected Altitude
- VNV Target Altitude

Extreme Pitch Indication
**DEAD RECKONING**

While in Enroute or Oceanic phase of flight, if the G950 detects an invalid GPS solution or is unable to calculate a GPS position, the system automatically reverts to Dead Reckoning (DR) Mode. In DR Mode, the G950 uses its last-known position combined with continuously updated airspeed and heading data (when available) to calculate and display the aircraft’s current estimated position.

**NOTE:** Dead Reckoning Mode only functions in Enroute (ENR) or Oceanic (OCN) phase of flight. In all other phases, an invalid GPS solution produces a “NO GPS POSITION” annunciation on the map and the G950 stops navigating in GPS Mode.

DR Mode is indicated on the G950 by the appearance of the letters ‘DR’ superimposed in yellow over the ‘own aircraft’ symbol as shown in the following figure. In addition, ‘DR’ is prominently displayed, also in yellow, on the HSI slightly above and to the right of the aircraft symbol on the CDI as shown in the following figure. Also, the CDI deviation bar is removed from the display. Lastly, but at the same time, a ‘GPS NAV LOST’ alert message appears on the PFD.

Normal navigation using GPS/WAAS source data resumes automatically once a valid GPS solution is restored.

It is important to note that estimated navigation data supplied by the G950 in DR Mode may become increasingly unreliable and must not be used as a sole means of navigation. If, while in DR Mode, airspeed and/or heading data is also lost or not available, the DR function may not be capable of estimating your position and, consequently, the system may display a path that is different than the actual movement of the aircraft. Estimated position information displayed by the G950 through DR while there is no heading and/or airspeed data available should not be used for navigation.

DR Mode is inherently less accurate than the standard GPS/WAAS Mode due to the lack of satellite measurements needed to determine a position. Changes in wind speed and/or wind direction compounds the relative inaccuracy of DR Mode. Because of this degraded accuracy, the crew must maintain position awareness using other navigation equipment until GPS-derived position data is restored.
Dead Reckoning Indications

As a result of operating in DR Mode, all GPS-derived data is computed based upon an estimated position and is displayed as yellow text on the display to denote degraded navigation source information. This data includes the following:

- Navigation Status Box fields except Active Leg, TAS, and DTK
- GPS Bearing Pointer
- Wind data and pointers in the Wind Data Box on the PFD
- Current Track Indicator
- All Bearing Pointer Distances
- Active Flight Plan distances, bearings, and ETE values

The accuracy of all nearest information (airports, airspaces, and waypoints) is questionable. Also, airspace alerts continue to function, but with degraded accuracy.
## ANNUNCIATIONS & ALERTS

### WARNING ANNUNCIATION

<table>
<thead>
<tr>
<th>Annunciation Text</th>
<th>Alerts Window Message</th>
<th>Audio Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>L BUS VOLT HIGH</td>
<td>Lh Overvoltage</td>
<td></td>
</tr>
<tr>
<td>R BUS VOLT HIGH</td>
<td>Rh Overvoltage</td>
<td></td>
</tr>
<tr>
<td>L COOLANT LOW</td>
<td>Lh Low Coolant</td>
<td></td>
</tr>
<tr>
<td>R COOLANT LOW</td>
<td>Rh Low Coolant</td>
<td>Repeating Tone</td>
</tr>
<tr>
<td>RH ENGINE FIRE</td>
<td>Right engine fire detected</td>
<td></td>
</tr>
<tr>
<td>LH ENGINE FIRE</td>
<td>Left engine fire detected</td>
<td></td>
</tr>
<tr>
<td>PILOT DR OPEN</td>
<td>Main door open</td>
<td></td>
</tr>
<tr>
<td>REAR DR OPEN</td>
<td>Rear Door Open</td>
<td></td>
</tr>
</tbody>
</table>

### CAUTION ANNUNCIATION

<table>
<thead>
<tr>
<th>Annunciation Text</th>
<th>Alerts Window Message</th>
<th>Audio Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>L ALT FAIL</td>
<td>Lh Generator</td>
<td>Single Chime</td>
</tr>
<tr>
<td>R ALT FAIL</td>
<td>Rh Generator</td>
<td></td>
</tr>
<tr>
<td>EXT POWER ON</td>
<td>Aircraft using external power</td>
<td></td>
</tr>
<tr>
<td>PITOT HEAT FAIL</td>
<td>Pitot Heat Fail</td>
<td></td>
</tr>
</tbody>
</table>

### SAFE OPERATING ANNUNCIATION

<table>
<thead>
<tr>
<th>Annunciation Text</th>
<th>Alerts Window Message</th>
<th>Audio Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEAR PUMP ON</td>
<td>Gear Pump Powered</td>
<td>None</td>
</tr>
<tr>
<td>L FUEL PUMP ON</td>
<td>Lh Fuel Pump</td>
<td></td>
</tr>
<tr>
<td>R FUEL PUMP ON</td>
<td>Rh Fuel Pump</td>
<td></td>
</tr>
<tr>
<td>PITOT HEAT ON</td>
<td>Pitot Heat</td>
<td></td>
</tr>
</tbody>
</table>
Annunciations & Alerts

ALERT MESSAGE

<table>
<thead>
<tr>
<th>Alerts Window Message</th>
<th>Audio Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFD FAN FAIL – The cooling fan for the PFD is inoperative.</td>
<td>None</td>
</tr>
<tr>
<td>MFD FAN FAIL – The cooling fan for the MFD is inoperative.</td>
<td>None</td>
</tr>
</tbody>
</table>

VOICE ALERTS

<table>
<thead>
<tr>
<th>Voice Alert</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Minimums, minimums”</td>
<td>The aircraft has descended below the preset barometric minimum descent altitude.</td>
</tr>
<tr>
<td>“Vertical track”</td>
<td>The aircraft is one minute from Top of Descent. Issued only when vertical navigation is enabled.</td>
</tr>
<tr>
<td>“Traffic”</td>
<td>Played when a Traffic Advisory (TA) is issued.</td>
</tr>
<tr>
<td>“Traffic Not Available”</td>
<td>The aircraft is outside the Traffic Information Service (TIS) coverage area.</td>
</tr>
</tbody>
</table>

MFD & PFD MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATA LOST</td>
<td>The pilot profile data was lost. System reverts to default pilot profile and settings. The pilot may reconfigure the MFD &amp; PFDs with preferred settings, if desired.</td>
</tr>
<tr>
<td>XTALK ERROR</td>
<td>The MFD and PFDs are not communicating with each other. The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 SERVICE</td>
<td>The PFD and/or MFD self-test has detected a problem. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MFD1 SERVICE</td>
<td>The PFD and/or MFD has incorrect software installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MANIFEST</td>
<td>The PFD configuration settings do not match backup configuration memory. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>

# MFD & PFD MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFD1 CONFIG – MFD1 config error. Config service req’d.</td>
<td>The MFD configuration settings do not match backup configuration memory. The G950 system should be serviced.</td>
</tr>
<tr>
<td>SW MISMATCH – GDU software version mismatch. Xtalk is off.</td>
<td>The MFD and PFDs have different software versions installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 COOLING – PFD1 has poor cooling. Reducing power usage.</td>
<td>The PFD and/or MFD is overheating and is reducing power consumption by dimming the display. If problem persists, the G950 system should be serviced.</td>
</tr>
<tr>
<td>MFD1 COOLING – MFD1 has poor cooling. Reducing power usage.</td>
<td></td>
</tr>
<tr>
<td>PFD1 KEYSTK – PFD1 [key name] Key is stuck.</td>
<td>A key is stuck on the PFD and/or MFD bezel. Attempt to free the stuck key by pressing it several times. The G950 system should be serviced if the problem persists.</td>
</tr>
<tr>
<td>MFD1 KEYSTK – MFD [key name] Key is stuck.</td>
<td></td>
</tr>
<tr>
<td>CNFG MODULE – PFD1 configuration module is inoperative.</td>
<td>The PFD1 configuration module backup memory has failed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 VOLTAGE – PFD1 has low voltage. Reducing power usage</td>
<td>The PFD1 voltage is low. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MFD1 VOLTAGE – MFD1 has low voltage. Reducing power usage</td>
<td>The MFD voltage is low. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>

# DATABASE MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFD1 DB ERR – MFD1 aviation database error exists.</td>
<td>The MFD and/or PFD detected a failure in the aviation database. Attempt to reload the aviation database. If problem persists, the G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 aviation database error exists.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 basemap database error exists.</td>
<td>The MFD and/or PFD detected a failure in the basemap database.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 basemap database error exists.</td>
<td></td>
</tr>
<tr>
<td>Message</td>
<td>Comments</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 terrain database error exists.</td>
<td>The MFD and/or PFD detected a failure in the terrain database. Ensure that the terrain card is properly inserted in display. Replace terrain card. If problem persists, The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 terrain database error exists.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 terrain database missing.</td>
<td>The terrain database is present on another LRU, but is missing on the specified LRU.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 terrain database missing.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 obstacle database error exists.</td>
<td>The MFD and/or PFD detected a failure in the obstacle database. Ensure that the data card is properly inserted. Replace data card. If problem persists, The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 obstacle database error exists.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 obstacle database missing.</td>
<td>The obstacle database is present on another LRU, but is missing on the specified LRU.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 obstacle database missing.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 airport terrain database error exists.</td>
<td>The MFD and/or PFD detected a failure in the airport terrain database. Ensure that the data card is properly inserted. Replace data card. If problem persists, The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 airport terrain database error exists.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 airport terrain database missing.</td>
<td>The airport terrain database is present on another LRU, but is missing on the specified LRU.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 airport terrain database missing.</td>
<td></td>
</tr>
<tr>
<td>MFD1 DB ERR – MFD1 Safe Taxi database error exists.</td>
<td>The MFD and/or PFD detected a failure in the Safe Taxi database. Ensure that the data card is properly inserted. Replace data card. If problem persists, The G950 system should be serviced.</td>
</tr>
<tr>
<td>PFD1 DB ERR – PFD1 Safe Taxi database error exists.</td>
<td></td>
</tr>
</tbody>
</table>
## DATABASE MESSAGE ADVISORIES (CONT.)

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MFD1 DB ERR</strong> – MFD1 Chartview database error exists.</td>
<td>The MFD and/or PFDs detected a failure in the ChartView database (optional feature). Ensure that the data card is properly inserted. Replace data card. If problem persists, the G950 system should be serviced.</td>
</tr>
<tr>
<td><strong>MFD1 DB ERR</strong> – MFD1 FliteCharts database error exists.</td>
<td>The MFD and/or PFDs detected a failure in the FliteCharts database (optional feature). Ensure that the data card is properly inserted. Replace data card. If problem persists, the G950 system should be serviced.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Aviation database version mismatch. Xtalk is off.</td>
<td>The PFDs and MFD have different aviation database versions installed. Crossfill is off. Install correct aviation database version in all displays.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Aviation database type mismatch. Xtalk is off.</td>
<td>The PFDs and MFD have different aviation database types installed (Americas, European, etc.). Crossfill is off. Install correct aviation database type in all displays.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Terrain database version mismatch.</td>
<td>The PFDs and MFD have different terrain database versions installed. Install correct terrain database version in all displays.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Terrain database type mismatch.</td>
<td>The PFDs and MFD have different terrain database types installed. Install correct terrain database type in all displays.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Obstacle database version mismatch.</td>
<td>The PFDs and MFD have different obstacle database versions installed. Install correct obstacle database version in all displays.</td>
</tr>
<tr>
<td><strong>DB MISMATCH</strong> – Airport Terrain database mismatch.</td>
<td>The PFDs and MFD have different airport terrain databases installed. Install correct airport terrain database in all displays.</td>
</tr>
</tbody>
</table>
## Annunciations & Alerts

### Garmin G950 Cockpit Reference Guide for the Tecnam P2006T

#### GMA 1347 MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMA1 FAIL — GMA1 is inoperative.</td>
<td>The audio panel self-test has detected a failure. The audio panel is unavailable. The G950 system should be serviced.</td>
</tr>
<tr>
<td>GMA1 CONFIG — GMA1 config error. Config service req’d.</td>
<td>The audio panel configuration settings do not match backup configuration memory. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MANIFEST — GMA1 software mismatch, communication halted.</td>
<td>The audio panel has incorrect software installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>GMA1 SERVICE — GMA1 needs service. Return unit for repair.</td>
<td>The audio panel self-test has detected a problem. Certain audio functions may still be available, and the audio panel may still be usable. The G950 system should be serviced when possible.</td>
</tr>
</tbody>
</table>

#### GIA 63W MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIA1 CONFIG — GIA1 config error. Config service req’d.</td>
<td>The GIA1 and/or GIA2 configuration settings do not match backup configuration memory. The G950 system should be serviced.</td>
</tr>
<tr>
<td>GIA2 CONFIG — GIA2 config error. Config service req’d.</td>
<td>The GIA1 and/or GIA2 have an error in the audio configuration. The G950 system should be serviced.</td>
</tr>
<tr>
<td>GIA1 COOLING — GIA1 temperature too low.</td>
<td>The GIA1 and/or GIA2 temperature is too low to operate correctly. Allow units to warm up to operating temperature.</td>
</tr>
<tr>
<td>GIA2 COOLING — GIA2 temperature too low.</td>
<td>The GIA1 and/or GIA2 temperature is too high. If problem persists, the G950 system should be serviced.</td>
</tr>
</tbody>
</table>
**GIA 63W MESSAGE ADVISORIES (CONT.)**

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GIA1 SERVICE</strong></td>
<td>GIA1 needs service. Return the unit for repair.</td>
</tr>
<tr>
<td><strong>GIA2 SERVICE</strong></td>
<td>GIA2 needs service. Return the unit for repair.</td>
</tr>
<tr>
<td><strong>HW MISMATCH</strong></td>
<td>GIA hardware mismatch. GIA1 communication halted. A GIA mismatch has been detected, where only one is WAAS capable.</td>
</tr>
<tr>
<td><strong>MANIFEST</strong></td>
<td>GIA1 software mismatch, communication halted. The GIA1 and/or GIA 2 has incorrect software installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td><strong>MANIFEST</strong></td>
<td>GIA2 software mismatch, communication halted. The GIA1 and/or GIA 2 has incorrect software installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td><strong>MANIFEST</strong></td>
<td>GFC software mismatch, communication halted. Incorrect servo software is installed, or gain settings are incorrect.</td>
</tr>
<tr>
<td><strong>COM1 TEMP</strong></td>
<td>COM1 over temp. Reducing transmitter power. The system has detected an over temperature condition in COM1 and/or COM2.</td>
</tr>
<tr>
<td><strong>COM2 TEMP</strong></td>
<td>COM2 over temp. Reducing transmitter power. The system has detected an over temperature condition in COM1 and/or COM2.</td>
</tr>
<tr>
<td><strong>COM1 SERVICE</strong></td>
<td>COM1 needs service. Return unit for repair. The system has detected a failure in COM1 and/or COM2. COM1 and/or COM2 may still be usable.</td>
</tr>
<tr>
<td><strong>COM2 SERVICE</strong></td>
<td>COM2 needs service. Return unit for repair. The system has detected a failure in COM1 and/or COM2. COM1 and/or COM2 may still be usable.</td>
</tr>
<tr>
<td><strong>COM1 PTT</strong></td>
<td>COM1 push-to-talk key is stuck. The COM1 and/or COM2 external push-to-talk switch is stuck in the enable (or “pressed”) position.</td>
</tr>
<tr>
<td><strong>COM2 PTT</strong></td>
<td>COM2 push-to-talk key is stuck. The COM1 and/or COM2 external push-to-talk switch is stuck in the enable (or “pressed”) position.</td>
</tr>
</tbody>
</table>
## Annunciations & Alerts

### GIA 63W MESSAGE ADVISORIES (CONT.)

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<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COM1 RMT XFR</strong></td>
<td>COM1 remote transfer key is stuck.</td>
</tr>
<tr>
<td><strong>COM2 RMT XFR</strong></td>
<td>COM2 remote transfer key is stuck.</td>
</tr>
<tr>
<td><strong>LOI</strong></td>
<td>GPS integrity lost. Crosscheck with other NAVS.</td>
</tr>
<tr>
<td><strong>GPS NAV LOST</strong></td>
<td>Loss of GPS navigation. Insufficient satellites.</td>
</tr>
<tr>
<td><strong>GPS NAV LOST</strong></td>
<td>Loss of GPS navigation. Position error.</td>
</tr>
<tr>
<td><strong>GPS NAV LOST</strong></td>
<td>Loss of GPS navigation. GPS fail.</td>
</tr>
<tr>
<td><strong>ABORT APR</strong></td>
<td>Abort approach due to loss of GPS navigation.</td>
</tr>
<tr>
<td><strong>APR DWNGRADE</strong></td>
<td>Vertical guidance generated by WAAS is unavailable, use LNAV only minimums.</td>
</tr>
<tr>
<td><strong>TRUE APR</strong></td>
<td>Displayed after passing the first waypoint of a true north approach when the nav angle is set to ‘AUTO’.</td>
</tr>
<tr>
<td><strong>GPS1 SERVICE</strong></td>
<td>GPS1 needs service. Return unit for repair.</td>
</tr>
<tr>
<td><strong>GPS2 SERVICE</strong></td>
<td>GPS2 needs service. Return unit for repair.</td>
</tr>
<tr>
<td><strong>NAV1 SERVICE</strong></td>
<td>NAV1 needs service. Return unit for repair.</td>
</tr>
<tr>
<td><strong>NAV2 SERVICE</strong></td>
<td>NAV2 needs service. Return unit for repair.</td>
</tr>
<tr>
<td><strong>NAV1 RMT XFR</strong></td>
<td>The remote NAV1 and/or NAV2 transfer switch is stuck in the enabled (or “pressed”) state. Press the transfer switch again to cycle its operation.</td>
</tr>
<tr>
<td><strong>NAV2 RMT XFR</strong></td>
<td>The remote NAV1 and/or NAV2 transfer switch is stuck in the enabled (or “pressed”) state. Press the transfer switch again to cycle its operation.</td>
</tr>
</tbody>
</table>
### GIA 63W MESSAGE ADVISORIES (CONT.)

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>G/S1 FAIL – G/S1 is inoperative.</td>
<td>A failure has been detected in glideslope receiver 1 and/or receiver 2. The G950 system should be serviced.</td>
</tr>
<tr>
<td>G/S2 FAIL – G/S2 is inoperative.</td>
<td></td>
</tr>
<tr>
<td>G/S1 SERVICE – G/S1 needs service. Return unit for repair.</td>
<td>A failure has been detected in glideslope receiver 1 and/or receiver 2. The receiver may still be available. The G950 system should be serviced when possible.</td>
</tr>
<tr>
<td>G/S2 SERVICE – G/S2 needs service. Return unit for repair.</td>
<td></td>
</tr>
</tbody>
</table>

### GTX 33 MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>XPDR1 CONFIG – XPDR1 config error. Config service req’d.</td>
<td>The transponder configuration settings do not match those of backup configuration memory. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MANIFEST – GTX1 software mismatch, communication halted.</td>
<td>The transponder has incorrect software installed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>XPDR1 SRVC – XPDR1 needs service. Return unit for repair.</td>
<td>The #1 transponder should be serviced when possible.</td>
</tr>
<tr>
<td>XPDR1 FAIL – XPDR1 is inoperative.</td>
<td>There is no communication with the #1 transponder.</td>
</tr>
</tbody>
</table>

### GRS 77 MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHRS1 TAS – AHRS1 not receiving valid airspeed.</td>
<td>The #1 AHRS is not receiving true airspeed from the air data computer. The AHRS relies on GPS information to augment the lack of airspeed. The G950 system should be serviced.</td>
</tr>
<tr>
<td>AHRS1 GPS – AHRS1 using backup GPS source.</td>
<td>The #1 AHRS is using the backup GPS path. Primary GPS path has failed. The G950 system should be serviced when possible.</td>
</tr>
<tr>
<td>AHRS1 GPS – AHRS1 not receiving any GPS information.</td>
<td>The #1 AHRS is not receiving any or any useful GPS information. Check AFMS limitations. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>
### GRS 77 MESSAGE ADVISORIES (CONT.)

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHRS1 GPS — AHRS1 not receiving backup GPS information.</td>
<td>The #1 AHRS is not receiving backup GPS information. The G950 system should be serviced.</td>
</tr>
<tr>
<td>AHRS1 GPS — AHRS1 operating exclusively in no-GPS mode.</td>
<td>The #1 AHRS is operating exclusively in no-GPS mode. The G950 system should be serviced.</td>
</tr>
<tr>
<td>AHRS1 SRVC — AHRS1 Magnetic-field model needs update.</td>
<td>The #1 AHRS earth magnetic field model is out of date. Update magnetic field model when practical.</td>
</tr>
<tr>
<td>GEO LIMITS — AHRS1 too far North/South, no magnetic compass.</td>
<td>The aircraft is outside geographical limits for approved AHRS operation. Heading is flagged as invalid.</td>
</tr>
<tr>
<td>MANIFEST — GRS1 software mismatch, communication halted.</td>
<td>The #1 AHRS has incorrect software installed. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>

### GMU 44 MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDG FAULT — AHRS1 magnetometer fault has occurred.</td>
<td>A fault has occurred in the #1 GMU 44. Heading is flagged as invalid. The AHRS uses GPS for backup mode operation. The G950 system should be serviced.</td>
</tr>
<tr>
<td>MANIFEST — GMU1 software mismatch, communication halted.</td>
<td>The GMU 44 has incorrect software installed. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>

### GDC 74A MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANIFEST — GDC1 software mismatch, communication halted.</td>
<td>The GDC 74A has incorrect software installed. The G950 system should be serviced.</td>
</tr>
</tbody>
</table>
### MISCELLANEOUS MESSAGE ADVISORIES

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FPL WPT LOCK</strong> – Flight plan waypoint is locked.</td>
<td>Upon power-up, the G950 system detects that a stored flight plan waypoint is locked. This occurs when an aviation database update eliminates an obsolete waypoint. The flight plan cannot find the specified waypoint and flags this message. This can also occur with user waypoints in a flight plan that is deleted. Remove the waypoint from the flight plan if it no longer exists in any database, or update the waypoint name/identifier to reflect the new information.</td>
</tr>
<tr>
<td><strong>FPL WPT MOVE</strong> – Flight plan waypoint moved.</td>
<td>The system has detected that a waypoint coordinate has changed due to a new aviation database update. Verify that stored flight plans contain correct waypoint locations.</td>
</tr>
<tr>
<td><strong>TIMER EXPIRD</strong> – Timer has expired.</td>
<td>The system notifies the pilot that the timer has expired.</td>
</tr>
<tr>
<td><strong>DB CHANGE</strong> – Database changed. Verify user modified procedures.</td>
<td>This occurs when a stored flight plan contains procedures that have been manually edited. This alert is issued only after an aviation database update. Verify that the user-modified procedures in stored flight plans are correct and up to date.</td>
</tr>
<tr>
<td><strong>DB CHANGE</strong> – Database changed. Verify stored airways.</td>
<td>This occurs when a stored flight plan contains an airway that is no longer consistent with the aviation database. This alert is issued only after an aviation database update. Verify use of airways in stored flight plans and reload airways as needed.</td>
</tr>
<tr>
<td><strong>FPL TRUNC</strong> – Flight plan has been truncated.</td>
<td>This occurs when a newly installed aviation database eliminates an obsolete approach or arrival used by a stored flight plan. The obsolete procedure is removed from the flight plan. Update flight plan with current arrival or approach.</td>
</tr>
</tbody>
</table>
### MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCKED FPL — Cannot navigate locked flight plan.</td>
<td>This occurs when the pilot attempts to activate a stored flight plan that contains locked waypoint. Remove locked waypoint from flight plan. Update flight plan with current waypoint.</td>
</tr>
<tr>
<td>WPT ARRIVAL — Arriving at waypoint [xxxx]</td>
<td>Arriving at waypoint [xxxx], where [xxxx] is the waypoint name.</td>
</tr>
<tr>
<td>STEEP TURN — Steep turn ahead.</td>
<td>A steep turn is 15 seconds ahead. Prepare to turn.</td>
</tr>
<tr>
<td>INSIDE ARSPC — Inside airspace.</td>
<td>The aircraft is inside the airspace.</td>
</tr>
<tr>
<td>ARSPC AHEAD — Airspace ahead less than 10 minutes.</td>
<td>Special use airspace is ahead of aircraft. The aircraft will penetrate the airspace within 10 minutes.</td>
</tr>
<tr>
<td>ARSPC NEAR — Airspace near and ahead.</td>
<td>Special use airspace is near and ahead of the aircraft position.</td>
</tr>
<tr>
<td>ARSPC NEAR — Airspace near – less than 2 nm.</td>
<td>Special use airspace is within 2 nm of the aircraft position.</td>
</tr>
<tr>
<td>APR INACTV — Approach is not active.</td>
<td>The system notifies the pilot that the loaded approach is not active. Activate approach when required.</td>
</tr>
<tr>
<td>SLCT FREQ — Select appropriate frequency for approach.</td>
<td>The system notifies the pilot to load the approach frequency for the appropriate NAV receiver. Select the correct frequency for the approach.</td>
</tr>
<tr>
<td>SLCT NAV — Select NAV on CDI for approach.</td>
<td>The system notifies the pilot to set the CDI to the correct NAV receiver. Set the CDI to the correct NAV receiver.</td>
</tr>
<tr>
<td>PTK FAIL — Parallel track unavailable: bad geometry.</td>
<td>Bad parallel track geometry.</td>
</tr>
<tr>
<td>PTK FAIL — Parallel track unavailable: invalid leg type.</td>
<td>Invalid leg type for parallel offset.</td>
</tr>
<tr>
<td>PTK FAIL — Parallel track unavailable: past IAF.</td>
<td>IAF waypoint for parallel offset has been passed.</td>
</tr>
</tbody>
</table>
## MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

<table>
<thead>
<tr>
<th>Message</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNABLE V WPT</strong> – Can’t reach current vertical waypoint.</td>
<td>The current vertical waypoint can not be reached within the maximum flight path angle and vertical speed constraints. The system automatically transitions to the next vertical waypoint.</td>
</tr>
<tr>
<td><strong>VNV</strong> – Unavailable. Unsupported leg type in flight plan.</td>
<td>The lateral flight plan contains a procedure turn, vector, or other unsupported leg type prior to the active vertical waypoint. This prevents vertical guidance to the active vertical waypoint.</td>
</tr>
<tr>
<td><strong>VNV</strong> – Unavailable. Excessive track angle error.</td>
<td>The current track angle error exceeds the limit, causing the vertical deviation to go invalid.</td>
</tr>
<tr>
<td><strong>VNV</strong> – Unavailable. Excessive crosstrack error.</td>
<td>The current crosstrack exceeds the limit, causing vertical deviation to go invalid.</td>
</tr>
<tr>
<td><strong>VNV</strong> – Unavailable. Parallel course selected.</td>
<td>A parallel course has been selected, causing the vertical deviation to go invalid.</td>
</tr>
<tr>
<td><strong>NO WGS84 WPT</strong> – Non WGS 84 waypoint for navigation -[xxxx]</td>
<td>The position of the selected waypoint [xxxx] is not calculated based on the WGS84 map reference datum and may be positioned in error as displayed. Do not use GPS to navigate to the selected non-WGS84 waypoint.</td>
</tr>
<tr>
<td><strong>TRAFFIC FAIL</strong> – Traffic device has failed.</td>
<td>The G950 is no longer receiving data from the traffic system. The traffic device should be serviced.</td>
</tr>
<tr>
<td><strong>FAILED PATH</strong> – A data path has failed.</td>
<td>A data path connected to the GDU or the GIA 63/W has failed.</td>
</tr>
<tr>
<td><strong>MAG VAR WARN</strong> – Large magnetic variance. Verify all course angles.</td>
<td>The GDU’s internal model cannot determine the exact magnetic variance for geographic locations near the magnetic poles. Displayed magnetic course angles may differ from the actual magnetic heading by more than 2°.</td>
</tr>
<tr>
<td>**SCHEDULER [#] – &lt;message&gt;.</td>
<td>Message criteria entered by the user.</td>
</tr>
</tbody>
</table>
### FLIGHT PLAN IMPORT/EXPORT MESSAGES

In some circumstances, some messages may appear in conjunction with others.

<table>
<thead>
<tr>
<th>Flight Plan Import/Export Results</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Flight plan successfully imported.’</td>
<td>A flight plan file stored on the SD card was successfully imported as a stored flight plan.</td>
</tr>
<tr>
<td>‘File contained user waypoints only. User waypoints imported successfully. No stored flight plan data was modified.’</td>
<td>The file stored on the SD card did not contain a flight plan, only user waypoints. These waypoints have been saved to the system user waypoints. No flight plans stored in the system have been modified.</td>
</tr>
<tr>
<td>‘No flight plan files found to import.’</td>
<td>The SD card contains no flight plan data.</td>
</tr>
<tr>
<td>‘Flight plan import failed.’</td>
<td>Flight plan data was not successfully imported from the SD card.</td>
</tr>
<tr>
<td>‘Flight plan partially imported.’</td>
<td>Some flight plan waypoints were successfully imported from the SD card, however others had errors and were not imported. A partial stored flight plan now exists in the system.</td>
</tr>
<tr>
<td>‘File contained user waypoints only.’</td>
<td>The file stored on the SD card did not contain a flight plan, only user waypoints. One or more of these waypoints did not import successfully.</td>
</tr>
<tr>
<td>‘Too many points. Flight plan truncated.’</td>
<td>The flight plan on the SD card contains more waypoints than the system can support. The flight plan was imported with as many waypoints as possible.</td>
</tr>
<tr>
<td>‘Some waypoints not loaded. Waypoints locked.’</td>
<td>The flight plan on the SD card contains one or more waypoints that the system cannot find in the navigation database. The flight plan has been imported, but must be edited within the system before it can be activated for use.</td>
</tr>
</tbody>
</table>
### FLIGHT PLAN IMPORT/EXPORT MESSAGES (CONT.)

<table>
<thead>
<tr>
<th>Flight Plan Import/Export Results</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘User waypoint database full. Not all loaded.’</td>
<td>The flight plan file on the SD card contains user waypoints. The quantity of stored user waypoints has exceeded system capacity, therefore not all the user waypoints on the SD card have been imported. Any flight plan user waypoints that were not imported are locked in the flight plan. The flight plan must be edited within the system before it can be activated for use.</td>
</tr>
<tr>
<td>‘One or more user waypoints renamed.’</td>
<td>One or more imported user waypoints were renamed when imported due to naming conflicts with waypoints already existing in the system.</td>
</tr>
<tr>
<td>‘Flight plan successfully exported.’</td>
<td>The stored flight plan was successfully exported to the SD card.</td>
</tr>
<tr>
<td>‘Flight plan export failed.’</td>
<td>The stored flight plan was not successfully exported to the SD card. The SD card may not have sufficient available memory or the card may have been removed prematurely.</td>
</tr>
</tbody>
</table>
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**APPENDIX**

**PFD SOFTKEY MAP**

![Diagram of PFD softkeys with options]

*Top Level PFD Softkeys*

![Diagram of top level softkeys with options]

*Inset Map Softkeys*

<table>
<thead>
<tr>
<th>INSET</th>
<th>Displays Inset Map in PFD lower left corner</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Removes Inset Map</td>
</tr>
</tbody>
</table>
| DCLTR (3) | Selects desired amount of map detail; cycles through declutter levels:  
DCLTR (No Declutter): All map features visible  
DCLTR-1: Declutters land data  
DCLTR-2: Declutters land and SUA data  
DCLTR-3: Removes everything except the active flight plan |
| TRAFFIC | Displays traffic information on Inset Map |
## Appendix

### TOPO
Displays topographical data (e.g., coastlines, terrain, rivers, lakes) and elevation scale on Inset Map

### TERRAIN
Displays terrain information on Inset Map

---

**PFD Configuration Softkeys**

<table>
<thead>
<tr>
<th>PFD</th>
<th>Displays second-level softkeys for additional PFD configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFLTS</td>
<td>Resets PFD to default settings, including changing units to standard</td>
</tr>
<tr>
<td>WIND</td>
<td>Displays softkeys to select wind data parameters</td>
</tr>
<tr>
<td>OPTN 1</td>
<td>Longitudinal and lateral components</td>
</tr>
<tr>
<td>OPTN 2</td>
<td>Total direction and speed</td>
</tr>
<tr>
<td>OPTN 3</td>
<td>Total direction with head and crosswind speed components</td>
</tr>
<tr>
<td>OFF</td>
<td>Information not displayed</td>
</tr>
<tr>
<td><strong>DME</strong></td>
<td>Displays the DME Information Window</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td><strong>BRG1</strong></td>
<td>Cycles the Bearing 1 Information Window through NAV1 or GPS/waypoint identifier and GPS-derived distance information.</td>
</tr>
<tr>
<td><strong>HSI FRMT</strong></td>
<td>Displays the HSI formatting softkeys</td>
</tr>
<tr>
<td><strong>360 HSI</strong></td>
<td>Displays the HSI in a 360 degree format</td>
</tr>
<tr>
<td><strong>ARC HSI</strong></td>
<td>Displays the HSI in an arc format</td>
</tr>
<tr>
<td><strong>BRG2</strong></td>
<td>Cycles the Bearing 2 Information Window through NAV2 or GPS/waypoint identifier and GPS-derived distance information.</td>
</tr>
<tr>
<td><strong>ALT UNIT</strong></td>
<td>Displays softkeys for setting the altimeter and BARO settings to metric units</td>
</tr>
<tr>
<td><strong>METERS</strong></td>
<td>When enabled, displays altimeter in meters</td>
</tr>
<tr>
<td><strong>IN</strong></td>
<td>Press to display the BARO setting as inches of mercury</td>
</tr>
<tr>
<td><strong>HPA</strong></td>
<td>Press to display the BARO setting as hectopacals</td>
</tr>
<tr>
<td><strong>STD BARO</strong></td>
<td>Sets barometric pressure to 29.92 in Hg (1013 hPa)</td>
</tr>
</tbody>
</table>
### Transponder Softkeys

<table>
<thead>
<tr>
<th>Softkey</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>XPDR</strong></td>
<td>Displays transponder mode selection softkeys</td>
</tr>
<tr>
<td><strong>STBY</strong></td>
<td>Selects Standby Mode (transponder does not reply to any interrogations)</td>
</tr>
<tr>
<td><strong>ON</strong></td>
<td>Selects Mode A (transponder replies to interrogations)</td>
</tr>
<tr>
<td><strong>ALT</strong></td>
<td>Selects Mode C – Altitude Reporting Mode (transponder replies to identification and altitude interrogations)</td>
</tr>
<tr>
<td><strong>GND</strong></td>
<td>Manually selects Ground Mode, the transponder does not allow Mode A and Mode C replies, but it does permit acquisition squitter and replies to discretely addressed Mode S interrogations.</td>
</tr>
<tr>
<td><strong>VFR</strong></td>
<td>Automatically enters the VFR code (1200 in the U.S.A. only)</td>
</tr>
<tr>
<td><strong>CODE</strong></td>
<td>Displays transponder code selection softkeys 0-7</td>
</tr>
<tr>
<td><strong>0 — 7</strong></td>
<td>Use numbers to enter code</td>
</tr>
<tr>
<td><strong>BKSP</strong></td>
<td>Removes numbers entered, one at a time</td>
</tr>
</tbody>
</table>
IDENT | Activates the Special Position Identification (SPI) pulse for 18 seconds, identifying the transponder return on the ATC screen
TMR/REF | Displays Timer/References Window
NRST | Displays Nearest Airports Window
ALERTS | Displays Alerts Window

**MFD SOFTKEY MAP**

**AUTO or DEST** | Switches between AUTO and DEST mode for the Navigation Information display (see the Flight Management section for more information)
**MAP** | Enables second-level Navigation Map softkeys
**TRAFFIC** | Displays traffic information on Navigation Map
**TOPO** | Displays topographical data (e.g., coastlines, terrain, rivers, lakes) and elevation scale on Navigation Map
<table>
<thead>
<tr>
<th><strong>TERRAIN</strong></th>
<th>Displays terrain information on Navigation Map</th>
</tr>
</thead>
</table>
| **AIRWAYS** | Displays airways on the map; cycles through the following:  
  AIRWAYS: No airways are displayed  
  AIRWY ON: All airways are displayed  
  AIRWY LO: Only low altitude airways are displayed  
  AIRWY HI: Only high altitude airways are displayed |
| **BACK**    | Returns to top-level softkeys |
| **DCLTR**   | Selects desired amount of map detail; cycles through declutter levels:  
  DCLTR (No Declutter): All map features visible  
  DCLTR-1: Declutters land data  
  DCLTR-2: Declutters land and SUA data  
  DCLTR-3: Removes everything except the active flight plan |
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